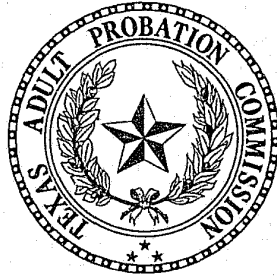


HIV Guidelines

for

Texas Adult Probation Departments



Texas Adult Probation Commission

February 1989

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**Texas Adult Probation Commission
Committee on HIV**

**Human Immunodeficiency Virus
Guidelines for
Texas Adult Probation Departments**

120844

U.S. Department of Justice
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February 1989

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OVERVIEW

Statement of Problem

Human Immunodeficiency Virus (HIV) has received more media attention and has been the focus of more public concern than any other virus of our time. It has been called the most serious health problem in the world today. The demonstrated link between HIV* and intravenous drug use places many offenders at risk. Thus, the potential exists for HIV to pose multi-faceted problems for community corrections programs. One such problem is the risk of probation personnel being exposed to the virus. Based on current medical information, the risk is minimal. However, this does not diminish the importance for all staff to receive education and training on current medical information, appropriate safety and hygienic procedures, and legal issues.

Resources

This virus has served as a catalyst in many Texas communities to mobilize resources and create networks geared toward HIV services. To ensure that adult probation departments are provided with current and reliable information, it is encouraged that all departments use services offered by the Texas Department of Health and the local county health facilities. Departments are urged to develop their own community resource directory to be made available to all staff and probationers.

Purpose

In response to a request from Commissioners of the Texas Adult Probation Commission, a committee was formed to draft administrative guidelines on HIV for dissemination to Texas adult probation departments. Based on current state law, the proposed guidelines are driven by issues examined within the parameters of the criminal justice system. Probation departments are encouraged to follow the guidelines in the development of local policies and procedures.

The TAPC HIV Guidelines are not intended to be linked to the distribution of state aid. Rather, they are to provide technical assistance to the judicial district adult probation departments.

* Throughout these guidelines, HIV will be used in reference to all the conditions of Human Immunodeficiency Virus infections, including Acquired Immunodeficiency Syndrome (AIDS) and AIDS-Related Complex (ARC).

GUIDELINES

Testing

Texas law (Art. 4419b-1, V.A.C.S; see Appendix D) prohibits routine mandatory testing for Human Immunodeficiency Virus (HIV) infection. Based on the law, probationers may be tested only under the following circumstances:

(a) by voluntarily consenting to the test; or

(b) pursuant to court order. A person who is indicted for sexual assault or aggravated sexual assault can be ordered to submit to a medical procedure or test for presence of sexually transmitted diseases or AIDS or HIV or other agent of AIDS under authority of Article 21.31 of the Code of Criminal Procedure. Health Department regulations for administration of a test under court order are found in Section 97.13 of the Rules and Regulations for the Control of Communicable Diseases (see Appendix D). Probationers may be encouraged to submit to an HIV antibody test, but such encouragement should be free of any coercion or threat.

Confidentiality

(a) Texas law (Art. 4419b-1, V.A.C.S.) provides that information related to testing for HIV infection is confidential. [See Appendix D - (Art. 4419b-1, V.A.C.S.).] Unless the person tested has authorized the disclosure in writing, neither the results of a test nor the fact that a person has or has not been tested may be disclosed to anyone other than the following:

1. the Texas Health Department;
2. a local health authority if reporting is required under the Communicable Disease Prevention and Control Act (Art. 4419b-1, V.A.C.S.);
3. the Centers for Disease Control of the United States Public Health Service;
4. the physician who ordered the test;
5. physicians, nurses, or other health care personnel who have a legitimate need to know the test result in order to provide for their protection and to provide for the patient's health and welfare; and
6. the person tested.

(b) If the person tested authorizes the disclosure in writing, the information regarding the test may be released to anyone included within the scope of the authorization. A probationer must voluntarily sign the authorization form. (See Appendix D - Voluntary Consent Form)

(c) If information regarding a test for HIV infection comes to the attention of probation department personnel from any source, the information must be regarded as confidential. It should be kept in a medical file separate from the probationer's regular supervision file. No direct references to the test should be made in the probationer's supervision file, but references to the medical file may be made at appropriate places in the supervision file. All such medical files should be kept in a secure place, with access limited to those persons who have a legal right to know as outlined in the state law.

Liability

All adult probation department personnel should be made aware that the Communicable Disease Prevention and Control Act provides both civil and criminal penalties for violations of its testing and confidentiality provisions. Violation of this law in regard to testing or confidentiality is a Class A misdemeanor punishable by a fine and/or jail.

HIV and HIV-Related Conditions in the Workplace

All probation departments are encouraged to develop a personnel policy that recognizes that employees with HIV may wish to continue their normal activities, including employment, as their condition allows. As long as employees with HIV are able to meet job performance standards, managers should ensure that they are treated as any other employee (Section 504 of the Rehabilitation Act of 1973, and the Texas Commission on Human Rights Act of 1983). This position is also supported by the National Sheriffs' Association.

Education and Training

Adult probation departments are encouraged to develop and provide ongoing HIV education and training for all probation staff and probationers. To ensure that local departments are provided with current and reliable information, it is recommended they use services offered by the Texas Department of Health and local health facilities. Education and training should orient all department personnel and probationers to the medical, psychological, legal, and social aspects of HIV.

The training objectives for department personnel should include:

1. an understanding of the medical information with emphasis on the transmission and prevention of HIV;
2. interviewing techniques and supervision strategies to appropriately and effectively identify and intervene when supervising probationers with HIV and/or a history of high risk behavior;
3. techniques for acting as a resource agent to all services and programs that support probationers with HIV and high risk behavior; and
4. ongoing education for department personnel regarding the State law and its legal implications.

HIV education for probationers should include medical information with emphasis on the transmission and prevention of HIV, ongoing education regarding the state law and its legal implications, and a listing of services and programs that support HIV offenders and persons with high risk behavior.

Supervision

Section 504 of the Rehabilitation Act of 1973 and Texas Commission on Human Rights Act of 1983 prohibits discrimination of persons with HIV. In compliance with the law, the Texas Adult Probation Commission assents that probationers with HIV should receive the same treatment and be eligible for the same community-based corrections programs as all other probationers. Changes of supervision status due to medical conditions should be based on a physician's recommendation.

The Texas Adult Probation Commission recognizes the sensitive issues and concerns faced by probation personnel who work directly with probationers who are HIV infected. This position is based on the best available medical and scientific opinions including statements from the U.S. Public Health Services Center for Disease Control.

Precautions

In daily performance, rarely are probation personnel exposed to situations where viral transmission is possible. However, insufficient caution is ill-advised and undermines the message that everyone must be careful about behavior and exposure. Departments should provide and maintain a safe work environment, including the responsibility to provide proper equipment and training.

The Centers for Disease Control (CDC) recommends that precautions be used universally whenever there is anticipated contact with blood or body fluids containing blood, and not upon the characteristics of an individual, such as sexual orientation, perceived drug usage, or assumed medical condition. The National Institute of Justice and the National Sheriffs' Association have adopted the CDC policies.

All probation departments are encouraged to follow these procedures and precautions when applicable in all probationer/staff situations. (See Appendix D - Morbidity and Mortality Weekly Reports)

Searches

1. Assume that every probationer or area to be searched may possess a sharp object that is potentially infectious.
2. A visual inspection of the probationer, area or property should be made prior to a hand-search.
 - Instruct subject to remove all items from pockets and to turn pockets inside out.
 - Ask subject about the presence of needles or sharp objects that may be concealed on his/her person or property.
 - conduct a light pat-type search of areas where sharp objects may be located before a more aggressive probing-type search is attempted.
 - A visual inspection of property should be made prior to handling. Instruct subject to empty the contents of all containers (lockers, bags, boxes, cases, purses) before beginning a handling inspection.

Infectious Disease Exposure Precautions

Handwashing

- Handwashing is the single most effective means of preventing any infection.
- A vigorous 15-second washing with fresh, running water with any available soap is recommended.
- If thorough handwashing in clean water is not possible, germicidal or alcohol handwipes should be used, followed by a thorough washing when practical.

Barrier Precaution

When exposure to blood or body fluids is anticipated, barrier precautions are recommended. Intact skin is the most important barrier against potential infection. All skin breaks, rashes, infections and cuts must be covered with clean dry bandages. Change bandages as soon as practical if they become wet or soiled.

Disposable Gloves

Disposable gloves should be worn when there is a likely exposure to blood and body fluids.

- Gloves contaminated by blood or body fluids shall be immediately disposed of as infectious waste.
- Wash hands thoroughly (for 15 seconds) after glove removal.
- Avoid touching own eyes, nose, mouth with contaminated gloves.

CPR Mask

Professional standards require that those certified to administer CPR are generally required to administer CPR to cardiac arrest victims with whatever equipment is available. Delay caused by lack of mechanical devices would be considered a breach of duty. Although there is no documented case of HIV infection through administration of CPR, CPR masks (pocket) should be made available in all residential facilities and security vehicles, and the required training should be conducted in their use.

Cleaning and Decontamination

1. Clothing

- The risk of HIV transmission through clothing soiled by blood or body fluids is negligible.
- When soiled by blood or body fluids, clothing should be changed as soon as possible.
- Washable clothing may be washed in any washing machine using the recommended amount of regular laundry detergent.
- Clothing that requires dry cleaning may be professionally cleaned without additional precautions.

2. Equipment

- Disposable equipment may be disposed of as infectious waste.
- Disposable equipment that becomes contaminated with blood or body fluids should be immediately cleaned with a 1:10 bleach:water solution (1/4 cup bleach to 1 gallon of water), followed by soap and water. Contact medical health department for direction.
- Razor Blades - in residential settings, probationers should be issued disposable razor blades that can be discarded in a puncture-proof container. Razors are not to be shared.

3. Disinfection - Environmental surfaces such as walls, floors, tables, and chairs are not associated with transmission of the HIV virus, therefore extraordinary attempts to disinfect or sterilize these surfaces are not necessary. However, when needed, the following disinfection agents are suggested:

	Advantages	Disadvantages
*Bleach	highly potent	fresh mix of 1:10 parts water; to bleach clothes mix 1:20 parts water
Povidone Iodine (Betadine)	potent	use as directed on container
Liquid detergent	potent	mix 1:20 parts water
Hydrogen Peroxide	no mixing	brief antiseptic effect
Rubbing Alcohol (70%)	mixing	effective only when accompanied w/scrubbing - mix with 30% water

*Solution of Choice - may corrode metal surfaces if used frequently, can deteriorate in light and does not store well.

4. Waste Disposal

- All waste associated with the contact with, or obtaining of body fluids should be disposed of under CDC guidelines. Waste disposal should include all materials and supplies used in gathering test samples used for urinalysis.
- Sharp items must be disposed of in a puncture-proof container.

5. Supplies

The following supplies should be made available:

1. Disposable gloves (latex)
2. CPR (pocket) masks (disposable)
3. 1:10 bleach/water solution or Betadine or liquid detergent or hydrogen peroxide, and/or rubbing alcohol. (Bleach is the solution of choice)
4. Packaged germicidal or alcohol handiwipes
5. Puncture-proof sharp container
6. Infectious waste (non-sharp) gathering and disposal containers used for gloves, urinalysis cups, test tubes, and clean-up of soft materials.

APPENDIX A

**MEDICAL AND EPIDEMIOLOGICAL
INFORMATION ON AIDS**

The Causes of AIDS and Its Transmission¹

AIDS or Acquired Immunodeficiency Syndrome is a condition in which the immune system becomes so compromised that the individual is unable to fight off a host of infections. It was first identified in 1981 among previously healthy homosexual or bisexual males in New York and San Francisco, though it has been found in stored blood of intravenous drug users in New York donated as early as 1978. The first cases involved a rare form of bacterial pneumonia (*Pneumocystis carinii*), or a type of skin cancer (Kaposi's sarcoma), which had previously been seen only in a far less virulent form among elderly men of East European or Mediterranean origins. In the absence of other causes, the appearance of these rare diseases pointed to an underlying problem with the immune systems of those affected; they were simply unable to fight off infection naturally and, often after a series of illness episodes, died. In addition to these two diseases, identified early in the epidemic, persons with AIDS may also suffer from a wide range of "opportunistic infections"; that is, infections, often from common viral or bacterial sources, which are not life-threatening in a healthy individual but which become deadly in persons with seriously compromised immune systems.

The diagnosis of AIDS involves the appearance of one of the known AIDS related diseases and clinical evaluation of severe immune suppression unrelated to other factors (such as chemotherapy). Since AIDS appeared, New York City also reports an unusually high incidence of fatalities from diseases such as bacterial endocarditis, non-pneumocystic pneumonia and tuberculosis among intravenous drug users leading to speculation about the specific role of the AIDS virus in other diseases as well. As information develops, these or other diseases may be added to the Centers of Disease Control (CDC) definition. There are currently a range of "indicator diseases" associated with AIDS that share some characteristics. For example, they are diseases often not seen in the age group, such as Kaposi Sarcoma or severe candidiasis ("thrush"); not typically found in the organ affected, such as cytomegalovirus or tuberculosis in areas other than the lung; or even diseases not usually manifested in humans. The AIDS virus may also produce encephalopathy or "AIDS dementia," which involves increasing neurological problems or a condition known as HIV "wasting syndrome," a condition of uncontrolled weight loss and deterioration.

The term, "AIDS," is somewhat of a misnomer. It refers to a syndrome, or group of diseases caused by a virus. It also actually refers to the end state of the illness. Some persons infected with the virus may remain asymptomatic for many years, perhaps indefinitely. Other progress from infection to a condition known as AIDS Related Complex (ARC), a milder condition characterized by weight loss, swollen lymph glands, continuous or intermittent diarrhea and fever, severe fatigue and tests indicating immune suppression. Recently, scientists have argued that ARC should only be distinguished as an early form of AIDS rather than a separate complex or condition. From this stage, persons progress to "full-blown" manifestation of the disease. In the end state, the individual has marked laboratory indications of immune suppression and has developed one or more of the diseases associated with the syndrome.

AIDS is also not an orderly progression to an end state as the definitions might imply. Persons may become infected and quickly develop the end state of the illness. Others may never progress beyond ARC symptoms. What determines the rate or sequence of progression is not clearly known and is the subject of current investigation. What is known is that end state AIDS is fatal. Of the over 60,000 cases of AIDS diagnosed since June of 1981, 56 percent have died. In the early stages of the epidemic, life expectancy for a person diagnosed with AIDS was approximately two years. Due to the development of life-extending treatments, persons may live as long as five or more years after diagnosis; expectancy nationwide also varies with a number of co-factors which will be discussed in a later section.

What Causes AIDS?

AIDS is caused by a virus generally known as the Human Immunodeficiency Virus (HIV), a human retrovirus which was discovered by scientists at the Pasteur Institute in Paris and further defined by Gallo and associates at the National Institute of Health in 1983 and 1984. The virus infects certain white blood cells (T-4 cells) rendering them incapable of combating infections. Once the virus has entered the host cell, it may remain dormant for long periods of time. When stimulated into action, the virus quickly reproduces producing the rapid depletion of T-4 cells that is the hallmark of AIDS diagnoses, and thus leaving the individual vulnerable to a number of "opportunistic infections" which would not normally harm a healthy person. What causes stimulation into activity of the dormant virus is not definitively known.

A number of "co-factors" are thought to be involved in one's susceptibility to the development of AIDS once exposed: continued high risk behaviors such as intravenous drug use, poor nutrition, alcohol and drug consumption, concurrent infections such as hepatitis B or cytomegalovirus and genetic predisposition. Research on the co-factors involved with AIDS is continuing, but the exact role they play is as yet unknown. Factors such as heavy alcohol use, for example, may act as a catalyst to HIV action or simply add to concurrent suppression of the immune system.

Exposure, Seroconversion and Manifestation of AIDS Symptoms

Exposure to the virus does not necessarily mean that the person has been infected and infection does not necessarily mean that the person will become ill. Exposure means that the person has had high-risk contact with a person infected with the AIDS virus which has resulted in his/her own infection. The amount of exposure to actual infection ("seroconversion") is not known. However, research with active homosexuals and active intravenous drug users indicates that those who engage in high risk activities frequently and with multiple partners are the most likely to become positive for the virus, yet a single exposure may also be sufficient.

The term "seropositivity" means that an individual has been exposed, successfully infected with the virus, and developed antibodies. This is indicated by a positive test result on the blood test used, two ELISA tests and one confirmatory Western Blot test. While seropositivity does not imply illness, it is generally agreed that it implies the ability to transmit the virus to others. We should also note the "lag" time between exposure and conversion makes these conditions unclear. While it has been generally thought that conversion occurred within a few weeks of exposure, there is now evidence that conversion may not occur until as long as many weeks or even months after exposure. For these reasons, tests should be repeated up to six months after exposure to ensure validity of the results. There is also limited evidence as to the amount of the virus or the number of exposures required to successfully transmit infection. It does appear that a large dose of the blood given intravenously, as occurs during a blood transfusion, poses an extremely high risk, and accidental needle sticks pose a fairly small one. On the other hand, repeated exposure to small amounts, as with intravenous drug users sharing needles, ultimately will present a serious risk.

There also appears to be a relationship between continued exposure and development of the disease. In studies of HIV positive intravenous (IV) drug users in New York, the best predictor of manifestation of the disease is continued intravenous use of drugs. This may be related to continued assaults on the immune system increasing the chance of its failing to combat the virus and the more people one shares needles with the greater the chance of encountering an infected person.

The number of persons who are seropositive and who will eventually manifest the disease is unknown, though it is believed, based on increased tracking of infected persons, that the majority of person infected will develop AIDS. The National Academy of Science estimates the 25-50 percent of HIV seropositives will develop AIDS within five to ten years of infection and that 90 percent of seropositives will show some immune system deficiency within five years of seroconversion. However, the average period is eight years but may be as short as nine months or as long as 10 years.

One of the difficult aspects of AIDS for epidemiological study is the long incubation period of the disease; that is, the long time between asymptomatic infection to the appearance of any symptoms. In most cases the incubation period is from five to eight years, though there are reported cases of incubation of as long as eight or ten years. This long period of uncertainty presents some of the most difficult problems for the management of infected persons and for estimation of seroprevalence. Persons who are infected may not know they are HIV-infected until symptoms of illness appear. Persons who are aware of their HIV positive status, but otherwise healthy, may spend many anxious years anticipating and fearing the appearance of symptoms.

Survival time varies in length according to the particular disease manifested, genetic factors, availability of treatment and general health of the patient. Fatality for cases diagnosed in 1981 is over 90 percent. Survival after the first year of diagnosis also varies considerably with the specific illness contracted, the age of the individual, and the underlying health status.

Persons who develop Kaposi's sarcoma seem to survive almost twice as long as those with Pneumocystis carinii pneumonia, though short-term survival with this disease is improving. Factors such as concurrent intravenous drug use also influence the length of survival. Intravenous drug users are more likely to contract Pneumocystis and/or opportunistic infections.

How is the AIDS Virus Transmitted?

While there has been a great deal of media attention paid to AIDS, the questions paramount in the public's mind, "Can someone give it to me?" is still not adequately understood by a great number of people. A survey conducted by the United States Public Health Service's Weekly National Health Interview revealed that a number of people thought AIDS could be transmitted through sharing kitchen utensils, from public toilets or by donating blood. This problem has not been helped by the recent report of sex experts Masters and Johnson which was interpreted to report that there is the possibility of transmission through body fluids such as tears or urine. While widely reported in the media as evidence for transmission through "casual contact," the Masters and Johnson report actually states that the virus is present in these fluids, a fact well-known for many years, and that they, therefore, are theoretically possible as sources of transmission.

The theoretical nature of this statement cannot be over-emphasized. Empirical evidence speaks strongly against the possibility of transmission through body fluids other than blood, semen, vaginal secretions, and breast milk. In the ten years of the AIDS epidemic, there have been no cases of transmission through any sources except sexual intercourse, inoculation of blood, and perinatal events.

There has been no new source of transmission identified since 1982. In addition, studies of over 14,000 persons with AIDS have found no cases of transmission to family members through non-sexual contact. These findings hold even in the case of children or infants with AIDS where daily contact with urine, tears and saliva is part of the care of the child.

There are three known methods of transmission of the virus: sexual contact, inoculation with blood and perinatal events. Since the epidemic began, epidemiologists have done careful tracing of all cases, and the three routes outlined have remained the only means of transmission identified. With over 60,000 cases of AIDS and much more ARC and seropositivity data, the consistency of these findings is extremely compelling. With the exception of one case of transmission from mother to child through breast milk and a small number of cases lost to follow-up, all known cases of AIDS can be attributed to one of the three methods of transmission.

As the data indicate, transmission of HIV is difficult and does not occur through casual contact. Though it is a blood borne disease like Hepatitis B, HIV is far more difficult to transmit than Hepatitis B, and precautions or clean-up procedures developed for Hepatitis B are more than adequate for dealing with the AIDS virus.

In the following sections we will briefly describe transmission modes, which include:

- transmission through inoculation with blood
- transmission through sexual contact
- perinatal transmission

Transmission through Inoculation with Blood or Blood Products

There are four instances in which contaminated or HIV infected blood is inoculated into a non-infected person and transmission of HIV can occur:

1. injection of the blood of someone else during sharing intravenous drug use equipment;
2. transmission during transfusion with contaminated blood or blood products;
3. transmission through accidental needlesticks with contaminated needle; and
4. transmission from an open wound or mucous membrane exposure.

1. Transmission through intravenous drug use

Transmission which occurs through sharing of intravenous drug use equipment is the most common method of transmission of this type. Eighteen percent of all AIDS cases in this country come from this source. In areas of high incidence of intravenous drug use, the numbers are even higher. For example, in New York and Northern New Jersey, almost 50 percent of all AIDS cases are among intravenous drug users, cases which represent almost 75 percent of the nation's total intravenous drug use AIDS cases.

The AIDS virus is spread among intravenous users through sharing the needles, syringes and heating elements ("cookers") used in injection. Users traditionally will draw their own blood up into the syringe to mix with the dissolved drug and re-inject it into their veins. This is done to use all traces of the drug mixture most effectively. The next user continues in the same way, but injects any traces of blood from the previous user as well as his own blood with his injection. Since needles are only cleaned in the most perfunctory way and, traditionally this means only blowing into the needle or manually clearing a clogged tip of the hypodermic with a wire, traces of the prior user's blood remain in the equipment. When a needle is shared among many users, as is often the case, the possibility of HIV infection is multiplied over and over again.

Sharing equipment is common. A study in San Francisco indicates that 90 percent of addicts reported that they had shared needles with an average of 37 different people in the prior year. A New York/New Jersey study found that one-third of users reported sharing daily.

Why do users share equipment? There are several instances in which sharing occurs. First, initiation into drug use is often the occasion for sharing "works." New IV users are unlikely to have their own injection equipment, as initiation is not generally a planned event. Consequently, they are most often "turned on" with friends who share their equipment with them.

Second, sharing "works" with a "running partner," a friend or a spouse is a common feature of the drug use world. Sharing is seen in this context as a social activity, a sign of trust and friendship as well as a convenience. Only one party need carry the equipment when both go to buy and use drugs, and both parties may share the drugs purchased by pooling them into the same "cooker" and into the same syringe. Researchers have found that failure to share can be seen as a serious sign of mistrust or disloyalty among IV users and a serious breach of drug world etiquette.

Needles may also be shared out of convenience due to scarcity. While only twelve states make possession of a hypodermic needle a punishable offense, they are the states in which IV drug use is the most common. Addicts may share or rent "works" because they have no access to their own and/or they do not wish to be caught with the equipment in their possession. This is the underlying motivation for the use of shooting galleries. Shooting galleries can vary from highly commercial operations such as found in New York City to the more prevalent informal renting of works done by other users in their apartments or in areas near drug buying. In a shooting gallery or a similar arrangement, a set or several sets of works are rented out to users so that they can use their drugs quickly and leave the area.

Early on, the spread of HIV was linked to the use of shooting galleries or similar operations. It is clear that the more one injects drugs, and consequently the more one is likely to rent or borrow contaminated works, the more likely he/she is to become infected.

2. Inoculation of blood or blood products during transfusion

HIV infection can also occur when contaminated blood or blood products such as plasma are administered to a patient. Since the blood supply has been screened for the presence of HIV since 1985, the number of cases from this source has been dramatically reduced. Only 3 percent of the total AIDS cases reported since 1981 have come from this source and the majority of these cases stem from infection prior to 1985. Cases will continue to be diagnosed related to transition prior to 1985 due to the long incubation period.

3. Inoculation of blood through accidental needle sticks

Accidental puncture with a contaminated needle is one of the often-repeated concerns of both health care workers and correctional personnel who may inadvertently come into contact with a needle used by an HIV positive individual through routine delivery of care or law enforcement procedures such as pat downs or searches. While at first glance the risk of infection through accidental puncture seems similar to that of needle sharing among IV users, there are important differences. First, in the case of IV drug use, blood is thoroughly mixed during the process of mixing drugs and user's blood each time. In the case of a needle stick the infected traces of blood are not thoroughly blended with the second party's blood and may in most cases enter subcutaneously rather than intravenously, reducing the efficiency of transmission. Second, IV drug users repeatedly share contaminated needles multiplying the risk of transmission, while the accidental needle stick is a solitary risk event.

For these reasons, the number of transmissions from accidental needle sticks has been very small. In studies of 887 health care workers who have received needle sticks or puncture wounds from HIV contaminated needles, only four have been infected as a result. The infection occurred from injections rather than just a needle stick. These data strongly suggest that, while not an impossible event, infection from these sources is not common.

4. Transmission through open wound or mucous membrane exposure

Exposure through contaminated contact with mucosa (eyes, nose, mouth) is also of concern to persons working closely with or caring for HIV infected persons. Fortunately, transmission from this source is even less likely than transmission from accidental needle sticks. In CDC studies of health care workers who have had open wounds or mucous membrane exposure to HIV infected patients, no cases of infection have appeared. There are four instances, however, reported in the literature which fall into this category.

In these cases, all health care workers, the individuals became infected after direct contact between HIV infected blood of a patient and their own broken skin or mucosa. In the first instance a health care worker with seriously chapped hands was in direct contact with the blood of an HIV infected patient for twenty minutes. In the second case, an individual using a high speed centrifuge spilled HIV contaminated blood over ungloved hands and in the process was covered with blood up to the elbows. In the third case, a health care worker was infected when infected blood went into the eyes and mouth with force. In the last case, a laboratory researcher who had regular and extended contact with concentrated preparations of the virus became infected. It is believed that in the course of the work an incident of unprotected contact between the preparations and the researcher's broken skin or mucosa occurred.

It should be reinforced that these instances were all preventable had precautions been taken — gloves, masks, covering broken skin. In the many laboratory situations across the country which are working daily with HIV, often in highly concentrated forms, and in the many hospital settings caring for infected patients, there have not been additional cases of transmission. This evidence strongly suggests that, while possible, this is an unlikely form of transmission and one which can be adequately protected against.

Perinatal Transmission

Perinatal transmission is the most common cause of AIDS infection in infants and small children. These cases are associated with HIV infection in the mother, often stemming from intravenous drug use by the mother. Seventy-seven percent of the pediatric AIDS cases reported to CDC are from perinatal events. In these cases, the virus is passed to the unborn child in utero or during childbirth from an HIV infected mother, or in one case, breast milk. The mechanism of perinatal transmission is not completely identified, though there appears to be a 30-50 percent chance that an HIV infected mother will give birth to a child who is HIV positive at birth. This is due to the mother's antibodies which will cross from the placenta. Only 30-50 percent of these babies are truly infected. The mother's antibodies can be detected up to 15 months due to the sensitivity of the HIV antibody test. Consequently, the baby may test positive up to 15 months, but not be infected. There is also one case of transmission of the virus in breast milk. The mother was transfused with infected blood after delivery, and the child became HIV positive through nursing.

The majority of pediatric cases come from New York City, New Jersey, and Florida—areas with high concentrations of intravenous drug users. Perinatal transmission cases also come disproportionately from minority populations. Eighty-five percent of the total cases of perinatal transmission occurred among Blacks or Hispanics, a figure which represents 65 percent of all pediatric AIDS cases. It is to be noted that race as a risk is not separate from the IV drug use itself.

Transmission through Sexual Contact

The AIDS virus can be transmitted through either homosexual or heterosexual contact. Activities that may produce small tears in mucosa, such as anal intercourse, appear to be the most risky. However, vaginal intercourse is also a mode of male-to-female or female-to-male transmission.

The outbreak of AIDS began in the homosexual and IV drug user population first. Thus, a great deal of transmission in these two populations occurred before AIDS was recognized. Homosexual or bisexual males constitute 64 percent of the total number of AIDS cases reported. Receptive anal intercourse as well as large number of partners have been linked to increased chances of contracting infection. Both activities increase the likelihood of contact with another infected male and the increased likelihood of producing small fissures in the anal mucosa.

The extent of heterosexual transmission has been widely discussed. While the overall proportion of cases stemming from the heterosexual cases has remained constant (4%), the number of heterosexual cases has increased more rapidly than the numbers in other categories. For example, in September 1984, only 25 cases of heterosexual transmission among women were reported to the New York City Health Department; just two years later that figure had risen more than five times. The number of AIDS cases among female IV drug users also increased dramatically during this time, 3.5 times the 1984 figure. These data do not predict an explosion of AIDS into the non-IV drug-using population, but do suggest increasing numbers in the population with regular sexual contact with IV users and/or bisexual men.

Important to this issue is the question of the efficiency of heterosexual transmission. Most of the data on heterosexual transmission comes from studies of the sexual partners of intravenous drug using prostitutes, or other persons with AIDS and from American military samples.

Small studies of the sexual partners of persons with AIDS indicate that regular unprotected sexual activity results in high rates of infection of the partner. In a U.S. study of 24 seronegative partners of persons with AIDS, of the ten pairs who used condoms over the 12-36 month study period, only one partner became HIV positive. By comparison, of the 14 pairs who engaged in unprotected sexual activity, 12 partners (88%) became infected. It is reported that risks of heterosexual transmission from vaginal intercourse increase with frequency of contact, but seem to remain stable after a threshold of 10-20 exposures. This is not true for anal intercourse. In this small sample, 88 percent of partners of persons with AIDS converted, and 30 percent of persons who were seropositive but asymptomatic converted. Similar findings have been reported among sexual partners of IV drug users in New York. Since 60-75 percent of IV users are male, and approximately 95 percent are heterosexual, the number of non-IV drug using sexual partners for this population is significant.

Studies of American military recruits report that nationally the ratio of male-to-female seropositivity is 2.7 to 1, and almost one-to-one in areas of highest population prevalence of seropositivity. Among this group were numerous married couples in which both parties were HIV positive. The areas where male-to-female ratios are almost equal are areas in which substantial portions of the cases involve IV drug use, highlighting the strong link between heterosexual transmission and intravenous drug use. The largest percentage of heterosexual transmission cases involve partners of IV users from the New York metropolitan area and South Florida and to date there is little evidence of major transmission in the "second wave;" for example, infection from IV user to non-drug-using partner to another non-drug-using sexual partner.

The case of heterosexual transmission from prostitutes is particularly important one for criminal justice agencies. In both European and U.S. studies of prostitutes, the percentage of HIV positivity is high, due primarily to the large number of IV drug users in this group. In a New York study, for example, 42 percent of street prostitutes were IV drug users, and in a New Jersey study, half of the IV drug-using prostitutes were HIV positive. There is some speculation that prostitutes may also be more susceptible to HIV infection, due to high rates of other sexually-transmitted diseases. Prostitutes can also come into contact with both IV drug users and persons who have multiple sexual partners. In the CDC multi-city study of prostitutes, 11 percent of the prostitutes who engaged in unprotected sex with customers tested positive for HIV, compared to none of the 22 who always used condoms in vaginal intercourse.

It is important to note that single-contact heterosexual transmission does occur, but appears less likely than first thought. From the sample, the prostitution data and the overall case distribution material suggests that regular or repeated sexual contact with an infected individual is needed for infection through this route. It should be emphasized, however, that the question of heterosexual transmission is a complicated one and should not be dismissed as unlikely or unimportant as a source of future cases.

Common Misconceptions about Transmission

It is critical for education and training programs to address some of the common misconceptions about AIDS transmissions. While misinformation in this area is, unfortunately, legion we will briefly review some of the common areas of misinformation and questions asked.

- Can I get infected from kissing, hugging, or sharing dishes, silverware, toothbrushes, razors, etc. with a person with AIDS or who is seropositive?

There is strong evidence that HIV infection does not occur from sharing household items, even those intimate household items such as a toothbrush or razor. Seven separate studies totaling almost 500 family members of persons with AIDS in daily intimate contact show no cases of infection which did not come from one of the known risk behaviors. In some cases, toothbrushes, razors, toilets, and other such intimate household items were routinely shared with the infected party. In addition, family members and health care workers often kiss or hug AIDS patients, and no case of infection through this route has been reported. CDC does recommend avoidance of deep kissing, however, due to the possibility of small breaks in skin or sores which may contact mucosa and, though highly unlikely, result in transmission. Similarly, though no cases exist, sharing razors and toothbrushes should probably be avoided as the theoretical possibility of small amounts of blood being transferred exists.

- Can I contract HIV on the job; for example, if I have to administer emergency first aid to a co-worker?

There is absolutely no evidence to support fears of transmission in the normal course of job performance. Again, in a study of persons with several years of close personal contact in a residential school setting with hemophiliac children who were seropositive, no non-hemophiliac children became infected. There have been no cases of infection among law enforcement personnel, paramedics, or firemen as a result of giving mouth-to-mouth resuscitation to an infected person. As a general precaution, however, against this or any other infection, masks or resuscitation cups should be used in all cases of resuscitation to protect both parties from this and numerous other infections.

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- I have heard that the AIDS virus is in saliva. Can't I get infected if an infected person bites me?

HIV can be isolated in a number of body fluids — saliva, tears, urine — though the concentrations in these fluids is low and, in recent culture studies, very rarely viable. It has been estimated that, given the low concentrations of virus in saliva or urine, it would take one quart of either fluid entering the bloodstream to produce infection.

Biting or spitting generally involves small amounts of saliva which, as had been discussed, poses no real threat. Biting in which the skin is broken may bring saliva of an infected person in contact with the blood of the person bitten. Only if the person biting has an open sore or wound in his/her mouth can blood mix with the blood of the person bitten and, given both the low frequency of the generally one-time event, and the unlikelihood of enough infected blood being involved, it is not surprising that there have been no reported infections among persons who have been bitten by someone with AIDS.

- Should I allow an HIV positive releasee to work in a food-handling job?

Much of the same evidence holds here. HIV positive individuals have undoubtedly been employed in food handling, and no cases have appeared as a result. Persons with AIDS have also prepared food as members of a family with no cases of infection resulting. Hypothetically, an individual could bleed or spit into food preparations, which could be eaten by someone with a cut or sore in the mouth. Even in this unlikely scenario, any virus would most likely be killed by the stomach acids. Therefore, CDC specifically recommends against screening food service workers for HIV.

- If the AIDS virus is a blood-borne virus, can't I get it from an insect that has bitten someone who is infected?

Important evidence about insect transmission comes from areas where the virus is well-established, and prevalence of HIV infection is high. In studies of areas of Africa where large portions of the adult population are infected, and in Belle Glade, Florida, where there is an unusually high concentration of HIV infection, there is no evidence of infection outside the known risk groups — IV drug users, homosexuals and their partners. If insects transmitted the infection, one would expect children, the elderly, all segments of the population to be affected. In addition, the insect must be able to replicate the virus in its own system and transmit it to humans; it has been found that mosquitos cannot do this with the AIDS virus.

1. Dana Eser Hunt, "The Causes of AIDS and Its Transmissions," *Aids in Parole and Probation Services: Issues and Options 1988*, 1:9-26.

APPENDIX B

TESTING

HIV TESTING

There are two types of tests available for determining HIV infection: viral culture tests and serological tests. Viral culture tests involve growing the virus from samples, which indicate viable infection in the persons sampled. Unfortunately, even highly skilled technicians under favorable conditions are often unable to grow HIV from blood in 40 percent or more of samples of persons who are known to be infected. This is thought to be due primarily to differing levels of infection activity in samples. Serological tests are those that measure antibodies to a viral agent present in the bloodstream. There are currently four tests available for testing infection with HIV: the enzyme linked immunosorbant assay test (ELISA), the Western Blot immunoprecipitation test, the radioimmunoprecipitation test (RIP) and the cytoplasmic membrane immunofluorescence assay (IFA) test. The ELISA is the most commonly used test for screening for HIV because of its low cost, standardized procedures, reproducibility and rapid turnaround of results.

Most commonly, a sequence of two testing procedures are used for the screening and confirmation of HIV infection, the ELISA test repeated twice and the Western Blot test. The ELISA test is conducted on a blood sample and repeated if a positive result is obtained. Samples which test positive on both ELISA tests are then subjected to the more labor intensive Western Blot test for confirmation. Positive results on all three tests is considered laboratory evidence of HIV infection.

We should stress that a positive result on this test series is not evidence that the individual tested has AIDS or that he/she necessarily will get AIDS. It is evidence of the presence of antibodies to a core protein of the AIDS virus in the person's system. This means that at some time the individual has been exposed to the virus and his/her system produced antibodies in response to that exposure. Persons testing positive may come down with ARC or AIDS or may remain asymptomatic. Infection with the virus as detected by these tests is a necessary, but not sufficient condition to predict the appearance of the illness. There is speculation that anywhere from 20-100 percent of persons testing positive will eventually manifest the disease, but these are educated guesses. Some people may, for example, test positive because they also have antibodies to a protein related to HIV which also reacts to the test, but they are not necessarily infected with HIV. Others may also have conditions such as other sexually transmitted disease or Hepatitis B which affect the test's reactivity precision.

It is, however, assumed that persons testing positively on the whole test series are infected with HIV and are able to transmit the virus, even if they are not ill themselves.

The ELISA test was developed in the mid-1980s for the screening of the blood supplies. The presence of HIV antibodies is signalled by a color reaction quantified through the use of a spectrophotometer. The higher the antibody level, the greater the optical density or color changes. Therefore, it is a continuum of color reaction rather than an "all or nothing" decision point, and determination points as to what constitutes infection have to be assigned. Manufacturers of the test kit provide suggested density points based on the color change occurring for definitively known positive or negative samples (e.g., test results of persons with full blown AIDS). However, there are varying results obtained with different ELISA kits, even following procedures suggested by the manufacturer. The varying results, it has been suggested, may be due to variations in the batches of antigen used.

The Western Blot test is used to confirm twice repeated positive ELISA results. For this test, inactivated virus is separated into component parts and "blotted" onto special paper. Complexes of viral protein and antibodies are seen as spots or bands in the final preparation. The Western blot test is not sold commercially as a kit nor does it have standardized interpretive procedures. Consequently, the reliability of results as well as criteria for interpretation can vary widely with laboratory and technical skill. Currently there are federal efforts to examine and standardize laboratory testing for HIV.

Reliability and Validity of HIV Testing

No test is 100 percent accurate. Tests vary in their reliability (or the ability to produce consistent results) and in their validity (or the ability to detect the condition tested for accurately) but, due to mislabeling, human error and a variety of other reasons, no test is perfect. However, with results as potentially serious and psychologically devastating as HIV infection, it is critical to understand and to minimize the errors associated with these tests.

One way to assess test validity is to see if it accurately tests positive for a condition in persons known to have that condition. A "false positive" occurs when the test indicates the person tested has the condition and, in fact, he/she does not have it. All tests have an error rate; that is, the percentage of instances when a false result is reported due to any reason, such as technical error or confounding factors in the sample which are undefined. Good testing definition and procedures for administration keep these instances to a small number. CDC estimates that the precision and accuracy of the two ELISA test sequence is 99 percent, meaning that on the average the test sequence will correctly identify 99 out of every 100 persons who are infected. This does not mean that only one percent of all of the positive or negative results will be false. The percentage of false positive or negative results depends on the actual prevalence of infection in the population tested. For example, if the actual prevalence of infection in a test population of 500 is 20 percent, and the accuracy of the test is 99 percent, one percent of the truly uninfected people, or 4 people, will receive a false positive result and about one percent, or one person, in the infected group will receive a false negative result. This means that in this group a total of 103 people will test positively and four of them or 3.9 percent of all positives, will be false.

These figures are quite different in the case of a population in which the true prevalence of infection is very low; for example, our same 500 people with a prevalence of one percent. In this case, the percentage of positives which are false rises dramatically. Four cases in this group will be truly infected and four cases will be false positives, making the error rate in false positives 50 percent for this low incidence case.

The HIV tests described above were developed to test blood supplies and therefore designed to set cut off or determination points for declaring the sample infected which minimize the number of false negatives, so that infection is not passed to transfusion patients. By setting the cut off points very conservatively in this fashion, the number of samples which are not infected but may test as if they were (false positives) is automatically inflated. This is not a problem in the situation of screening samples for transfusion, but is a serious one if passing the information on to persons who are infected but testing as if they were. As discussed above, this is increasingly possible with samples in low incidence populations.

Though the manufacturers of ELISA test kits recommend setting the determination point at which a decision of positivity is made differently for different runs of the test, the sophistication in test use varies widely from area to area and group to group. The cutpoint for determination of infection should be higher for low incidence populations (to minimize false positives) and lower in high incidence populations or high risk groups (to minimize false negatives). This is not always done, making the number of false reports, positive and negative, variable.

In addition, the Western Blot test is not a standardized test, it is highly labor intensive and relies heavily on the interpretive ability of the laboratory used. This too varies, making results even of a confirmatory test less than definitive and subject to interpretation. Even the loss of a fraction of a percentage of specificity due to interpretive differences or lack of quality control becomes critical in the production of false positives in populations where the true prevalence of the virus is low. In our example earlier, even adding a half percentage of error due to laboratory reading error would make the percentage of positives reported in the population of 500 low incidence people that were erroneous 75 percent!

It is important in reviewing the information on testing reliability and validity to assess the purpose of the test. Screening low risk populations, such as applicants for a marriage license, should have quite different interpretive criteria than tests used in sexually transmitted disease or IV drug use clinics or as part of the clinical diagnosis of persons with symptoms of AIDS.

To summarize, a single ELISA test or even two ELISA tests may not be adequate for screening HIV in all but the very high risk and/or high incidence populations, due primarily to variations in test application and an unacceptably high rate of false positives. Even the Western Blot confirmatory test, designed to sort through false positives from true infection, has some problems with human error in handling materials and, most importantly, in interpretation of results.

It should also be pointed out that in order to be effective with high risk populations the test sequence needs to be repeated periodically. CDC estimates that the average time from infection to conversion (appearing positive on a test) is 6 weeks to as long as fourteen months. Therefore, a person who is not positive at testing, but has engaged in high risk behavior over the prior six month period is not necessarily free of infection and should be retested. Persons who continue to engage in high risk behavior should also be periodically tested, as infection can occur at any point in time.

2. Ibid.

APPENDIX C

GLOSSARY

GLOSSARY³

Acquired Immune Deficiency Syndrome (AIDS): A condition that reduces the body's ability to fight disease, leaving it vulnerable to infections.

AIDS-Related Complex (ARC): ARC patients have some symptoms, but not the full-blown disease. Symptoms may include unexplained swollen glands or fever, weight loss, persistent diarrhea.

Antibody: A unique protein produced by blood plasma cells to counteract or kill some specific infectious agents—viruses and bacteria.

Asymptomatic: A person who has an infectious organism within the body but feels or shows no outward symptoms.

Contagious: Easily transmitted from one person to another—directly or indirectly—by the organism that causes the disease.

Elisa: Acronym for “enzyme-linked immunosorbent assay,” a test used to detect antibodies against HIV.

HTLV: Human T-Cell Lymphotropic Virus. This is the family of viruses to which HIV belongs.

Epidemiology: The study of relationships among various factors thought to determine the frequency and distribution of diseases in humans.

Exposure: The act or condition of coming in contact with, but not necessarily being infected by, a pathogenic agent.

Human Immunodeficiency Virus (HIV): The virus that causes AIDS, sometimes referred to as LAV or HTLV-3.

HIV Antibody Screening Test: A test performed on all donated blood that reveals the presence of antibodies to HIV. If antibodies are detected, the blood is destroyed. The test has also been used by individuals seeking to determine their likely infection status. If antibodies are detected, they are presumed to have been infected.

Immune System: A system within the body that helps the body resist disease-causing organisms such as germs, viruses, or other infections.

Immunosuppressed: A state of the body when the immune system defenses do not work normally—usually as a result of illness or the administration of certain drugs used to fight cancer or prepare the body to accept transplanted donor organs.

Incubation Period: The interval between infection and appearance of the first symptom. See “Latency.”

Infected: The state of the body when it has been invaded by a pathogenic agent that multiplies and causes injurious effects.

Intravenous Drugs: Drugs injected by needle directly into a vein.

Latency: A period when the virus is in the body but is in an inactive—dormant—state. See “Asymptomatic.”

Opportunistic Infection: An infection that is not a threat to a healthy immune system but than can be fatal to a person who is immuno-suppressed.

Perinatal: Occurring in the period preceding, during or after birth.

Retrovirus: One of a group of viruses that have RNA as their genetic code and have the ability to copy RNA into DNA and incorporate it into an infected cell.

Risk Behavior: Behavior that puts a person at risk of getting AIDS such as male to male sex, intravenous drug use, transfusions with blood or blood products prior to 1985, intimate contact with someone who is infected with the HIV virus, and infants born to infected mothers.

Seroconversion: The point at which antibodies to specific antigens are produced by B lymphocytes and become detectable in the blood.

Seropositive: Producing a positive reaction to a blood test—the HTLV-3 antibody test(s).

Syndrome: A set of signs and symptoms that occur together.

T-Cell: A cell that matures in the thymus gland. T-lymphocytes are found primarily in the blood, lymph, and lymphoid organs. Subsets of T-Cells have a variety of specialized functions within the immune system.

Vaccine: A preparation of killed, living attenuated, or living virulent organisms or parts of microorganisms, that can be administered to produce or increase immunity to a particular disease.

Virus: Submicroscopic organisms that grow and reproduce only inside living cells and thus cause disease.

Western Blot: A blood test that involves the identification of antibodies against specific protein molecules. This test is more specific than the Elisa test in detecting antibodies to HIV in blood samples. The Western Blot requires more sophisticated lab technique than the Elisa and is more expensive.

3. Red Cross

APPENDIX D
LEGAL INFORMATION

COMMUNICABLE DISEASE PREVENTION AND CONTROL ACT

TEXAS DEPARTMENT OF HEALTH Bureaus of Communicable Disease Control and Epidemiology

(Article 4419b-1, Vernon's Texas Civil Statutes)

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ARTICLE 1. GENERAL PROVISIONS

Sec. 1.01. **SHORT TITLE.** This Act may be cited as the Communicable Disease Prevention and Control Act:

Sec. 1.02. **PURPOSE.** The legislature recognizes that many of the public health laws of the state were enacted under public health conditions that are not relevant to contemporary society. It is the intent of the legislature to revise and consolidate the laws pertaining to identifying, reporting, preventing, and controlling communicable disease or conditions that are injurious or threaten the health of the people of Texas. While the legislature recognizes that it is the duty of the state to protect the public health, the legislature also recognizes that it is the responsibility of each person to act responsibly to prevent and control communicable disease in this state.

Sec. 1.03. **CUMULATIVE EFFECT.** This Act is cumulative of all other state or federal laws relating to the prevention and control of communicable disease.

Sec. 1.04. **DEFINITIONS.** In this Act:

- (1) "Board" means the Texas Board of Health.
- (2) "Commissioner" means the commissioner of health.
- (3) "Communicable disease" means an illness due to an infectious agent or its toxic products that arises through transmission of that agent or its products from a reservoir to a susceptible host, either directly, as from an infected person or animal, or indirectly through an intermediate plant or animal host, vector, or the inanimate environment.
- (4) "Department" means the Texas Department of Health.
- (5) "Financially responsible adult" means a parent, guardian, spouse, or any person whom the laws of this state hold responsible for the debts incurred as a result of hospitalization or treatment.
- (6) "Health authority" means a physician designated to administer state and local laws relating to public health under the Local Public Health Reorganization Act (Article 4436b, Vernon's Texas Civil Statutes.)

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(7) "Health professional" means an individual whose vocation or profession is indirectly or directly related to the maintenance of the health status of another individual or animal and whose duties require a specified amount of formal education together with, in many instances, a special examination, certificate or license, and membership in regional or national associations.

(8) "Local health department" means a department of health created by the governing body of an incorporated municipality or the commissioners court of a county under the Local Public Health Reorganization Act (Article 4436b, Vernon's Texas Civil Statutes).

(9) "Person" means an individual, corporation, government or governmental subdivision or agency, business trust, estate, trust, partnership, association, or other legal entity.

(10) "Physician" means a person licensed by the Texas State Board of Medical Examiners to practice medicine in Texas.

(11) "Public health district" means a department of health created under the Local Public Health Reorganization Act (Article 4436b, Vernon's Texas Civil Statutes).

(12) "Regional director" means the physician who is the chief administrative officer of a region as designated by the department under the Local Public Health Reorganization Act (Article 4436b, Vernon's Texas Civil Statutes).

(13) "Report" means information that is required to be provided to the department in accordance with Section 3.04 of this Act.

(14) "Reportable disease" means a disease or condition for which the board requires a report.

(15) "Resident of this state" means a person who is physically present and living voluntarily in this state with the intention of making a home within this state and whose stay is not for temporary purposes. The intent may be demonstrated by the presence of personal effects at a specific abode within this state; employment within this state, possession of documentation such as a Texas driver's license, motor vehicle registration, or voter registration forms, or other pertinent evidence of that intent.

(16) "School authority" means the superintendent of a public school system or the superintendent's designee and the principal or other chief administrative officer of a private school located in the state.

(17) "Sexually transmitted disease" means an infection, with or without symptoms or clinical manifestations, that is or may be transmitted from one person to another during or as a result of sexual relations of whatever kind between two persons and that produces or might produce a disease in or otherwise impair the health of either person or might cause an infection or disease in a fetus in utero or a newborn.

(18) "Standard serological test for syphilis" means tests and procedures for the diagnosis or evaluation of syphilis as may be approved by the board.

ARTICLE 2. GENERAL DUTIES AND POWERS

Sec. 2.01. COMMISSIONER. The commissioner is responsible for the general statewide administration of this Act.

Sec. 2.02. BOARD. (a) The board may adopt rules necessary for the effective administration and implementation of this Act.

(b) The board shall determine which diseases, either directly or indirectly through their complications, constitute threatening risks to the public health, and the department shall provide regular reports of the incidence, prevalence, and medical and economic effects of those diseases.

(c) The board has general supervision and control over all matters pertaining to protecting the health of all individuals within the state and shall exercise those powers to prevent the introduction of disease into the state and to impose control measures to prevent the spread of disease in the state.

(d) Except as otherwise required by law, whenever this Act grants a power or imposes a duty on the board, the power may be exercised or the duty performed by a designee of the board.

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Sec. 2.03. DEPARTMENT. (a) The department may enter into contracts or agreements with persons necessary to implement this Act. The contracts or agreements may provide for payment by the state for materials, equipment, and services.

(b) The department may seek, receive, and expend any funds received through appropriations, grants, fees, donations, or contributions from public or private sources for the purposes of identifying, reporting, preventing, or controlling those communicable diseases or conditions that have been determined to be injurious or to be a threat to the public health, subject to any limitations or conditions prescribed by the legislature.

(c) Subject to the confidentiality requirements of this Act, the department shall require and evaluate epidemiological reports of disease outbreaks and of individual cases of disease suspected or known to be of importance to the public health to establish the nature and magnitude of the hazards and to demonstrate the trends involved.

(d) The department may make inspections and investigations as authorized by this Act and other law.

ARTICLE 3. PREVENTION, REPORTING, AND INVESTIGATION OF COMMUNICABLE DISEASE

Sec. 3.01. PREVENTION. (a) The department may develop and maintain an ongoing program of health education for the prevention and control of communicable diseases.

(b) The department may contract for mass media productions, outdoor display advertising, newspaper advertising, literature, bulletins, pamphlets, posters, audiovisual displays, and other means of presentation that are intended to increase the public awareness of individual actions needed to prevent and control communicable disease.

(c) The department shall furnish the State Board of Education with recommendations and suggestions for the health curriculum in the public schools of the state.

(d) The board shall develop the immunization requirements for the children in the state and shall:

(1) cooperate with the Texas Board of Human Services in formulating and implementing the immunization requirements for children admitted to child-care facilities; and

(2) cooperate with the State Board of Education in formulating and implementing all immunization requirements for students admitted to public and private elementary or secondary schools.

(e) The Texas Animal Health Commission and the Texas A & M University Veterinary Diagnostic Laboratory shall each adopt by rule a memorandum of understanding with the department to exchange information on communicable diseases in animals.

Sec. 3.02. CLASSIFICATION OF COMMUNICABLE DISEASE FOR REPORTING. (a) The board shall identify and classify each communicable disease and health condition that must be reported under this Act. The classification must be based on the nature of the disease or condition and the severity of its impact on the public health.

(b) The board shall establish, maintain, and revise as necessary a list of reportable diseases and conditions.

(c) The board may establish registries for reportable and non-reportable communicable diseases and health conditions. Any information provided to the department of nonreportable communicable diseases or health conditions may be made only on a voluntary basis.

(d) Acquired immune deficiency syndrome and human immunodeficiency virus infection are reportable diseases or conditions under this Act. The board shall classify them as such and shall require them to be reported as provided by this Act.

Sec. 3.03. REPORTING REQUIREMENTS. (a) Every physician, dentist, and veterinarian licensed to practice in this state shall report to the local health authority, after the first professional encounter, each patient or animal examined having or suspected of having a reportable disease. If there is no local health authority appointed or if the physician is outside the jurisdiction of a local health authority, the report shall be made to the regional director.

(b) The local school authorities shall report to the local health authority those children attending school who are suspected of having a reportable disease. If there is no local health authority appointed or if the school is outside the jurisdiction of a local health authority, the report shall be made to the regional director. The board shall adopt rules

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establishing procedures for determining which children should be suspected and reported and procedures for their exclusion from school pending appropriate medical diagnosis or recovery.

(c) Any person who is in charge of a clinical or hospital laboratory, blood bank, mobile unit, or other facility in which a laboratory examination of any specimen derived from a human body yields microscopical, cultural, serological, or other evidence of a reportable disease or health condition as defined by the board shall notify the health authority or the regional director of the findings in accordance with this section and procedures adopted by the board.

(d) If the laboratory examination was requested by a physician, notice shall be sent to:

(1) the health authority for the jurisdiction where the physician's office is located, if the physician's office is within the jurisdiction of a public health district or local health department; or

(2) the regional director for the jurisdiction where the physician's office is located, if the physician's office is outside the jurisdiction of a public health district or local health department or if no health authority has been appointed.

(e) If the laboratory examination was not requested by a physician, notice shall be sent to:

(1) the health authority for the jurisdiction where the laboratory is located, if the laboratory is within the jurisdiction of a public health district or local health department; or

(2) the regional director for the jurisdiction where the laboratory is located, if the laboratory is outside the jurisdiction of a public health district or local health department or if no health authority has been appointed.

(f) If a case of a reportable disease or health condition has not been reported as required by Subsections (a), (b), and (c) of this section, the following persons should notify the local health authority or the department when a reportable disease or health condition is suspected and provide all information known to them concerning any person who has or is suspected of having a reportable disease or health condition:

(1) each professional, registered nurse;

(2) each administrator or director of a public or private temporary or permanent child-care facility;

(3) each administrator or director of a nursing home, personal care home, maternity home, adult respite care center, or adult day-care center;

(4) each administrator of a home health agency;

(5) each administrator or health official of a public or private institution of higher learning;

(6) each owner or manager of a restaurant, dairy, or other food handling or food processing establishment or outlet;

(7) each superintendent, manager, or health official of a public or private camp, home, or institution;

(8) each parent, guardian, or householder;

(9) each health professional; and

(10) each administrator or health official of a penal or correctional institution.

Sec. 3.04. GENERAL PROCEDURES FOR REPORTING COMMUNICABLE DISEASES.

(a) Each health authority or regional director shall keep a record of each case of a disease or condition reported to him.

(b) A health authority or regional director shall report to the department's central office diseases or conditions declared reportable by the board at least as frequently as the interval set by rule of the board.

(c) The board shall prescribe the form and method of reporting under this Act, which may be in writing, by telephone, by electronic data transmission, or by other means. The board may require the reports to contain any information necessary to achieve the purposes of this Act, including the name, address, age, sex, race, occupation, date of onset of the disease or condition, probable source of infection, the name of the attending physician or dentist, or other

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prescribed information pertaining to the reported case. If the commissioner determines that the procedure for reporting diseases or conditions would cause the information to be delayed unduly, the commissioner may authorize an alternate routing in particular cases.

Sec. 3.05. REPORTS OF DEATH DUE TO A COMMUNICABLE DISEASE.

(a) If a physician knows or suspects that an individual attended during the individual's last illness has died of a reportable disease or other communicable disease that in the physician's judgment may be a threat to the public health, the physician shall immediately notify the health authority of the jurisdiction in which the death is pronounced or the department.

(b) If either the attending physician or the health authority requires further information concerning the cause of death of an individual in order to protect the public health, the physician or the health authority may request that an autopsy be performed with the consent of the survivors. If there are no survivors or consent for an autopsy is withheld by the survivors, the health authority shall order an autopsy to determine the cause of death. The results of the autopsy shall be reported to the department.

(c) If either a justice of the peace acting as coroner or a county medical examiner in the course of an inquest under Chapter 49, Code of Criminal Procedure, 1965, determines that an individual's cause of death was a reportable disease or other communicable disease that in the coroner's or medical examiner's judgment may constitute a threat to the public health, the coroner or medical examiner shall immediately notify the health authority of the jurisdiction in which this finding was made or the department.

Sec. 3.06. CONFIDENTIALITY OF REPORTS AND RECORDS. (a) Reports, records, and information relating to cases or suspected cases of diseases or health conditions furnished to the health authority or the department are confidential and may be used only for the purpose of this Act. Reports, records, and information relating to cases or suspected cases of diseases or health conditions are not public information under Chapter 424, Acts of the 63rd Legislature, Regular Session, 1973 (Article 6252-17a, Vernon's Texas Civil Statutes). That information may not be released or made public on subpoena or otherwise, except:

(1) the release of medical or epidemiological information for statistical purposes made so that no person can be identified;

(2) the release of medical or epidemiological information made with the consent of all persons identified in the information released;

(3) the release is made of medical or epidemiological information to medical personnel, appropriate state agencies, or county and district courts made to comply with this Act and related rules concerning the control and treatment of communicable diseases and health conditions;

(4) the release of medical or epidemiological information to appropriate federal agencies, such as the United States Public Health Service Centers for Disease Control, limited to the name, address, age, sex, race, occupation, date of disease onset, probable source of infection, or other requested information relating to the case or suspected case of a communicable disease or health condition;

(5) the release of medical or epidemiological information to medical personnel in a medical emergency to the extent necessary to protect the health or life of the named party; or

(6) in a case of sexually transmitted disease involving a minor not more than 12 years of age, the release of only the child's name, age, address, and name of the disease to appropriate agents as required by Chapter 34, Family Code, and no other information; provided, that if the information to be disclosed is required in a court proceeding involving child abuse, the information shall be disclosed in camera.

(b) A state or public health district officer or employee, local health department officer or employee, or local health authority may not be examined in a civil, criminal, special, or other proceeding as to the existence or contents of pertinent records of a person examined or treated by the district, department, or authority for a reportable disease, or as to the existence or contents of any reports or information received from any person unless the person examined or treated for the disease or condition consents.

Sec. 3.07. INVESTIGATIONS. (a) The department shall investigate the causes of communicable diseases and methods of prevention.

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(b) The department may require special investigations of specified cases of disease so that it may evaluate the status in this state of diseases of an epidemic, endemic, or sporadic nature. On request, each health authority shall provide the data according to the written instructions of the department.

(c) The commissioner, the commissioner's designee, a health authority, or a health authority designee may enter at reasonable times and inspect within reasonable limits a public place or building, including a public conveyance, in the performance of his duty to prevent or control the entry into or spread in the state of communicable disease by enforcing the provisions of this Act or the rules of the board adopted under this Act. In this section, "a public place or building" means all or any portion of an area, a structure, or a conveyance, regardless of ownership, that is not used for private residential purposes.

(d) Persons authorized to conduct investigations under this section may take samples or specimens of materials present on the premises, including samples or specimens of soil, water, air, unprocessed or processed foodstuffs, manufactured items of clothing, pharmaceuticals, and household goods. If samples or specimens are taken, a corresponding sample shall be offered to the person in control of the premises for independent analysis. Persons securing the required samples and specimens may reimburse or offer to reimburse the owner for the materials taken, but the reimbursement may not exceed the actual monetary loss sustained by the owner.

(e) The department may investigate the existence of communicable diseases in the state to determine the nature and extent of the diseases and to formulate and evaluate the control measures employed to protect the public health. On request, a person shall provide the department with records, data, and other information according to the written instructions of the department. For the purpose of the investigation, the department may administer oaths, summon witnesses, and compel the witness's attendance and the production of documents. The department may seek the assistance of a county or district court to compel the production of documents and the witness's attendance at a hearing for which the documents are requested and the witness is summoned. A witness or deponent who is not a party and who is subpoenaed or otherwise compelled to appear at a hearing or proceeding under this section that is conducted outside the county in which the witness or deponent resides is entitled to receive a travel and per diem allowance to be set by rules adopted by the board. The allowance may not exceed the travel and per diem allowance authorized for state employees traveling in the state on official business.

(f) For the purpose of investigation or inspection, the commissioner, employees of the department, and health authorities have the right of entry onto any land or into any building, vehicle, watercraft, or aircraft and access to any individual, animal, or object that is in isolation, detention, restriction, or quarantine regardless of whether that measure is instituted by the commissioner, employees of the department, or a health authority or is a voluntary one undertaken on instructions from a private physician.

Sec. 3.08. NOTIFICATION OF EMERGENCY MEDICAL SERVICE EMPLOYEE, PEACE OFFICER, OR FIREFIGHTER. (a) The Texas Board of Health shall promulgate guidelines designating certain reportable disease for which this section requires notification. The Texas Board of Health shall also promulgate guidelines defining the conditions that constitute possible exposure to these certain reportable diseases.

(b) An emergency medical service personnel, peace officer, or firefighter shall be notified of a positive test result for any reportable disease listed in Texas Board of Health guidelines defined in Subsection (a) of this section if:

(1) a person was delivered to a hospital as defined by Section 1.03, Medical Liability and Insurance Improvement Act of Texas (Article 4590i, Vernon's Texas Civil Statutes), by the emergency medical service personnel, peace officer, or firefighter;

(2) the hospital has knowledge that the person has a reportable disease and has medical reason to believe that the person had the reportable disease at the time of admittance to the hospital; and

(3) the emergency medical service personnel, peace officer, or firefighter was exposed to the reportable disease during the course of duty.

(c) The hospital that admitted the person shall notify the local health authority of the possible exposure and the local health authority shall notify the director of the appropriate department of the entity that employs the emergency medical service personnel, peace officer, or firefighter of the possible exposure and the director shall notify the employee affected.

(d) Any person notified of a possible exposure under this section shall maintain the confidentiality of the information as provided by this Act.

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- (e) No person shall be liable for good faith compliance with this section.
- (f) Nothing in this section creates a duty by the hospital to perform any test or tests beyond those which are necessary for the medical management of the person delivered by [sic] the hospital.

ARTICLE 4. CONTROL OF COMMUNICABLE DISEASES

Sec. 4.01. GENERAL PROVISIONS. (a) Unless specifically preempted by the board, a health authority has supervisory authority and control over the administration of communicable disease control measures in the area under the jurisdiction of the health authority, except that any control measures imposed by a health authority must be consistent with and equal to or more stringent than the control measure standards contained in rules adopted by the board.

(b) A communicable disease control measure imposed by a health authority in the area under the jurisdiction of the health authority may be amended, revised, or revoked by the board if the board finds that the modification is necessary or desirable in the administration of a regional or statewide public health program or policy. A control measure imposed by the department may not be modified or discontinued until the department authorizes the action.

(c) As used in this section, the term "control measures" includes, but is not limited to:

- (1) immunization;
- (2) detention;
- (3) restriction;
- (4) disinfection;
- (5) decontamination;
- (6) isolation;
- (7) quarantine;
- (8) disinfestation;
- (9) chemoprophylaxis; and
- (10) preventive therapy.

(d) The control measures may be imposed on an individual, animal, place, or object, as appropriate.

Sec. 4.02. APPLICATION OF CONTROL MEASURES TO AN INDIVIDUAL.

(a) Every physician and every other person who examines or treats an individual having a communicable disease shall instruct the individual in measures for preventing reinfection and the spread of that disease and of the necessity for treatment until cured or free from the infection.

(b) If the department or health authority has reasonable cause to believe that an individual is ill with, has been exposed to, or is the carrier of a communicable disease, the department or health authority may order the individual or the individual's parent, legal guardian, or managing conservator, if the individual is not of legal age, to implement control measures that are reasonable and necessary to prevent the introduction, transmission, and spread of the disease in the state. All orders must be in writing and be delivered personally or by registered or certified mail to the individual if the individual is of legal age or to the individual's parent, legal guardian, or managing conservator if the individual is not of legal age. The order is not effective after the individual is no longer infected with a communicable disease or after the longest usual incubation period, in the case of a suspected disease.

(c) An individual may be subject to court orders for the control of communicable disease under Article 8 of this Act if the individual or the individual's parent, legal guardian, or managing conservator, if the individual is not of legal age, fails or refuses to comply with the written orders of the department or health authority as required by Subsection (b) of this section and the individual is infected with or is reasonably suspected of being infected with a communicable disease that presents an immediate threat to the public health.

(d) Except as prescribed by this subsection, an individual who is the subject of court orders under Article 8 of this Act shall pay the expense of the required medical care and treatment. The medical expenses of an individual who is a resident of the state, is indigent and without the financial means to pay for part or all of the required medical care or treatment, and is not eligible for benefits under an insurance contract, group policy or prepaid health plan, or benefits provided by a federal, state, county, or municipal medical assistance program or facility shall be paid by the county or hospital district of the individual's residence. The medical expenses of a nonresident individual who is indigent and without the financial means to pay for part or all of the required medical care and treatment may be paid by the state to the extent that the individual is not eligible for benefits that will pay the expenses under an insurance contract, group

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policy or prepaid health plan, or benefits provided by a federal, state, county, or municipal medical assistance program. The provider of the medical care and treatment shall certify the reasonable amount of the required medical care to the state comptroller of public accounts. The comptroller shall issue a warrant to the provider of the medical care and treatment for the certified amount. The department may return a nonresident individual involuntarily hospitalized in this state to the program agency in the state in which the individual resides. The department may enter into reciprocal agreements with the proper agencies of other states to facilitate the return of individuals involuntarily hospitalized in this state.

Sec. 4.03. APPLICATION OF CONTROL MEASURES TO OBJECTS. (a) If the department or a health authority has reasonable cause to believe that an object in its jurisdiction is or may be infected or contaminated with a communicable disease, the department or health authority may tag the object for identification with a notice of possible infection or contamination and place the object in quarantine for the period of time necessary for a medical examination or technical analysis of the samples and specimens taken from the object to reveal either the absence or the presence of the suspected infection or contamination. The department or health authority shall send notice of its action by registered or certified mail to the person who owns or controls the object. If the object is found to be free from infection or contamination, the department or health authority shall remove the quarantine and release the object to the person who owns or controls it. If the object is found to be infected or contaminated, the department or health authority by written order may require the owner or person in control of the object to impose control measures that are technically feasible to restore the object to a noninfected or noncontaminated condition. If the control measures are effective, the department or health authority shall remove the quarantine and release the object to the person who owns or controls it. If the technically feasible control measures are ineffective or if there is no technically feasible control measure available for use, the department or health authority may continue the quarantine and order the person who owns or controls the object to destroy it in a manner that will render it noninfected or noncontaminated to prevent the spread of infection or contamination.

(b) If a person fails or refuses to comply with the orders of the department or health authority as required by Subsection (a) of this section and the department or health authority has reason to believe that the object is or may be infected or contaminated with a communicable disease that presents an immediate threat to the public health, the department or health authority may petition the county or district court of the county in which the object is located to order the person who owns or controls the object to make necessary orders for the public health.

(c) On the filing of a petition, the court may grant injunctive relief and make temporary orders that are necessary for the health and safety of the public.

(d) The person who owns or controls the object shall pay all expenses of implementing control measures, court costs, storage, and other justifiable expenses. The court may require the person who owns or controls the object to execute a bond in an amount not to exceed the value of the noninfected or noncontaminated object to ensure the performance of any control measures, restoration, or destruction ordered by the court. This bond shall be returned to the person when the department or health authority informs the court that the object is no longer infected or contaminated or that the object has been destroyed.

(e) If the court finds that the object is not infected or contaminated, it shall order the department or health authority to remove the quarantine tags and to release the object to the person who owns or controls it.

(f) The department shall charge the person who owns or controls the object for the cost of any control measures performed by the department's employees. The department shall deposit the payments received under this section to the credit of the General Revenue Fund to be used for the administration of this Act. A health authority shall charge the person who owns or controls the object for the cost of any control measures performed by the health authority's employees. A health authority shall return payments received to each county, incorporated municipality, or other jurisdiction in an amount proportional to that jurisdiction's or entity's contribution to the quarantine and control expense.

Sec. 4.04. APPLICATION OF CONTROL MEASURES TO LAND, STRUCTURES, ANIMALS, OR OTHER PROPERTY ON LAND. (a) If the department or health authority has reasonable cause to believe that a parcel of land in its jurisdiction or a structure, an animal, or other property on the land is or may be infected or contaminated with a communicable disease, the department or health authority may place the land or property in quarantine for the period of time necessary for medical examination or technical analysis of samples and specimens of materials taken from the land, structure, animal, or other property to reveal either the absence or presence of the suspected infection or contamination. The department or health authority shall send notice of its action by registered or certified mail to the person who owns or controls the land, structure, animal, or other property and shall post notice on the land and on the courthouse door. If the land, structure, animal, or other property is found to be free from infection or contamination, the department or health authority shall remove the quarantine and return control of the land or other property to the person who owns or

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controls the land or other property. If the land, structure, animal, or other property is found to be infected or contaminated, the department or health authority by written order may require the person who owns or controls the land to impose control measures that are technically feasible. If the control measures are effective, the department or health authority shall remove the quarantine. If the technically feasible control measures are ineffective or if there are no technically feasible control measures available for use, the department or health authority may continue the quarantine and may order the person who owns or controls the land to securely fence the perimeter of the land or any part of the land that is infected or contaminated. The department or health authority may also order the person to destroy any infected or contaminated structure, animal, or other property in a manner that will render it noninfected or noncontaminated to prevent the spread of infection or contamination or to securely seal off the infected or contaminated structure or other property to obstruct entry into the infected or contaminated areas until the quarantine is removed by the board or health authority.

(b) If a person fails or refuses to comply with the orders of the department or health authority as required by Subsection (a) of this section and the department or health authority has reason to believe that the land, structure, animal or other property is or may be infected or contaminated with a communicable disease that presents an immediate threat to the public health, the department or health authority may petition the county or district court of the county or counties in which the land is located to make necessary orders for the public health.

(c) On the filing of a petition, the court may grant injunctive relief and make temporary orders that are necessary for the health and safety of the public.

(d) The person who owns or controls the land, structure, animal, or other property shall pay all expenses of implementing control measures, court costs, storage, and other justifiable expenses. The court may also require the person who owns or controls the land, structure, animal, or other property to execute a bond in an amount set by the court to ensure the performance of control measures, destruction, or restoration ordered by the court. This bond shall be returned to the person when the department or health authority informs the court that the land, structure, animal, or other property is no longer infected or contaminated or that the structure, animal, or other property has been destroyed.

(e) If the court finds that the land, structure, animal, or other property is not infected or contaminated, it shall order the department or health authority to remove the quarantine and to release the land or other property to the person who owns or controls the land or property.

(f) The department shall charge the person who owns or controls the land or property for the cost of any control measures performed by the department's employees. The department shall deposit the payments received under this section to the credit of the General Revenue Fund to be used for the administration of this Act. A health authority shall charge the person who owns or controls the land or property for the cost of any control measures performed by the health authority's employees. A health authority shall return payments received to each county, incorporated municipality, or other jurisdiction in an amount proportional to that jurisdiction's or entity's contribution to the quarantine and control expense.

Sec. 4.05. AREA QUARANTINE. (a) If an outbreak of communicable disease occurs in the state, the commissioner, a health authority, or two or more health authorities whose jurisdictions lie wholly or partly within the affected region may impose an area quarantine to be coextensive with the respective affected geographical area or areas in which the health authority or health authorities have jurisdiction. As appropriate in this section, "health authority" includes two or more health authorities acting under this subsection.

(b) An area quarantine may not be imposed by a health authority unless the health authority has first:

- (1) consulted with and obtained the approval of the commissioner; and
- (2) consulted with and obtained the approval of the governing body of each county and incorporated municipality in the geographical area over which the health authority has jurisdiction and in whose jurisdiction the affected area is located.

(c) In the absence of preemptive action by the board under the provisions of this Act or by the governor under the Texas Disaster Act of 1975 (Article 6889-7, Vernon's Texas Civil Statutes), the health authority may impose in the quarantine area under the health authority's jurisdiction the additional disease-control measures that the health authority determines are necessary and most appropriate to arrest, control, and eradicate the existing threat to the public health.

(d) If the affected geographical area lies within the jurisdiction of this state and one or more adjoining states, the department may enter into cooperative agreements with the appropriate officials or agencies of the adjoining states for:

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- (1) the exchange of morbidity, mortality, and other technical information;
- (2) the receipt of extrajurisdictional inspection reports;
- (3) the coordination of disease-control measures;
- (4) the dissemination of instructions to the population of the area, operators of interstate private and common carriers, and private vehicles in transit across state borders; and
- (5) the participation in other public-health activities appropriate to arrest, control, and eradicate the existing threat to the public health.

(e) During the period of area quarantine, the department or health authority may employ all reasonable means of communication to inform persons present in the quarantine area of the orders and instructions of the board or health authority. The department or health authority shall publish at least once each week during the period of area quarantine, in a newspaper of general circulation in the area, a notice of the orders or instructions currently in force with a brief explanation of their meaning and effect. Notice by publication is sufficient notice to inform persons in the area of their rights, duties, and obligations under the orders or instructions.

(f) An area quarantine may be terminated by the commissioner or with the commissioner's consent by a health authority.

Sec. 4.06. PRIVATE AND COMMON CARRIERS; PRIVATE CONVEYANCES.

(a) This section applies to:

- (1) all private or common carriers and private conveyances, including a vehicle, an aircraft, and a watercraft operated solely in the jurisdiction of the state; and
- (2) all private or common carriers and private conveyances, including a vehicle, an aircraft, and a watercraft operated between one or more states of the United States or between the United States and one or more foreign nations while the vehicle or craft is in the jurisdiction of the state.

(b) If the department or health authority has reasonable cause to believe that a private carrier, common carrier, or private conveyance has departed from or traveled through an area infected or contaminated with a communicable disease, the department or health authority may order the commander, captain, master, driver, or other authorized agent, owner, or operator to stop the carrier or conveyance under his control at a port of entry or a place of first landing or first arrival in the jurisdiction of the state. The department or health authority may require the commander, captain, master, driver, or other authorized agent, owner, or operator to provide a statement in a form approved by the board that includes information showing:

- (1) the details of any illness suspected of being communicable that occurred during the journey;
- (2) the details of any condition on board the carrier or conveyance during the journey that may lead to the spread of disease;
- (3) the details of any control measures that were imposed on the carrier or conveyance, its passengers or crew, or its cargo or any other object on board during the journey; and
- (4) any other information that is required by rules adopted by the board, including information on passengers and cargo manifests.

(c) If the department or health authority, after inspection, has reasonable cause to believe that a private carrier, common carrier, or private conveyance that has departed from or traveled through an infected or contaminated area is or may be infected or contaminated with a communicable disease, that its cargo, or a part of its cargo, or any other object on board is or may be infected or contaminated with a communicable disease, or that an individual on board has been exposed to, or is the carrier of, a communicable disease, the department or health authority may impose necessary, technically feasible control measures under the provisions of Section 4.02 or 4.03 of this Act to prevent the introduction and spread of communicable disease in the state.

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(d) The owner or operator of a private carrier, common carrier, or private conveyance placed in quarantine on the order of the department or health authority, or on the order of a county or district court under the provisions of Section 4.02 or 4.03 of this Act, shall bear the expense of the control measures employed to restore the private carrier, common carrier, or private conveyance to a noninfected or noncontaminated state. The department shall charge and be reimbursed for the cost of any control measures performed by the department's employees. The board shall deposit the reimbursements to the credit of the General Revenue Fund to be used for the administration of this Act. A health authority shall charge and be reimbursed for the cost of any control measures performed by the health authority's employees. A health authority shall return the reimbursements to each county, incorporated municipality, or other governmental entity in an amount proportional to that jurisdiction's or entity's contribution to the quarantine and control expense.

(e) The owner or claimant of any part of the cargo or other object on board the private carrier, common carrier, or private conveyance shall pay the expense of the control measures employed in a manner prescribed by Section 4.03 of this Act. The cost of services rendered or provided by the board or health authority are subject to reimbursement under the procedure prescribed by Subsection (d) of this section.

(f) A crew member, a passenger, or an individual on board the private carrier, common carrier, or private conveyance shall pay the expense of the control measures employed under the provision of Section 4.02 of this Act. The state may pay the expenses of an individual who is without the financial means to pay for part or all of the required medical care or treatment and who is not eligible for benefits under an insurance contract, group policy or prepaid health plan, or benefits provided by a federal, state or local medical assistance program, as prescribed by Section 4.02(d) of this Act.

(g) A private carrier, a common carrier, a private conveyance, cargo, a crew member, a passenger, or an individual, an animal, or object placed in quarantine under this section may not be removed or may not depart from the area of quarantine until permission for removal or departure is given by the department or health authority.

(h) If the department or health authority has reasonable cause to believe that a private carrier, common carrier, or private conveyance is transporting cargo or any other object that is or may be infected or contaminated with a communicable disease through the state, the department or health authority may require that the cargo or object be transported in secure confinement or sealed within cars, trailers, holds, or compartments, as appropriate, that are secured on the order and instruction of the board or health authority.

(i) If the department or health authority has reasonable cause to believe that a private carrier, common carrier, or private conveyance is transporting cargo or any other object that is or may be infected or contaminated with a communicable disease to an intermediate or ultimate destination in the state and the intermediate or ultimate destination cannot provide the necessary facilities, the department or health authority may require that the cargo or objects in transit be unloaded at an alternate location equipped with adequate investigative and disease-control facilities.

(j) The department or health authority may proceed as authorized by Section 4.03 of this Act to investigate and, if necessary, quarantine the cargo or object and impose any required control measure.

(k) If the department or health authority has reasonable cause to believe that a private carrier, common carrier, or private conveyance is transporting an individual who has been exposed to or is the carrier of a communicable disease, the department or health authority may require the individual, whether in transit through the state or in transit to an intermediate or ultimate destination in the state, to be isolated from other travelers and, together with his personal effects and baggage, to disembark at the first location equipped with adequate investigative and disease-control facilities. The department or health authority may proceed as authorized under Section 4.02 of this Act to investigate and, if necessary, isolate or involuntarily hospitalize the individual until discharge is approved by the department or health authority.

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TEXAS DEPARTMENT OF HEALTH Bureau of Communicable Disease Control and Epidemiology

(Article 4419b-1, Vernon's Texas Civil Statutes)

ARTICLE 9. TESTS FOR ACQUIRED IMMUNE DEFICIENCY SYNDROME AND RELATED DISORDERS

Sec. 9.01. DEFINITIONS. In this Act:

- (1) "AIDS" means acquired immune deficiency syndrome as defined by the Centers for Disease Control of the United States Public Health Service.
- (2) "HIV" means human immunodeficiency virus.
- (3) "Bona fide occupational qualification" means a qualification:
 - (A) that is reasonably related to the satisfactory performance of the duties of a job; and
 - (B) for which there is a reasonable cause for believing that a person of the excluded group would be unable to perform satisfactorily the duties of the job with safety.
- (4) "Blood bank" means a blood bank, blood center, regional collection center, tissue bank, transfusion service, or other similar facility licensed by the Bureau of Biologics of the United States Food and Drug Administration, accredited for membership in the American Association of Blood Banks, or qualified for membership in the American Association of Tissue Banks.
- (5) "Test result" means any statement or assertion that any identifiable individual is positive, negative, at risk, has or does not have a certain level of antigen or antibody, or any other statement that indicates that an identifiable individual has or has not been tested for AIDS or HIV infection, antibodies to HIV, or infection with any other probable causative agent of AIDS.

Sec. 9.02. TESTS FOR AIDS AND RELATED DISORDERS. (a) A person or entity may not require another person to undergo any medical procedure or test designed to show or help show whether a person has AIDS or HIV infection, antibodies to HIV, or infection with any other probable causative agent of AIDS unless required under Subsection (c) or (g) of this section or under Article 21.31, Code of Criminal Procedure, or unless the medical procedure or test is necessary:

- (1) as a bona fide occupational qualification and there exists no less discriminatory means of satisfying the occupational qualification;
- (2) to screen blood, blood products, bodily fluids, organs, or tissues for the purpose of determining suitability for donation;
- (3) in relation to a particular person under this Act;
- (4) to test residents and clients of residential facilities of the Texas Department of Mental Health and Mental Retardation, but only if:
 - (A) the test result would change the medical or social management of the person tested or others who associate with that person; and
 - (B) the test is conducted in accordance with guidelines that have been adopted by the residential facility or the Texas Department of Mental Health and Mental Retardation, and approved by the department; or

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(5) to manage accidental exposure to blood or other bodily fluids but only if the test is conducted in accordance with written infectious disease control protocols adopted by the health care agency or facility and is conducted in accordance with Subsection (d) of this section.

(b) An employer who alleges that a test is necessary as a bona fide occupational qualification has the burden of proving the allegation.

(c) The board may adopt emergency rules for mandatory testing for HIV infection if the commissioner files a certificate of necessity with the board that contains supportive findings of medical and scientific fact and that declares a sudden and imminent threat to public health. Rules adopted under this subsection must:

(1) provide for the narrowest application of HIV testing necessary for the protection of public health;

(2) provide procedures and guidelines to be followed by affected entities and state agencies that clearly specify the need and justification for the testing, specify methods to be used to assure confidentiality, and delineate responsibility and authority for carrying out the recommended actions;

(3) provide for counseling of persons with seropositive test results; and

(4) provide for confidentiality regarding persons tested and their test results.

(d) Protocols adopted under Subsection (a)(5) of this section must clearly establish procedural guidelines that provide criteria for testing and that respect the rights of the person with the infection and the person who may be exposed to that infection. The protocols may not require the person who may have been exposed to be tested and must ensure the confidentiality of the person with the infection in accordance with this Act.

(e) When the prevalence rate of confirmed positive HIV infection is 0.83 percent, as reported under the Communicable Disease Prevention and Control Act (Article 4419b-1, Vernon's Texas Civil Statutes), the Texas Board of Health shall promulgate emergency rules for mandatory testing for HIV infection as a condition for obtaining a marriage license.

(f) This section does not provide a duty to test for AIDS and related disorders, and a cause of action does not arise under this section for the failure to test for AIDS and related disorders.

(g) A patient may be required to be tested for AIDS or HIV infection, antibodies to HIV, or infection with any other probable causative agent of AIDS if a medical procedure is to be performed on the patient that could expose health care personnel to AIDS or HIV infection, according to Texas Board of Health guidelines defining the conditions that constitute possible exposure to AIDS or HIV infection, and if there is sufficient time to receive the test result before the procedure is conducted.

Sec. 9.03. CONFIDENTIALITY AND DISCLOSURE OF TEST RESULTS. (a) A test result is confidential. Except as provided by this section, any person, firm, corporation, physician, hospital, blood center, blood bank, laboratory, or other entity that possesses or has knowledge of the test result may not release or disclose a test result or allow a test result to become known.

(b) A test result may be released only to:

(1) the department under this Act;

(2) a local health authority if reporting is required under this Act;

(3) the Centers for Disease Control of the United States Public Health Service if reporting is required by federal law or regulation;

(4) the physician or other person authorized by law who ordered the test;

(5) a physician, nurse, or other health care personnel who have a legitimate need to know the test result in order to provide for their protection and to provide for the patient's health and welfare;

(6) the person tested or a person legally authorized to consent to the test on the person's behalf;

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(7) the spouse of the person tested if the person tests positive for AIDS or HIV infection, antibodies to HIV, or infection with any other probable causative agent of AIDS and the physician who ordered the test makes the notification. This subdivision does not provide a duty to notify the spouse, and a cause of action does not arise under this subdivision for the failure to make that notification; and

(8) if the person is tested as required by Article 21.31, Code of Criminal Procedure, the victim of an alleged offense listed in that article committed by the person tested. The court shall notify the victim of the alleged offense of the requirements of this Act under this section.

(c) This section does not prohibit the person tested or a person legally authorized to consent to the test on the person's behalf from:

(1) voluntarily releasing or disclosing that person's test results to persons or entities other than those provided by this section; or

(2) authorizing the release or disclosure of that person's test results to persons or entities other than those provided by this section.

(d) The authorization prescribed by Subsection (c)(2) of this section must be in writing and signed by the person tested or a person legally authorized to consent to the test on the person's behalf and must state the persons or entities or classification of persons or entities to whom the test results may be released or disclosed.

(e) If a report of a test result is used for statistical summary purposes only, the person or entity releasing or disclosing the test result may disclose or release the information without the written consent of the person tested only after any information that could identify the person is removed from the report.

(f) A blood bank may report positive blood test results indicating the name of a donor with a possible infectious disease to other blood banks. A blood bank that reports a donor's name to other blood banks under this subsection may not disclose the infectious disease that the donor has or is suspected of having. A blood bank making a report as provided by this subsection is not considered to have breached a confidence arising out of any confidential relationship.

(g) A blood bank may provide blood samples to hospitals, laboratories, and other blood banks for additional, repetitive, or different testing.

(h) A blood bank may report blood test results to the hospitals where the blood was transfused, to the physician who transfused the infected blood, and to the recipient of the blood. A blood bank may also report blood test results for statistical purposes. A blood bank that reports test results under this subsection may not disclose the name of the donor or person tested or any other information that could result in disclosure of the donor's or person's name, including addresses, social security number, designated recipients, or replacement information.

(i) This section does not prohibit an employee of a health care facility from viewing test results while performing the employee's duties if the employee's job requires the employee to deal with permanent medical records and the employee learns of test results during reasonable health care facility practices. Test results that may be viewed under this subsection are confidential as provided by this Act.

Sec. 9.04 CIVIL LIABILITY. (a) Any person who is injured by a violation of Section 9.02 or 9.03 of this Act may bring a civil action for damages. In addition, any person may bring an action to restrain a violation or threatened violation of those sections.

(b) If it is found in a civil action that a person or entity has violated Section 9.02 of this Act, the person or entity is liable for:

(1) actual damages;

(2) a civil penalty of not more than \$1,000; and

(3) court costs and reasonable attorney's fees incurred by the person bringing the action.

(c) If it is found in a civil action that a person or entity has negligently released or disclosed a test result or allowed a test result to become known in violation of Section 9.03 of this Act, the person or entity is liable for:

(1) actual damages;

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- (2) a civil penalty of not more than \$1,000; and
 - (3) court costs and reasonable attorney's fees incurred by the person bringing the action.
- (d) If it is found in a civil action that a person or entity has wilfully released or disclosed a test result or allowed a test result to become known in violation of Section 9.03 of this Act, the person or entity is liable for:
- (1) actual damages;
 - (2) a civil penalty of not less than \$1,000 nor more than \$5,000; and
 - (3) court costs and reasonable attorney's fees incurred by the person bringing the action.
- (e) Each release or disclosure made, or allowance of a test result to become known, in violation of this Act constitutes a separate offense.
- (f) A defendant in a civil action brought under this section is not entitled to claim any privilege as a defense to the action.

Sec. 9.05. TESTS FOR AIDS AND RELATED DISORDERS; PENALTY. (a) A person or entity that requires a medical procedure or test in violation of Section 9.02 of this Act commits an offense.

(b) An offense under this section is a Class A misdemeanor.

Sec. 9.06. RELEASING OR DISCLOSING TEST RESULTS; PENALTY. (a) A person or entity that, with criminal negligence, releases or discloses a test result or other information or that allows a test result or other information to become known in violation of Section 9.03 of this Act commits an offense.

(b) An offense under this section is a Class A misdemeanor.

Added by Acts 1983, 68th Leg., p. 1116, ch. 255, 1, eff. Sept. 1, 1983; Sec. 1.02 amended by Act, 1987, 70th Leg., ch. 543, 1, eff. Sept. 1, 1987; Sec. 1.04 amended by Act, 1987, 70th Leg., ch. 543, 2, eff. Sept. 1, 1987; Sec. 2.02(c) amended by Acts, 1987, 70th Leg., ch. 543, 3, eff. Sept. 1, 1987; Sec. 2.03(b) amended by Acts, 1987, 70th Leg., ch. 543, 4, eff. Sept. 1, 1987; Sec. 3.01(a)-(d) amended and Sec. 3.01(e) added by Acts, 1987, 70th Leg., ch. 543, 5, eff. Sept. 1, 1987; Sec. 3.02(b) amended and 3.02(c)-(d) added by Acts, 1987, 70th Leg., ch. 543, 6, eff. Sept. 1, 1987; Sec. 3.03 amended by Acts, 1987, 70th Leg., ch. 543, 7, eff. Sept. 1, 1987; Sec. 3.04(a) amended and Sec. 3.04(b) and (c) added by Acts, 1987, 70th Leg., ch. 543, 8, eff. Sept. 1, 1987; Sec. 3.05 amended by Acts, 1987, 70th Leg., ch. 543, 9, eff. Sept. 1, 1987; Sec. 3.06 amended by Acts, 1987, 70th Leg., ch. 543, 10, eff. Sept. 1, 1987; Sec. 3.07 amended by Acts, 1987, 70th Leg., ch. 543, 11, eff. Sept. 1, 1987; Sec. 3.08 added by Acts, 1987, 70th Leg., ch. 543, 12, eff. Sept. 1, 1987; Sec. 4.01(c) amended by Acts, 1987, 70th Leg., ch. 543, 13, eff. Sept. 1, 1987; Sec. 4.02 amended by Acts, 1987, 70th Leg., ch. 543, 14, eff. Sept. 1, 1987; Sec. 4.06(f) amended by Acts, 1987, 70th Leg., ch. 543, 15, eff. Sept. 1, 1987; Sec. 6.01(b) amended by Acts, 1987, 70th Leg., ch. 543, 16, eff. Sept. 1, 1987; Sec. 6.02(b) amended by Acts, 1987, 70th Leg., ch. 543, 17, eff. Sept. 1, 1987; Sec. 6.04 amended by Acts, 1987, 70th Leg., ch. 543, 18, eff. Sept. 1, 1987; Sec. 6.09 and Sec. 6.10 added by Acts, 1987, 70th Leg., ch. 543, 19, eff. Sept. 1, 1987; Art. 7 added by Acts, 1987, 70th Leg., ch. 543, 20, eff. Sept. 1, 1987; Art. 8 added by Acts, 1987, 70th Leg., ch. 543, 21, eff. Sept. 1, 1987; Art. 9 added by Acts, 1987, 70th Leg., ch. 543, 22, eff. Sept. 1, 1987; Sec. 9.02 amended by Act, 1987 70th Leg., 2nd Called Session, ch. 55, 4, eff. October 20, 1987; Sec. 9.03 amended by Acts, 1987, 70th Leg., 2nd Called Session, ch. 55, 5, eff. October 20, 1987.

Other Provisions from Chapter 543, Acts of the 70th Legislature,
Regular Session, 1987 (HB 1829, McDonald)

Sec. 23. Section 35.03(a), Family Code, is amended to read as follows:

(a) A minor may consent to the furnishing of hospital, medical, surgical, and dental care by a licensed physician or dentist if the minor:

- (1) is on active duty with the armed services of the United States of America;
- (2) is 16 years of age or older and resides separate and apart from his parents, managing conservator, or guardian, whether with or without the consent of the parents, managing conservator, or guardian and regardless of the duration of such residence, and is managing his own financial affairs, regardless of the source of the income;

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(3) consents to the diagnosis and treatment of any infectious, contagious or communicable disease which is required by law or regulation adopted pursuant to law to be reported by the licensed physician or dentist to a local health officer or the Texas Department of Health and including all sexually transmitted diseases [within the scope by law or regulation of Section 1.02, Article 4445d, Vernon's Texas Civil Statutes];

(4) is unmarried and pregnant, and consents to hospital, medical, or surgical treatment, other than abortion, related to her pregnancy;

(5) is 18 years of age or older and consents to the donation of his blood and the penetration of tissue necessary to accomplish the donation; or

(6) consents to examination and treatment for drug addiction, drug dependency, or any other condition directly related to drug use.

Sec. 24. The following laws are repealed:

(1) Texas Venereal Disease Act (Article 4445d, Vernon's Texas Civil Statutes);

(2) Sections 4, 4A, 5, 6, and 7, Texas Tuberculosis Code (Article 4477-11, Vernon's Texas Civil Statutes);

(3) Sections 3, 4, 5, 6, 7, 9, and 10, Chapter 51, Acts of the 59th Legislature, Regular Session, 1965 (Article 4477-12, Vernon's Texas Civil Statutes); and

(4) Section 6.05, Communicable Disease Prevention and Control Act (Article 4419b-1, Vernon's Texas Civil Statutes).

Sec. 25. An offense committed before the effective date of this Act under a law that is repealed by this Act is governed by the law in effect when the offense occurred, and the former law is continued in effect for that purpose.

Sec. 26. Subsection (d), Section 3.06, Medical Practice Act (Article 4495b, Vernon's Texas Civil Statutes), is amended by adding Subdivision (7) to read as follows:

(7)(A) It is the policy of this state that the prevention of ophthalmia neonatorum in newborn infants is of paramount importance for the protection of the health of Texas children.

(B) Authority to delegate medical acts to a lay midwife registered under Chapter 365, Acts of the 68th Legislature, Regular Session, 1983 (Article 4512i, Vernon's Texas Civil Statutes), is recognized as applicable to the possession of the administration of eye prophylaxis for the prevention of ophthalmia neonatorum.

(C) A physician who has issued such a standing delegation order is immune from liability in connection with acts performed pursuant to the standing delegation order as long as a lay midwife has provided proof of compliance with Chapter 365, Acts of the 68th Legislature, Regular Session, 1983 (Article 4512i, Vernon's Texas Civil Statutes), prior to the issuance of the order.

Sec. 27. Title 108, Revised Statutes, is amended by adding Article 6203c-12 to read as follows:

Art. 6303c-12. TESTING FOR COMMUNICABLE DISEASES. The Texas Department of Corrections is authorized to test inmates of correctional facilities for human immunodeficiency virus. If the department determines that an inmate has a positive test result, the inmate may be segregated from other inmates.

Sec. 28. This Act takes effect September 1, 1987.

Sec. 29. The importance of this legislation and the crowded condition of the calendars in both houses create an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days in each house be suspended, and this rule is hereby suspended.

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Other Provisions from Chapter 55, Acts of the 70th Legislature, Second Called Session, 1987.

Code of Criminal Procedure

Art. 21.31. (a) A person indicted for an offense under Section 22.011 or 22.021, Penal Code, shall, at the direction of the court, undergo a medical procedure or test designed to show or help show whether the person has a sexually transmitted disease or has acquired immune deficiency syndrome (AIDS) or human immunodeficiency virus (HIV) infection, antibodies to HIV, or infection with any other probable causative agent of AIDS. The court may direct the person to undergo the procedure or test on its own motion or on the request of the victim of the alleged offense. If the person refuses to submit voluntarily to the procedure or test, the court may require the person to submit to the procedure or test. The person performing the procedure or test shall make the test results available to the local health authority, and the local health authority shall be required to make the notification of the test result to the victim of the alleged offense. The state may not use the fact that a medical procedure or test was performed on a person under this subsection or use the results of the procedure or test in any criminal proceeding arising out of the alleged offense.

(b) Testing under this section shall be conducted in accordance with written infectious disease control protocols adopted by the Texas Board of Health that clearly establish procedural guidelines that provide criteria for testing and that respect the rights of the person accused and the victims of the alleged offense.

(c) Nothing in this section would allow a court to release a test result to anyone other than those specifically authorized by this law and the provisions of Subdivision (2), Subsection (c), Section 9.03, Communicable Disease Prevention and Control Act (Article 4419b-1, Vernon's Texas Civil Statutes), shall not be construed to allow such disclosure.

9/24/87

RULES & REGULATIONS FOR THE CONTROL OF COMMUNICABLE DISEASES

97.3. Reportable Diseases and Health Conditions.

(a) The department's publication "Identification and Confirmation of Reportable Diseases" is adopted by reference. This publication shall be used to determine when a reportable disease should be reported under these rules based on a specific diagnosis, test procedure, and/or confirmatory test. Copies are available upon request to the Materials Acquisition and Management Division, Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756. Copies are indexed and filed in the Bureau of Disease Control and Epidemiology, Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756, and are available for public inspection during regular working hours.

(b) The following diseases are reportable: acquired immune deficiency syndrome; amebiasis; anthrax; botulism - adult and infant; brucellosis; campylobacteriosis; chickenpox; Chlamydia trachomatis infection; cholera; coccidioidomycosis; dengue; diphtheria; encephalitis (specify etiology); gonorrhea; Hansen's disease (leprosy); Haemophilus influenzae infections; hepatitis, viral - type A, type B, type D (delta agent), type non-A/non-B, and unspecified types; histoplasmosis; HIV infection; influenza and flu-like illness; legionellosis; leptospirosis; listeria infections; Lyme disease; malaria; measles; meningitis - bacterial, aseptic/viral, fungal, and other (specify etiology, all types); meningococcal infections; mumps; pertussis; plague; poliomyelitis; paralytic; psittacosis; Q fever; rabies in man; Reye syndrome; Rocky Mountain spotted fever; rubella; rubella, congenital syndrome; salmonellosis; shigellosis; syphilis; tetanus; toxic shock syndrome; trichinosis; tuberculosis; tularemia; typhoid fever; typhus fever - endemic (murine) and epidemic; vibrio infections; viral hemorrhagic fever; and yellow fever.

(c) In addition to individual case reports, any unusual outbreak of disease that could be of public health concern should be reported by the most expeditious means.

97.5 Reporting and Other Duties of Local Health Authorities and Regional Directors.

(a) The purpose of this section is to provide procedures for local health authorities to report a disease to the department. Chlamydia trachomatis infection, gonorrhea, and syphilis shall be reported in accordance with Sub. Sec. 97.131, 97.134, and 97.135 of this chapter (relating to Sexually Transmitted Diseases).

(b) The local health authority or regional director shall collect reports of disease and transmit the following information at weekly intervals as directed by the department:

(1) numerical totals only: influenza and flu-like illness;

(2) numerical totals by age: chickenpox;

(3) numerical totals by age and sex: HIV infection.

(4) For all other reportable diseases, by name, city, age, sex, race/ethnicity, physician, disease, type of diagnosis, and date of onset.

(c) Transmittal may be by telephone, mail, courier, or electronic transmission.

(1) If by mail or courier, the reports shall be on a form provided by the department and placed in a sealed envelope addressed to the attention of the appropriate receiving source and marked "Confidential."

(2) If by electronic transmission, including facsimile transmission by telephone, the local health authority or regional director must obtain prior approval of the manner and form of the transmission from the Commissioner or his/her designee. Any electronic transmission of the reports must provide at least the same degree of protection against unauthorized disclosure as those of mail or courier transmittal.

(d) The local health authority shall notify health authorities in other jurisdictions of a case or outbreak of a communicable disease that has been reported if the case resides in another jurisdiction or there is cause to believe transmission of a disease may have occurred in another jurisdiction. The department shall assist the local health authority in providing such notifications upon request. The local health authority of the area where the case or outbreak is diagnosed shall report the case or outbreak to the department on the same basis as other reports.

(e) The local health authority upon identification of a case or upon receipt of notification or report of disease shall take such action and measures as may be necessary to conform with the appropriate control measure standards. The local health authority may upon identification of a case or upon report of a communicable disease in a child attending a public or private child-care facility or a school notify the owner or operator of the child-care facility or the school administrator. The Commissioner is authorized to amend, revise, or revoke any control measure or action taken by the local health authority if necessary or desirable in the administration of a regional or statewide public health program or policy.

(f) The local health authority is empowered to close any public or private child-care facility, school or other place of public or private assembly when in his or her opinion such closing is necessary to protect the public health; and such school or other place of public or private assembly shall not reopen until permitted by the health authority who caused its closure.

97.13. Guidelines for Testing Certain Indicted Persons for Certain Diseases.

(a) A court may order a person who is indicted for sexual assault or aggravated sexual assault to submit to a medical procedure or test for presence of sexually transmitted diseases or AIDS or HIV or other agent of AIDS, under authority of Article 21.31 of the Code of Criminal Procedure. The physician who is directed by the court to perform the medical procedure or test shall follow the rules in this section that prescribe the criteria for testing and that respect the rights of the victim of the alleged offense and the rights of the person accused.

(b) In order to protect the privacy of the person being tested, the court, in consultation with the local health authority, shall use or arrange the use of a pseudonym for the person on all requests and reports pertaining to the procedure or test; the pseudonym shall be distinct and known only to the physician, the local health authority, the person being tested, and the court. The person performing the procedures or test shall make the results available directly to the local health authority.

(c) For AIDS, HIV infection, syphilis, gonorrhea, viral hepatitis B, and genital infections from *Chlamydia trachomatis*, the procedures and tests shall be those specified in the department's publication "Identification and Confirmation of Reportable Diseases," as adopted by reference in Sub. Sec. 97.3 of this title (pertaining to the reporting of diseases and health conditions). For other sexually transmitted diseases, the physician shall request instructions from the commissioner or his designee.

(d) The local health authority shall meet with the victim of the alleged offense and disclose the results of the medical procedures or test; no other person shall be present during the notification unless permitted by the victim. The local health authority shall advise the victim of the medical implications of the test results whether or not the test results are positive or negative. The local health authority shall instruct the victim to receive further medical intervention by the victim's personal physician. If the victim resides outside the State of Texas, the notification may be made by telephone.

(e) The local health authority shall notify the person accused of the results of the procedure or test and, if the result indicates the presence of a communicable disease, shall instruct the person accused as required by Section 4.02 (a) of the Communicable Disease Prevention and Control Act and shall perform the appropriate duties and make the reports, as required by Sub. Sec. 97.5 of the title (pertaining to reporting and other duties of local health authorities and regional directors).

(f) After reporting of the results of the procedure or test to the victim and to the person accused, the local health authority shall file an affidavit with the court attesting that he or she has executed the order. Disclosure of the test results to any persons other than the victim and the accused person is prohibited under Article 21.31, Code of Criminal Procedure.

(g) A local health authority may delegate any duty imposed by these rules to a person who is under the local health authority's supervision. If a victim or a person tested under this section resides outside the jurisdiction of the local health authority, the notifications required by this section may be made by the local health authority in the jurisdiction where the person resides.

MMWR

Supplement

MORBIDITY AND MORTALITY WEEKLY REPORT

**Recommendations for
Prevention of HIV
Transmission in Health-Care
Settings**

U. S. Department of Health and Human Services
Public Health Service
Centers for Disease Control
Atlanta, Georgia 30333

Recommendations for Prevention of HIV Transmission in Health-Care Settings

Introduction

Human immunodeficiency virus (HIV), the virus that causes acquired immunodeficiency syndrome (AIDS), is transmitted through sexual contact and exposure to infected blood or blood components and perinatally from mother to neonate. HIV has been isolated from blood, semen, vaginal secretions, saliva, tears, breast milk, cerebrospinal fluid, amniotic fluid, and urine and is likely to be isolated from other body fluids, secretions, and excretions. However, epidemiologic evidence has implicated only blood, semen, vaginal secretions, and possibly breast milk in transmission.

The increasing prevalence of HIV increases the risk that health-care workers will be exposed to blood from patients infected with HIV, especially when blood and body-fluid precautions are not followed for all patients. Thus, this document emphasizes the need for health-care workers to consider all patients as potentially infected with HIV and/or other blood-borne pathogens and to adhere rigorously to infection-control precautions for minimizing the risk of exposure to blood and body fluids of all patients.

The recommendations contained in this document consolidate and update CDC recommendations published earlier for preventing HIV transmission in health-care settings: precautions for clinical and laboratory staffs (1) and precautions for health-care workers and allied professionals (2); recommendations for preventing HIV transmission in the workplace (3) and during invasive procedures (4); recommendations for preventing possible transmission of HIV from tears (5); and recommendations for providing dialysis treatment for HIV-infected patients (6). These recommendations also update portions of the "Guideline for Isolation Precautions in Hospitals" (7) and reemphasize some of the recommendations contained in "Infection Control Practices for Dentistry" (8). The recommendations contained in this document have been developed for use in health-care settings and emphasize the need to treat blood and other body fluids from all patients as potentially infective. These same prudent precautions also should be taken in other settings in which persons may be exposed to blood or other body fluids.

Definition of Health-Care Workers

Health-care workers are defined as persons, including students and trainees, whose activities involve contact with patients or with blood or other body fluids from patients in a health-care setting.

Health-Care Workers with AIDS

As of July 10, 1987, a total of 1,875 (5.8%) of 32,395 adults with AIDS, who had been reported to the CDC national surveillance system and for whom occupational information was available, reported being employed in a health-care or clinical laboratory setting. In comparison, 6.8 million persons—representing 5.6% of the U.S. labor force—were employed in health services. Of the health-care workers with AIDS, 95% have been reported to exhibit high-risk behavior; for the remaining 5%, the means of HIV acquisition was undetermined. Health-care workers with AIDS were significantly more likely than other workers to have an undetermined risk (5% versus 3%, respectively). For both health-care workers and non-health-care workers with AIDS, the proportion with an undetermined risk has not increased since 1982.

AIDS patients initially reported as not belonging to recognized risk groups are investigated by state and local health departments to determine whether possible risk factors exist. Of all health-care workers with AIDS reported to CDC who were initially characterized as not having an identified risk and for whom follow-up information was available, 66% have been reclassified because risk factors were identified or because the patient was found not to meet the surveillance case definition for AIDS. Of the 87 health-care workers currently categorized as having no identifiable risk, information is incomplete on 16 (18%) because of death or refusal to be interviewed; 38 (44%) are still being investigated. The remaining 33 (38%) health-care workers were interviewed or had other follow-up information available. The occupations of these 33 were as follows: five physicians (15%), three of whom were surgeons; one dentist (3%); three nurses (9%); nine nursing assistants (27%); seven housekeeping or maintenance workers (21%); three clinical laboratory technicians (9%); one therapist (3%); and four others who did not have contact with patients (12%). Although 15 of these 33 health-care workers reported parenteral and/or other non-needlestick exposure to blood or body fluids from patients in the 10 years preceding their diagnosis of AIDS, none of these exposures involved a patient with AIDS or known HIV infection.

Risk to Health-Care Workers of Acquiring HIV in Health-Care Settings

Health-care workers with documented percutaneous or mucous-membrane exposures to blood or body fluids of HIV-infected patients have been prospectively evaluated to determine the risk of infection after such exposures. As of June 30, 1987, 883 health-care workers have been tested for antibody to HIV in an ongoing surveillance project conducted by CDC (9). Of these, 708 (80%) had percutaneous exposures to blood, and 175 (20%) had a mucous membrane or an open wound contaminated by blood or body fluid. Of 396 health-care workers, each of whom had only a convalescent-phase serum sample obtained and tested ≥ 90 days post-exposure, one—for whom heterosexual transmission could not be ruled out—was seropositive for HIV antibody. For 425 additional health-care workers, both acute- and convalescent-phase serum samples were obtained and tested; none of 74 health-care workers with nonpercutaneous exposures seroconverted, and three (0.9%) of 351

with percutaneous exposures seroconverted. None of these three health-care workers had other documented risk factors for infection.

Two other prospective studies to assess the risk of nosocomial acquisition of HIV infection for health-care workers are ongoing in the United States. As of April 30, 1987, 332 health-care workers with a total of 453 needlestick or mucous-membrane exposures to the blood or other body fluids of HIV-infected patients were tested for HIV antibody at the National Institutes of Health (10). These exposed workers included 103 with needlestick injuries and 229 with mucous-membrane exposures; none had seroconverted. A similar study at the University of California of 129 health-care workers with documented needlestick injuries or mucous-membrane exposures to blood or other body fluids from patients with HIV infection has not identified any seroconversions (11). Results of a prospective study in the United Kingdom identified no evidence of transmission among 150 health-care workers with parenteral or mucous-membrane exposures to blood or other body fluids, secretions, or excretions from patients with HIV infection (12).

In addition to health-care workers enrolled in prospective studies, eight persons who provided care to infected patients and denied other risk factors have been reported to have acquired HIV infection. Three of these health-care workers had needlestick exposures to blood from infected patients (13-15). Two were persons who provided nursing care to infected persons; although neither sustained a needlestick, both had extensive contact with blood or other body fluids, and neither observed recommended barrier precautions (16,17). The other three were health-care workers with non-needlestick exposures to blood from infected patients (18). Although the exact route of transmission for these last three infections is not known, all three persons had direct contact of their skin with blood from infected patients, all had skin lesions that may have been contaminated by blood, and one also had a mucous-membrane exposure.

A total of 1,231 dentists and hygienists, many of whom practiced in areas with many AIDS cases, participated in a study to determine the prevalence of antibody to HIV; one dentist (0.1%) had HIV antibody. Although no exposure to a known HIV-infected person could be documented, epidemiologic investigation did not identify any other risk factor for infection. The infected dentist, who also had a history of sustaining needlestick injuries and trauma to his hands, did not routinely wear gloves when providing dental care (19).

Precautions To Prevent Transmission of HIV

Universal Precautions

Since medical history and examination cannot reliably identify all patients infected with HIV or other blood-borne pathogens, blood and body-fluid precautions should be consistently used for all patients. This approach, previously recommended by CDC (3,4), and referred to as "universal blood and body-fluid precautions" or "universal precautions," should be used in the care of all patients, especially including those in emergency-care settings in which the risk of blood exposure is increased and the infection status of the patient is usually unknown (20).

1. All health-care workers should routinely use appropriate barrier precautions to prevent skin and mucous-membrane exposure when contact with blood or other body fluids of any patient is anticipated. Gloves should be worn for touching blood and body fluids, mucous membranes, or non-intact skin of all patients, for handling items or surfaces soiled with blood or body fluids, and for performing venipuncture and other vascular access procedures. Gloves should be changed after contact with each patient. Masks and protective eyewear or face shields should be worn during procedures that are likely to generate droplets of blood or other body fluids to prevent exposure of mucous membranes of the mouth, nose, and eyes. Gowns or aprons should be worn during procedures that are likely to generate splashes of blood or other body fluids.
2. Hands and other skin surfaces should be washed immediately and thoroughly if contaminated with blood or other body fluids. Hands should be washed immediately after gloves are removed.
3. All health-care workers should take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices during procedures; when cleaning used instruments; during disposal of used needles; and when handling sharp instruments after procedures. To prevent needlestick injuries, needles should not be recapped, purposely bent or broken by hand, removed from disposable syringes, or otherwise manipulated by hand. After they are used, disposable syringes and needles, scalpel blades, and other sharp items should be placed in puncture-resistant containers for disposal; the puncture-resistant containers should be located as close as practical to the use area. Large-bore reusable needles should be placed in a puncture-resistant container for transport to the reprocessing area.
4. Although saliva has not been implicated in HIV transmission, to minimize the need for emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags, or other ventilation devices should be available for use in areas in which the need for resuscitation is predictable.
5. Health-care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment until the condition resolves.
6. Pregnant health-care workers are not known to be at greater risk of contracting HIV infection than health-care workers who are not pregnant; however, if a health-care worker develops HIV infection during pregnancy, the infant is at risk of infection resulting from perinatal transmission. Because of this risk, pregnant health-care workers should be especially familiar with and strictly adhere to precautions to minimize the risk of HIV transmission.

Implementation of universal blood and body-fluid precautions for all patients eliminates the need for use of the isolation category of "Blood and Body Fluid Precautions" previously recommended by CDC (7) for patients known or suspected to be infected with blood-borne pathogens. Isolation precautions (e.g., enteric, "AFB" [7]) should be used as necessary if associated conditions, such as infectious diarrhea or tuberculosis, are diagnosed or suspected.

Precautions for Invasive Procedures

In this document, an invasive procedure is defined as surgical entry into tissues, cavities, or organs or repair of major traumatic injuries 1) in an operating or delivery

room, emergency department, or outpatient setting, including both physicians' and dentists' offices; 2) cardiac catheterization and angiographic procedures; 3) a vaginal or cesarean delivery or other invasive obstetric procedure during which bleeding may occur; or 4) the manipulation, cutting, or removal of any oral or perioral tissues, including tooth structure, during which bleeding occurs or the potential for bleeding exists. The universal blood and body-fluid precautions listed above, combined with the precautions listed below, should be the minimum precautions for all such invasive procedures.

1. All health-care workers who participate in invasive procedures must routinely use appropriate barrier precautions to prevent skin and mucous-membrane contact with blood and other body fluids of all patients. Gloves and surgical masks must be worn for all invasive procedures. Protective eyewear or face shields should be worn for procedures that commonly result in the generation of droplets, splashing of blood or other body fluids, or the generation of bone chips. Gowns or aprons made of materials that provide an effective barrier should be worn during invasive procedures that are likely to result in the splashing of blood or other body fluids. All health-care workers who perform or assist in vaginal or cesarean deliveries should wear gloves and gowns when handling the placenta or the infant until blood and amniotic fluid have been removed from the infant's skin and should wear gloves during post-delivery care of the umbilical cord.
2. If a glove is torn or a needlestick or other injury occurs, the glove should be removed and a new glove used as promptly as patient safety permits; the needle or instrument involved in the incident should also be removed from the sterile field.

Precautions for Dentistry*

Blood, saliva, and gingival fluid from all dental patients should be considered infective. Special emphasis should be placed on the following precautions for preventing transmission of blood-borne pathogens in dental practice in both institutional and non-institutional settings.

1. In addition to wearing gloves for contact with oral mucous membranes of all patients, all dental workers should wear surgical masks and protective eyewear or chin-length plastic face shields during dental procedures in which splashing or spattering of blood, saliva, or gingival fluids is likely. Rubber dams, high-speed evacuation, and proper patient positioning, when appropriate, should be utilized to minimize generation of droplets and spatter.
2. Handpieces should be sterilized after use with each patient, since blood, saliva, or gingival fluid of patients may be aspirated into the handpiece or waterline. Handpieces that cannot be sterilized should at least be flushed, the outside surface cleaned and wiped with a suitable chemical germicide, and then rinsed. Handpieces should be flushed at the beginning of the day and after use with each patient. Manufacturers' recommendations should be followed for use and maintenance of waterlines and check valves and for flushing of handpieces. The same precautions should be used for ultrasonic scalers and air/water syringes.

*General infection-control precautions are more specifically addressed in previous recommendations for infection-control practices for dentistry (8).

3. Blood and saliva should be thoroughly and carefully cleaned from material that has been used in the mouth (e.g., impression materials, bite registration), especially before polishing and grinding intra-oral devices. Contaminated materials, impressions, and intra-oral devices should also be cleaned and disinfected before being handled in the dental laboratory and before they are placed in the patient's mouth. Because of the increasing variety of dental materials used intra-orally, dental workers should consult with manufacturers as to the stability of specific materials when using disinfection procedures.
4. Dental equipment and surfaces that are difficult to disinfect (e.g., light handles or X-ray-unit heads) and that may become contaminated should be wrapped with impervious-backed paper, aluminum foil, or clear plastic wrap. The coverings should be removed and discarded, and clean coverings should be put in place after use with each patient.

Precautions for Autopsies or Morticians' Services

In addition to the universal blood and body-fluid precautions listed above, the following precautions should be used by persons performing postmortem procedures:

1. All persons performing or assisting in postmortem procedures should wear gloves, masks, protective eyewear, gowns, and waterproof aprons.
2. Instruments and surfaces contaminated during postmortem procedures should be decontaminated with an appropriate chemical germicide.

Precautions for Dialysis

Patients with end-stage renal disease who are undergoing maintenance dialysis and who have HIV infection can be dialyzed in hospital-based or free-standing dialysis units using conventional infection-control precautions (21). Universal blood and body-fluid precautions should be used when dialyzing all patients.

Strategies for disinfecting the dialysis fluid pathways of the hemodialysis machine are targeted to control bacterial contamination and generally consist of using 500-750 parts per million (ppm) of sodium hypochlorite (household bleach) for 30-40 minutes or 1.5%-2.0% formaldehyde overnight. In addition, several chemical germicides formulated to disinfect dialysis machines are commercially available. None of these protocols or procedures need to be changed for dialyzing patients infected with HIV.

Patients infected with HIV can be dialyzed by either hemodialysis or peritoneal dialysis and do not need to be isolated from other patients. The type of dialysis treatment (i.e., hemodialysis or peritoneal dialysis) should be based on the needs of the patient. The dialyzer may be discarded after each use. Alternatively, centers that reuse dialyzers—i.e., a specific single-use dialyzer is issued to a specific patient, removed, cleaned, disinfected, and reused several times on the same patient only—may include HIV-infected patients in the dialyzer-reuse program. An individual dialyzer must never be used on more than one patient.

Precautions for Laboratories[†]

Blood and other body fluids from all patients should be considered infective. To supplement the universal blood and body-fluid precautions listed above, the following precautions are recommended for health-care workers in clinical laboratories.

[†]Additional precautions for research and industrial laboratories are addressed elsewhere (22,23).

1. All specimens of blood and body fluids should be put in a well-constructed container with a secure lid to prevent leaking during transport. Care should be taken when collecting each specimen to avoid contaminating the outside of the container and of the laboratory form accompanying the specimen.
2. All persons processing blood and body-fluid specimens (e.g., removing tops from vacuum tubes) should wear gloves. Masks and protective eyewear should be worn if mucous-membrane contact with blood or body fluids is anticipated. Gloves should be changed and hands washed after completion of specimen processing.
3. For routine procedures, such as histologic and pathologic studies or microbiologic culturing, a biological safety cabinet is not necessary. However, biological safety cabinets (Class I or II) should be used whenever procedures are conducted that have a high potential for generating droplets. These include activities such as blending, sonicating, and vigorous mixing.
4. Mechanical pipetting devices should be used for manipulating all liquids in the laboratory. Mouth pipetting must not be done.
5. Use of needles and syringes should be limited to situations in which there is no alternative, and the recommendations for preventing injuries with needles outlined under universal precautions should be followed.
6. Laboratory work surfaces should be decontaminated with an appropriate chemical germicide after a spill of blood or other body fluids and when work activities are completed.
7. Contaminated materials used in laboratory tests should be decontaminated before reprocessing or be placed in bags and disposed of in accordance with institutional policies for disposal of infective waste (24).
8. Scientific equipment that has been contaminated with blood or other body fluids should be decontaminated and cleaned before being repaired in the laboratory or transported to the manufacturer.
9. All persons should wash their hands after completing laboratory activities and should remove protective clothing before leaving the laboratory.

Implementation of universal blood and body-fluid precautions for all patients eliminates the need for warning labels on specimens since blood and other body fluids from all patients should be considered infective.

Environmental Considerations for HIV Transmission

No environmentally mediated mode of HIV transmission has been documented. Nevertheless, the precautions described below should be taken routinely in the care of all patients.

Sterilization and Disinfection

Standard sterilization and disinfection procedures for patient-care equipment currently recommended for use (25,26) in a variety of health-care settings—including hospitals, medical and dental clinics and offices, hemodialysis centers, emergency-care facilities, and long-term nursing-care facilities—are adequate to sterilize or disinfect instruments, devices, or other items contaminated with blood or other body fluids from persons infected with blood-borne pathogens including HIV (21,23).

Instruments or devices that enter sterile tissue or the vascular system of any patient or through which blood flows should be sterilized before reuse. Devices or items that contact intact mucous membranes should be sterilized or receive high-level disinfection, a procedure that kills vegetative organisms and viruses but not necessarily large numbers of bacterial spores. Chemical germicides that are registered with the U.S. Environmental Protection Agency (EPA) as "sterilants" may be used either for sterilization or for high-level disinfection depending on contact time.

Contact lenses used in trial fittings should be disinfected after each fitting by using a hydrogen peroxide contact lens disinfecting system or, if compatible, with heat (78 C-80 C [172.4 F-176.0 F]) for 10 minutes.

Medical devices or instruments that require sterilization or disinfection should be thoroughly cleaned before being exposed to the germicide, and the manufacturer's instructions for the use of the germicide should be followed. Further, it is important that the manufacturer's specifications for compatibility of the medical device with chemical germicides be closely followed. Information on specific label claims of commercial germicides can be obtained by writing to the Disinfectants Branch, Office of Pesticides, Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460.

Studies have shown that HIV is inactivated rapidly after being exposed to commonly used chemical germicides at concentrations that are much lower than used in practice (27-30). Embalming fluids are similar to the types of chemical germicides that have been tested and found to completely inactivate HIV. In addition to commercially available chemical germicides, a solution of sodium hypochlorite (household bleach) prepared daily is an inexpensive and effective germicide. Concentrations ranging from approximately 500 ppm (1:100 dilution of household bleach) sodium hypochlorite to 5,000 ppm (1:10 dilution of household bleach) are effective depending on the amount of organic material (e.g., blood, mucus) present on the surface to be cleaned and disinfected. Commercially available chemical germicides may be more compatible with certain medical devices that might be corroded by repeated exposure to sodium hypochlorite, especially to the 1:10 dilution.

Survival of HIV in the Environment

The most extensive study on the survival of HIV after drying involved greatly concentrated HIV samples, i.e., 10 million tissue-culture infectious doses per milliliter (31). This concentration is at least 100,000 times greater than that typically found in the blood or serum of patients with HIV infection. HIV was detectable by tissue-culture techniques 1-3 days after drying, but the rate of inactivation was rapid. Studies performed at CDC have also shown that drying HIV causes a rapid (within several hours) 1-2 log (90%-99%) reduction in HIV concentration. In tissue-culture fluid, cell-free HIV could be detected up to 15 days at room temperature, up to 11 days at 37 C (98.6 F), and up to 1 day if the HIV was cell-associated.

When considered in the context of environmental conditions in health-care facilities, these results do not require any changes in currently recommended sterilization, disinfection, or housekeeping strategies. When medical devices are contaminated with blood or other body fluids, existing recommendations include the cleaning of these instruments, followed by disinfection or sterilization, depending on the type of medical device. These protocols assume "worst-case" conditions of

extreme virologic and microbiologic contamination, and whether viruses have been inactivated after drying plays no role in formulating these strategies. Consequently, no changes in published procedures for cleaning, disinfecting, or sterilizing need to be made.

Housekeeping

Environmental surfaces such as walls, floors, and other surfaces are not associated with transmission of infections to patients or health-care workers. Therefore, extraordinary attempts to disinfect or sterilize these environmental surfaces are not necessary. However, cleaning and removal of soil should be done routinely.

Cleaning schedules and methods vary according to the area of the hospital or institution, type of surface to be cleaned, and the amount and type of soil present. Horizontal surfaces (e.g., bedside tables and hard-surfaced flooring) in patient-care areas are usually cleaned on a regular basis, when soiling or spills occur, and when a patient is discharged. Cleaning of walls, blinds, and curtains is recommended only if they are visibly soiled. Disinfectant fogging is an unsatisfactory method of decontaminating air and surfaces and is not recommended.

Disinfectant-detergent formulations registered by EPA can be used for cleaning environmental surfaces, but the actual physical removal of microorganisms by scrubbing is probably at least as important as any antimicrobial effect of the cleaning agent used. Therefore, cost, safety, and acceptability by housekeepers can be the main criteria for selecting any such registered agent. The manufacturers' instructions for appropriate use should be followed.

Cleaning and Decontaminating Spills of Blood or Other Body Fluids

Chemical germicides that are approved for use as "hospital disinfectants" and are tuberculocidal when used at recommended dilutions can be used to decontaminate spills of blood and other body fluids. Strategies for decontaminating spills of blood and other body fluids in a patient-care setting are different than for spills of cultures or other materials in clinical, public health, or research laboratories. In patient-care areas, visible material should first be removed and then the area should be decontaminated. With large spills of cultured or concentrated infectious agents in the laboratory, the contaminated area should be flooded with a liquid germicide before cleaning, then decontaminated with fresh germicidal chemical. In both settings, gloves should be worn during the cleaning and decontaminating procedures.

Laundry

Although soiled linen has been identified as a source of large numbers of certain pathogenic microorganisms, the risk of actual disease transmission is negligible. Rather than rigid procedures and specifications, hygienic and common-sense storage and processing of clean and soiled linen are recommended (26). Soiled linen should be handled as little as possible and with minimum agitation to prevent gross microbial contamination of the air and of persons handling the linen. All soiled linen should be bagged at the location where it was used; it should not be sorted or rinsed in patient-care areas. Linen soiled with blood or body fluids should be placed and transported in bags that prevent leakage. If hot water is used, linen should be washed

with detergent in water at least 71 C (160 F) for 25 minutes. If low-temperature (≤ 70 C [158 F]) laundry cycles are used, chemicals suitable for low-temperature washing at proper use concentration should be used.

Infective Waste

There is no epidemiologic evidence to suggest that most hospital waste is any more infective than residential waste. Moreover, there is no epidemiologic evidence that hospital waste has caused disease in the community as a result of improper disposal. Therefore, identifying wastes for which special precautions are indicated is largely a matter of judgment about the relative risk of disease transmission. The most practical approach to the management of infective waste is to identify those wastes with the potential for causing infection during handling and disposal and for which some special precautions appear prudent. Hospital wastes for which special precautions appear prudent include microbiology laboratory waste, pathology waste, and blood specimens or blood products. While any item that has had contact with blood, exudates, or secretions may be potentially infective, it is not usually considered practical or necessary to treat all such waste as infective (23,26). Infective waste, in general, should either be incinerated or should be autoclaved before disposal in a sanitary landfill. Bulk blood, suctioned fluids, excretions, and secretions may be carefully poured down a drain connected to a sanitary sewer. Sanitary sewers may also be used to dispose of other infectious wastes capable of being ground and flushed into the sewer.

Implementation of Recommended Precautions

Employers of health-care workers should ensure that policies exist for:

1. Initial orientation and continuing education and training of all health-care workers—including students and trainees—on the epidemiology, modes of transmission, and prevention of HIV and other blood-borne infections and the need for routine use of universal blood and body-fluid precautions for all patients.
2. Provision of equipment and supplies necessary to minimize the risk of infection with HIV and other blood-borne pathogens.
3. Monitoring adherence to recommended protective measures. When monitoring reveals a failure to follow recommended precautions, counseling, education, and/or re-training should be provided, and, if necessary, appropriate disciplinary action should be considered.

Professional associations and labor organizations, through continuing education efforts, should emphasize the need for health-care workers to follow recommended precautions.

Serologic Testing for HIV Infection

Background

A person is identified as infected with HIV when a sequence of tests, starting with repeated enzyme immunoassays (EIA) and including a Western blot or similar, more specific assay, are repeatedly reactive. Persons infected with HIV usually develop antibody against the virus within 6-12 weeks after infection.

The sensitivity of the currently licensed EIA tests is at least 99% when they are performed under optimal laboratory conditions on serum specimens from persons infected for ≥ 12 weeks. Optimal laboratory conditions include the use of reliable reagents, provision of continuing education of personnel, quality control of procedures, and participation in performance-evaluation programs. Given this performance, the probability of a false-negative test is remote except during the first several weeks after infection, before detectable antibody is present. The proportion of infected persons with a false-negative test attributed to absence of antibody in the early stages of infection is dependent on both the incidence and prevalence of HIV infection in a population (Table 1).

The specificity of the currently licensed EIA tests is approximately 99% when repeatedly reactive tests are considered. Repeat testing of initially reactive specimens by EIA is required to reduce the likelihood of laboratory error. To increase further the specificity of serologic tests, laboratories must use a supplemental test, most often the Western blot, to validate repeatedly reactive EIA results. Under optimal laboratory conditions, the sensitivity of the Western blot test is comparable to or greater than that of a repeatedly reactive EIA, and the Western blot is highly specific when strict criteria are used to interpret the test results. The testing sequence of a repeatedly reactive EIA and a positive Western blot test is highly predictive of HIV infection, even in a population with a low prevalence of infection (Table 2). If the Western blot test result is indeterminant, the testing sequence is considered equivocal for HIV infection.

TABLE 1. Estimated annual number of patients infected with HIV not detected by HIV-antibody testing in a hypothetical hospital with 10,000 admissions/year*

Beginning prevalence of HIV infection	Annual incidence of HIV infection	Approximate number of HIV-infected patients	Approximate number of HIV-infected patients not detected
5.0%	1.0%	550	17-18
5.0%	0.5%	525	11-12
1.0%	0.2%	110	3-4
1.0%	0.1%	105	2-3
0.1%	0.02%	11	0-1
0.1%	0.01%	11	0-1

*The estimates are based on the following assumptions: 1) the sensitivity of the screening test is 99% (i.e., 99% of HIV-infected persons with antibody will be detected); 2) persons infected with HIV will not develop detectable antibody (seroconvert) until 6 weeks (1.5 months) after infection; 3) new infections occur at an equal rate throughout the year; 4) calculations of the number of HIV-infected persons in the patient population are based on the mid-year prevalence, which is the beginning prevalence plus half the annual incidence of infections.

When this occurs, the Western blot test should be repeated on the same serum sample, and, if still indeterminate, the testing sequence should be repeated on a sample collected 3-6 months later. Use of other supplemental tests may aid in interpreting of results on samples that are persistently indeterminate by Western blot.

Testing of Patients

Previous CDC recommendations have emphasized the value of HIV serologic testing of patients for: 1) management of parenteral or mucous-membrane exposures of health-care workers, 2) patient diagnosis and management, and 3) counseling and serologic testing to prevent and control HIV transmission in the community. In addition, more recent recommendations have stated that hospitals, in conjunction with state and local health departments, should periodically determine the prevalence of HIV infection among patients from age groups at highest risk of infection (32).

Adherence to universal blood and body-fluid precautions recommended for the care of all patients will minimize the risk of transmission of HIV and other blood-borne pathogens from patients to health-care workers. The utility of routine HIV serologic testing of patients as an adjunct to universal precautions is unknown. Results of such testing may not be available in emergency or outpatient settings. In addition, some recently infected patients will not have detectable antibody to HIV (Table 1).

Personnel in some hospitals have advocated serologic testing of patients in settings in which exposure of health-care workers to large amounts of patients' blood may be anticipated. Specific patients for whom serologic testing has been advocated include those undergoing major operative procedures and those undergoing treatment in critical-care units, especially if they have conditions involving uncontrolled bleeding. Decisions regarding the need to establish testing programs for patients should be made by physicians or individual institutions. In addition, when deemed appropriate, testing of individual patients may be performed on agreement between the patient and the physician providing care.

In addition to the universal precautions recommended for all patients, certain additional precautions for the care of HIV-infected patients undergoing major surgical operations have been proposed by personnel in some hospitals. For example, surgical procedures on an HIV-infected patient might be altered so that hand-to-hand passing of sharp instruments would be eliminated; stapling instruments rather than

TABLE 2. Predictive value of positive HIV-antibody tests in hypothetical populations with different prevalences of infection

	Prevalence of infection	Predictive value of positive test ^a
Repeatedly reactive enzyme immunoassay (EIA) ^b }	0.2%	28.41%
	2.0%	80.16%
	20.0%	98.02%
Repeatedly reactive EIA followed by positive Western blot (WB) ^c }	0.2%	99.75%
	2.0%	99.97%
	20.0%	99.99%

^aProportion of persons with positive test results who are actually infected with HIV.

^bAssumes EIA sensitivity of 99.0% and specificity of 99.5%.

^cAssumes WB sensitivity of 99.0% and specificity of 99.9%.

hand-suturing equipment might be used to perform tissue approximation; electrocautery devices rather than scalpels might be used as cutting instruments; and, even though uncomfortable, gowns that totally prevent seepage of blood onto the skin of members of the operative team might be worn. While such modifications might further minimize the risk of HIV infection for members of the operative team, some of these techniques could result in prolongation of operative time and could potentially have an adverse effect on the patient.

Testing programs, if developed, should include the following principles:

- Obtaining consent for testing.
- Informing patients of test results, and providing counseling for seropositive patients by properly trained persons.
- Assuring that confidentiality safeguards are in place to limit knowledge of test results to those directly involved in the care of infected patients or as required by law.
- Assuring that identification of infected patients will not result in denial of needed care or provision of suboptimal care.
- Evaluating prospectively 1) the efficacy of the program in reducing the incidence of parenteral, mucous-membrane, or significant cutaneous exposures of health-care workers to the blood or other body fluids of HIV-infected patients and 2) the effect of modified procedures on patients.

Testing of Health-Care Workers

Although transmission of HIV from infected health-care workers to patients has not been reported, transmission during invasive procedures remains a possibility. Transmission of hepatitis B virus (HBV)—a blood-borne agent with a considerably greater potential for nosocomial spread—from health-care workers to patients has been documented. Such transmission has occurred in situations (e.g., oral and gynecologic surgery) in which health-care workers, when tested, had very high concentrations of HBV in their blood (at least 100 million infectious virus particles per milliliter, a concentration much higher than occurs with HIV infection), and the health-care workers sustained a puncture wound while performing invasive procedures or had exudative or weeping lesions or microlacerations that allowed virus to contaminate instruments or open wounds of patients (33,34).

The hepatitis B experience indicates that only those health-care workers who perform certain types of invasive procedures have transmitted HBV to patients. Adherence to recommendations in this document will minimize the risk of transmission of HIV and other blood-borne pathogens from health-care workers to patients during invasive procedures. Since transmission of HIV from infected health-care workers performing invasive procedures to their patients has not been reported and would be expected to occur only very rarely, if at all, the utility of routine testing of such health-care workers to prevent transmission of HIV cannot be assessed. If consideration is given to developing a serologic testing program for health-care workers who perform invasive procedures, the frequency of testing, as well as the issues of consent, confidentiality, and consequences of test results—as previously outlined for testing programs for patients—must be addressed.

Management of Infected Health-Care Workers

Health-care workers with impaired immune systems resulting from HIV infection or other causes are at increased risk of acquiring or experiencing serious complications of infectious disease. Of particular concern is the risk of severe infection following exposure to patients with infectious diseases that are easily transmitted if appropriate precautions are not taken (e.g., measles, varicella). Any health-care worker with an impaired immune system should be counseled about the potential risk associated with taking care of patients with any transmissible infection and should continue to follow existing recommendations for infection control to minimize risk of exposure to other infectious agents (7,35). Recommendations of the Immunization Practices Advisory Committee (ACIP) and institutional policies concerning requirements for vaccinating health-care workers with live-virus vaccines (e.g., measles, rubella) should also be considered.

The question of whether workers infected with HIV—especially those who perform invasive procedures—can adequately and safely be allowed to perform patient-care duties or whether their work assignments should be changed must be determined on an individual basis. These decisions should be made by the health-care worker's personal physician(s) in conjunction with the medical directors and personnel health service staff of the employing institution or hospital.

Management of Exposures

If a health-care worker has a parenteral (e.g., needlestick or cut) or mucous-membrane (e.g., splash to the eye or mouth) exposure to blood or other body fluids or has a cutaneous exposure involving large amounts of blood or prolonged contact with blood—especially when the exposed skin is chapped, abraded, or afflicted with dermatitis—the source patient should be informed of the incident and tested for serologic evidence of HIV infection after consent is obtained. Policies should be developed for testing source patients in situations in which consent cannot be obtained (e.g., an unconscious patient).

If the source patient has AIDS, is positive for HIV antibody, or refuses the test, the health-care worker should be counseled regarding the risk of infection and evaluated clinically and serologically for evidence of HIV infection as soon as possible after the exposure. The health-care worker should be advised to report and seek medical evaluation for any acute febrile illness that occurs within 12 weeks after the exposure. Such an illness—particularly one characterized by fever, rash, or lymphadenopathy—may be indicative of recent HIV infection. Seronegative health-care workers should be retested 6 weeks post-exposure and on a periodic basis thereafter (e.g., 12 weeks and 6 months after exposure) to determine whether transmission has occurred. During this follow-up period—especially the first 6-12 weeks after exposure, when most infected persons are expected to seroconvert—exposed health-care workers should follow U.S. Public Health Service (PHS) recommendations for preventing transmission of HIV (36,37).

No further follow-up of a health-care worker exposed to infection as described above is necessary if the source patient is seronegative unless the source patient is at high risk of HIV infection. In the latter case, a subsequent specimen (e.g., 12 weeks following exposure) may be obtained from the health-care worker for antibody

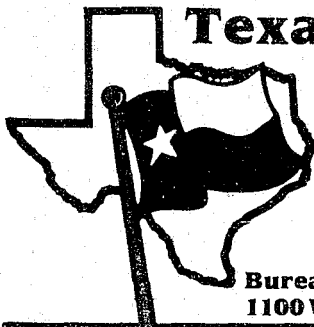
testing. If the source patient cannot be identified, decisions regarding appropriate follow-up should be individualized. Serologic testing should be available to all health-care workers who are concerned that they may have been infected with HIV.

If a patient has a parenteral or mucous-membrane exposure to blood or other body fluid of a health-care worker, the patient should be informed of the incident, and the same procedure outlined above for management of exposures should be followed for both the source health-care worker and the exposed patient.

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Texas Preventable Disease NEWS

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Texas Board of Health

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contents:

Update: Universal Precautions for: Prevention
of Transmission of Human Immunodeficiency
Virus, Hepatitis B Virus, and Other
Bloodborne Pathogens in Health-Care Settings

Bureau of Disease Control and Epidemiology,
1100 West 49th Street, Austin, Texas 78756 (512-458-7455)

UPDATE: UNIVERSAL PRECAUTIONS FOR PREVENTION OF TRANSMISSION OF HUMAN IMMUNODEFICIENCY VIRUS, HEPATITIS B VIRUS, AND OTHER BLOODBORNE PATHOGENS IN HEALTH-CARE SETTINGS*

Introduction

The purpose of this report is to clarify and supplement the CDC¹ publication entitled "Recommendations for Prevention of HIV Transmission in Health-Care Settings."¹ **

In 1983, CDC published a document entitled "Guideline for Isolation Precautions in Hospitals" that contained a section entitled "Blood and Body Fluid Precautions." The recommendations in this section called for blood and body fluid precautions when a patient was known or suspected to be infected with bloodborne pathogens. In August 1987, CDC published a document entitled "Recommendations for Prevention of HIV Transmission in Health-Care Settings." In contrast to the 1983 document, the 1987 document recommended that blood and body fluid precautions be consistently used for all patients regardless of their bloodborne infection status. This extension of blood and body fluid precautions to all patients is referred to as "Universal Blood and Body Fluid Precautions" or "Universal Precautions." Under universal precautions, blood and certain body fluids of all patients are considered potentially infectious for human immunodeficiency virus (HIV), hepatitis B virus (HBV), and other bloodborne pathogens.

Universal precautions are intended to prevent parenteral, mucous membrane, and nonintact skin exposures of health-care workers to bloodborne pathogens. In addition, immunization with HBV vaccine is recommended as an important adjunct to universal precautions for health-care workers who have exposures to blood.

Since the recommendations for universal precautions were published in August 1987, CDC and the Food and Drug Administration (FDA) have received requests for clarification of the following issues: 1) body fluids to which universal precautions apply, 2) use of protective barriers, 3) use of gloves for phlebotomy, 4) selection of gloves for use while observing universal precautions, and 5) need for making changes in waste management programs as a result of adopting universal precautions.

Body Fluids to Which Universal Precautions Apply

Universal precautions apply to blood and to other body fluids containing visible blood. Occupational transmission of HIV and HBV to health-care workers by blood is documented. Blood is the single most important source of HIV, HBV, and other bloodborne pathogens in the occupational setting. Infection control efforts for HIV, HBV, and other bloodborne pathogens must focus on preventing exposures to blood as well as on delivery of HBV immunization.

Universal precautions also apply to semen and vaginal secretions. Although both of these fluids have been implicated in the sexual transmission of HIV and HBV, they have not been implicated in occupational transmission from patient to health-care worker. This observation is not unexpected, since exposure to semen in the usual health-care setting is limited, and the routine practice of wearing gloves for performing vaginal examinations protects health-care workers from exposure to potentially infectious vaginal secretions.

Universal precautions also apply to tissues and to the following fluids: cerebrospinal fluid (CSF), synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid. The risk of transmission of HIV and HBV from these fluids is unknown; epidemiologic studies in the health-care and community setting are currently inadequate to assess the potential risk to health-care workers from occupational exposures to them. However, HIV has been isolated from CSF, synovial, and amniotic fluid, and HBsAg has been detected in synovial fluid, amniotic fluid, and peritoneal fluid. One case of HIV transmission was reported after a percutaneous exposure to bloody pleural fluid obtained by needle aspiration. Whereas aseptic procedures used to obtain these fluids for diagnostic or therapeutic purposes protect health-care workers from skin exposures, they cannot prevent penetrating injuries due to contaminated needles or other sharp instruments.

*Reprinted from: CDC. MMWR 1988, 37 (24): 377-82, 387-8.

**The August 1987 publication should be consulted for general information and specific recommendations not addressed in this update.

Body Fluids to Which Universal Precautions Do Not Apply

Universal precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine, and vomitus unless they contain visible blood. The risk of transmission of HIV and HBV from these fluids and materials is extremely low or nonexistent. HIV has been isolated and HBsAg has been demonstrated in some of these fluids; however, epidemiologic studies in the health-care and community setting have not implicated these fluids or materials in the transmission of HIV and HBV infections. Some of the above fluids and excretions represent a potential source for nosocomial and community-acquired infections with other pathogens, and recommendations for preventing the transmission of nonbloodborne pathogens have been published.

Precautions for Other Body Fluids in Special Settings

Human breast milk has been implicated in perinatal transmission of HIV, and HBsAg has been found in the milk of mothers infected with HBV. However, occupational exposure to human breast milk has not been implicated in the transmission of HIV nor HBV infection to health-care workers. Moreover, the health-care worker will not have the same type of intensive exposure to breast milk as the nursing neonate. Whereas universal precautions do not apply to human breast milk, gloves may be worn by health-care workers in situations where exposures to breast milk might be frequent, for example, in breast milk banking.

Saliva of some persons infected with HBV has been shown to contain HBV-DNA at concentrations 1/1,000 to 1/10,000 of that found in the infected person's serum. HBsAg-positive saliva has been shown to be infectious when injected into experimental animals and in human bite exposures. However, HBsAg-positive saliva has not been shown to be infectious when applied to oral mucous membranes in experimental primate studies or through contamination of musical instruments or cardiopulmonary resuscitation dummies used by HBV carriers. Epidemiologic studies of nonsexual household contacts of HIV-infected patients, including several small series in which HIV transmission failed to occur after bites or after percutaneous inoculation or contamination of cuts and open wounds with saliva from HIV-infected patients, suggest that the potential for salivary transmission of HIV is remote. One case report from Germany has suggested the possibility of transmission of HIV in a household setting from an infected child to a sibling through a human bite. The bite did not break the skin or result in bleeding. Since the date of seroconversion to HIV was not known for either child in this case, evidence for the role of saliva in the transmission of virus is unclear. Another case report suggested the possibility of transmission of HIV from husband to wife by contact with saliva during kissing. However, follow-up studies did not confirm HIV infection in the wife.

Universal precautions do not apply to saliva. General infection control practices already in existence -- including the use of gloves for digital examination of mucous membranes and endotracheal suctioning, and handwashing after exposure to saliva -- should further minimize the minute risk, if any, for salivary transmission of HIV and HBV. Gloves need not be worn when feeding patients and when wiping saliva from skin.

Special precautions, however, are recommended for dentistry. Occupationally acquired infection with HBV in dental workers has been documented, and two possible cases of occupationally acquired HIV infection involving dentists have been reported. During dental procedures, contamination of saliva with blood is predictable, trauma to health-care workers' hands is common, and blood spattering may occur. Infection control precautions for dentistry minimize the potential for nonintact skin and mucous membrane contact of dental health-care workers to blood-contaminated saliva of patients. In addition, the use of gloves for oral examinations and treatment in the dental setting may also protect the patient's oral mucous membranes from exposures to blood, which may occur from breaks in the skin of dental workers' hands.

Use of Protective Barriers

Protective barriers reduce the risk of exposure of the health-care worker's skin or mucous membranes to potentially infective materials. For universal precautions, protective barriers reduce the risk of exposure to blood, body fluids containing visible blood, and other fluids to which universal precautions apply. Examples of protective barriers include gloves, gowns, masks, and protective eyewear. Gloves should reduce the incidence of contamination of hands, but they cannot prevent penetrating injuries due to needles or other sharp instruments. Masks and protective eyewear or face shields should reduce the incidence of contamination of mucous membranes of the mouth, nose, and eyes.

Universal precautions are intended to supplement rather than replace recommendations for routine infection control, such as handwashing and using gloves to prevent gross microbial contamination of hands. Because specifying the types of barriers needed for every possible clinical situation is impractical, some judgment must be exercised.

The risk of nosocomial transmission of HIV, HBV, and other bloodborne pathogens can be minimized if health-care workers use the following general guidelines:[†]

1. Take care to prevent injuries when using needles, scalpels, and other sharp instruments or devices; when handling sharp instruments after procedures; when cleaning used instruments; and when disposing of used needles. Do not recap used needles by hand; do not remove used needles from disposable syringes by hand; and do not bend, break, or otherwise manipulate used needles by hand. Place used disposable syringes and needles, scalpel blades, and other sharp items in puncture-resistant containers for disposal. Locate the puncture-resistant containers as close to the use area as is practical.

[†]The August 1987 publication should be consulted for general information and specific recommendations not addressed in this update.

2. Use protective barriers to prevent exposure to blood, body fluids containing visible blood, and other fluids to which universal precautions apply. The type of protective barrier(s) should be appropriate for the procedure being performed and the type of exposure anticipated.
3. Immediately and thoroughly wash hands and other skin surfaces that are contaminated with blood, body fluids containing visible blood, or other body fluids to which universal precautions apply.

Glove Use for Phlebotomy

Gloves should reduce the incidence of blood contamination of hands during phlebotomy (drawing blood samples), but they cannot prevent penetrating injuries caused by needles or other sharp instruments. The likelihood of hand contamination with blood containing HIV, HBV, or other bloodborne pathogens during phlebotomy depends on several factors: 1) the skill and technique of the health-care worker, 2) the frequency with which the health-care worker performs the procedure (other factors being equal, the cumulative risk of blood exposure is higher for a health-care worker who performs more procedures), 3) whether the procedure occurs in a routine or emergency situation (where blood contact may be more likely), and 4) the prevalence of infection with bloodborne pathogens in the patient population. The likelihood of infection after skin exposure to blood containing HIV or HBV will depend on the concentration of virus (viral concentration is much higher for hepatitis B than for HIV), the duration of contact, the presence of skin lesions on the hands of the health-care worker, and -- for HBV -- the immune status of the health-care worker. Although not accurately quantified, the risk of HIV infection following intact skin contact with infective blood is certainly much less than the 0.5% risk following percutaneous needlestick exposures. In universal precautions, *all* blood is assumed to be potentially infective for bloodborne pathogens, but in certain settings (eg, volunteer blood-donation centers) the prevalence of infection with some bloodborne pathogens (eg, HIV, HBV) is known to be very low. Some institutions have relaxed recommendations for using gloves for phlebotomy procedures by skilled phlebotomists in settings where the prevalence of bloodborne pathogens is known to be very low.

Institutions that judge that routine gloving for *all* phlebotomies is not necessary should periodically reevaluate their policy. Gloves should always be available to health-care workers who wish to use them for phlebotomy. In addition, the following general guidelines apply:

1. Use gloves for performing phlebotomy when the health-care worker has cuts, scratches, or other breaks in his/her skin.
2. Use gloves in situations where the health-care worker judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative patient.
3. Use gloves for performing finger and/or heel sticks on infants and children.
4. Use gloves when persons are receiving training in phlebotomy.

Selection of Gloves

The Center for Devices and Radiological Health, FDA, has responsibility for regulating the medical glove industry. Medical gloves include those marketed as sterile surgical or nonsterile examination gloves made of vinyl or latex. General purpose utility ("rubber") gloves are also used in the health-care setting, but they are not regulated by FDA since they are not promoted for medical use. There are no reported differences in barrier effectiveness between intact latex and intact vinyl used to manufacture gloves. Thus, the type of gloves selected should be appropriate for the task being performed.

The following general guidelines are recommended:

1. Use sterile gloves for procedures involving contact with normally sterile areas of the body.
2. Use examination gloves for procedures involving contact with mucous membranes, unless otherwise indicated, and for other patient care or diagnostic procedures that do not require the use of sterile gloves.
3. Change gloves between patient contacts.
4. Do not wash or disinfect surgical or examination gloves for reuse. Washing with surfactants may cause "wicking," ie, the enhanced penetration of liquids through undetected holes in the glove. Disinfecting agents may cause deterioration.
5. Use general-purpose utility gloves (eg, rubber household gloves) for housekeeping chores involving potential blood contact and for instrument cleaning and decontamination procedures. Utility gloves may be decontaminated and reused but should be discarded if they are peeling, cracked, or discolored, or if they have punctures, tears, or other evidence of deterioration.

Waste Management

Universal precautions are not intended to change waste management programs previously recommended by CDC for health-care settings.¹ Policies for defining, collecting, storing, decontaminating, and disposing of infective waste are generally determined by institutions in accordance with state and local regulations. Information regarding waste management regulations in health-care settings may be obtained from state or local health departments or agencies responsible for waste management.

MMWR Editorial Note: Implementation of universal precautions does not eliminate the need for other category- or disease-specific isolation precautions, such as enteric precautions for infectious diarrhea or isolation for pulmonary tuberculosis. In addition to universal precautions, detailed precautions have been developed for the following procedures and/or settings in which prolonged or intensive exposures to blood occur: invasive procedures, dentistry, autopsies or morticians' services, dialysis, and the clinical laboratory. These detailed precautions are found in the August 21, 1987, "Recommendations for Prevention of HIV Transmission in Health-Care Settings".¹ In addition, specific precautions have been developed for research laboratories.²

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2. Centers for Disease Control. 1988 Agent summary statement for human immunodeficiency virus and report on laboratory-acquired infection with human immunodeficiency virus. MMWR 1988; 37 (suppl no. S4:1S- 22S).

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**SECOND CLASS POSTAGE
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This is an example of a form that could be used to document a probationer's voluntary consent to be tested for AIDS or HIV infection and to the disclosure of the test results.

VOLUNTARY CONSENT FOR HIV TESTING

I, _____, hereby voluntarily consent to be tested for infection by human immunodeficiency virus (HIV). I further voluntarily authorize the release of the results of the test or tests to the judge or the court in which I am on probation, to adult probation department personnel who supervise me while I am on probation, to the personnel of any residential program in which I may be placed and to any institution to which I may be committed. I understand that I do not have to consent to this testing or to the release of the test results. I also understand that my refusal to be tested or to authorize the release of the results will not adversely affect the status of my probation .

Signed this _____ day of _____, 19_____.

Witness

Probationer

APPENDIX E

RESOURCES

AIDS INFORMATION NUMBERS TEXAS

Austin - AIDS Services of Austin - (512) 458-AIDS

Austin - Texas Department of Health

- Clinical Aspects(512) 458-7207
- Education(512) 458-7405
- Film Library(512) 458-7260
- HIV Testing & Counseling Referral(512) 458-7207
- Surveillance(512) 458-7504

AIDS Foundation Houston, Inc.
3927 Essex Lane
Houston, Texas 77027
(713) 623-6796

AIDS Resource Center
3920 Cedar Springs Road
Dallas, Texas 75219
(214) 521-5124

AIDS Services of Austin, Inc.
202 West 17th Street
Austin, Texas 78701
(512) 472-2273

Amarillo Bi-City Cty. Health Dept.
411 South Austin Street
Amarillo, Texas 79186
(806) 371-1100

Angelina Co. & Citizens Hlth Dist.
202 South Bynum
Lufkin, Texas 75901
(409) 632-1139

Ark-Tex Council of Governments
P.O. Box 5307
Texarkana, Texas 75505
(214) 832-8636

Austin Latino's Lesbian & Gay Org.
P.O. Box 13501
Austin, Texas 78711
(512) 472-2001

Austin-Travis Co. Health Dept.
15 Waller Street
Austin, Texas 78702
(512) 469-2000

Austin-Travis Co. MHMR Care Unit
1643 East 2nd Street
Austin, Texas 78702
(512) 473-8273

Baylor College of Medicine
1801 Allen Parkway
Houston, Texas 77019
(713) 751-8041

Beaumont City Health Dept.
950 Washington Blvd.
Beaumont, Tx. 77705
(409) 832-4000

Bering Community Service Foundation
1440 Harold Street
Houston, Texas 77006
(713) 520-7070

Bexar Co. Hospital Dist.
4502 Medical Drive
San Antonio, Tx. 78284
(512) 694-3030

Brazos Valley Community Action
301 North Main
Bryan, Texas 77802
(409) 779-5211

Centro de Salud Familia Le Fe, Inc.
700 South Ochoa Street
El Paso, Texas 79901
(915) 545-4550

Community Action, Inc.
P.O. Box 644
San Marcos, Tx. 78667
(512) 392-1161

Community Clinic, Inc.
210 West Olmos
San Antonio, Tx. 78212

DARCO Drug Services, Inc.
2722 Inwood Road
Dallas, Tx. 75235
(214) 956-7181

Dallas Urban League, Inc.
2121 Main Street, Suite 410
Dallas, Tx. 75201
(214) 747-4734

Ector Co. Health Dept.
221 North Texas
Odessa, Tx. 79761
(915) 335-3141

Ella Austin Health Center
1920 Burnet Street
San Antonio, Tx. 78202
(512) 224-2112

Foundation for Interfaith Res & Min
P.O. Box 20392
Houston, Tx. 77025
(713) 667-8718

Galveston Co. Health District
1207 Oak Street
La Marque, Tx. 77568
(404) 938-7221

Harris Co. Health Dept.
2501 Dunstan
Houston, Tx. 77005
(713) 526-1841

Hill Co. Community Action Assoc.
P.O. Box 846
San Saba, Tx. 76877
(915) 372-5781

Coastal Bend AIDS Foundation
P.O. Box 331416
Corpus Christi, Tx. 78704-1416
(512) 883-5815

Community Care for AIDS, Inc.
11th at Market
Galveston, Tx. 77550
(409) 327-2689

Corpus Christi-Nueces Cty, PhD
1702 Horne Road
Corpus Christi, Tx. 78469

Dallas County Health Dept.
1936 Amelia Court
Dallas, Tx. 75235
(214) 920-7910

Ebony Connection, Inc.
P.O. Box 1428
Austin, Tx. 78767
(512) 478-3786

El Paso City-County Health Dist.
222 South Campbell
El Paso, Tx. 79901
(915) 541-4989

Fort Worth Counseling Center
659 South Jennings
Fort Worth, Tx 76104
(817) 335-1994

Ft. Worth Dept. of Public Health
1800 University Drive
Ft. Worth, Tx. 76107
(817) 870-7234

Gonzales Co. Health Agency, Inc.
519 1/2 St. Jopseph
Gonzales, Tx. 78629
(512) 672-6511

Harris Co. Sheriff's Dept.
1301 Franklin
Houston, Tx. 77002
(713) 221-6719

Hispanic AIDS Committee for Edu.
1139 W. Hildebrand, Ste. B
San Antonio, Tx. 78201
(512) 732-3108

Laredo State Center
413 Cherry Hill Drive
Laredo, Tx. 78041
(512) 723-2926

Life Planning/Health Services, Inc.
7929 Brookriver Dr., Ste. 750
Dallas, Tx. 75247-4909
(214) 630-9941

Los Barrios Unidos Community Clinic
3316 Sylvan Avenue
Dallas, Tx. 75212
(214) 651-8739

Neighborhood Centers, Inc.
P.O. Box 88067
Houston, Tx. 77288
(713) 529-3931

Omega House, Inc.
2615 Waugh Drive, #286
Houston, Tx. 77006
(713) 523-1139

PWA Coalition of Dallas, Inc.
800 North Lancaster
Dallas, Tx. 75203
(214) 941-0523

People's Community Clinic
408 W. 23rd Street
Austin, Tx. 78705
(512) 478-4939

Planned Parenthood Greater Dallas
7515 Greenville Ave., Ste. 707
Dallas, Tx. 75231
(214) 363-2004

Planned Parenthood of Central Texas
P.O. Box 1518
Waco, Tx. 76703
(817) 754-2391

Planned Parenthood of Houston & SE
3601 Fannin
Houston, Tx. 77004
(713) 522-6363

Laredo-Webb Co. Health Dept.
600 Cedar Street
Laredo, Tx. 78044
(512) 723-2051

Lloyd Butler Foundation
1803 Old Spanish Trail
Houston, Tx. 77054
(713) 796-9969

Lubbock City Health Dept.
1902 Texas Avenue
Lubbock, Tx. 79408
(806) 762-6411

Oak Lawn Counseling Center
3000 Turtle Creek Plaza #116
Dallas, Tx. 75219-5311
(214) 520-8108

Over the Hill, Inc.
4001 San Jacinto Street
Houston, Tx. 77004
(713) 520-9554

Panhandle Planned Parenthood Assoc.
604 West 8th
Amarillo, Tx. 79101
(806) 372-8731

Planned Parenthood Assoc./Hidalgo
1017 Pecan
McAllen, Tx. 78501

Planned Parenthood/Cameron/Will.
370 Old Port Isabel Road
Brownsville, Tx. 78521
(512) 546-4574

Planned Parenthood of El Paso
2817 E. Yandell
El Paso, Tx. 79903
(915) 566-1613

Planned Parenthood of N. Texas
1101 University Drive
Ft. Worth, Tx. 76107
(817) 332-7966

Planned Parenthood of San Antonio
104 Babcock Road
San Antonio, Tx. 78201
(512) 736-2244

R.E. Thomason General Hospital
4815 Alameda Ave.
El Paso, Tx. 79998
(915) 544-1200

San Antonio AIDS Foundation, Inc.
3530 Broadway
San Antonio, Tx. 78209
(512) 821-6218

Texarkana-Bowie Cty. Fam. Hlth. Ctr.
902 West 12th St.
Texarkana, Tx. 75504
(214) 792-8211

Texas Department of MHMR
909 West 45th St.
Austin, Tx. 78711
(512) 465-4667

The University of Texas at Austin
P.O. Box 8179
Austin, Tx. 78713-8179
(512) 327-2689

Tyler-Smith Co. Public Hlth Dist.
815 North Broadway
Tyler, Tx. 75710
(214) 531-0030

Univ. of Tx. Health Science
7703 Floyd Curl Drive
San Antonio, Tx. 78284
(512) 567-5900

Univ. of Texas Southwestern
823 Harry Hines Blvd.
Dallas, Tx. 78235-9042
(214) 905-2100

Planned Parenthood of West Texas
910-B South Grant
Odessa, Tx. 79761
(915) 333-4133

Sabine Valley Center
P.O. Box 29
White Oak, Tx. 75693
(214) 597-7867

San Antonio Metropolitan Hlth Dist.
332 West Commerce
San Antonio, Tx. 78285
(512) 299-8792

Tx. Comm. on Alcohol & Drugs
1705 Guadalupe
Austin, Tx. 78701
(512) 463-5510

Texas Tech Univ. Hlth Science Ctr.
4800 Alberta Avenue
El Paso, Tx. 79905-1298
(915) 533-3020

Triangle AIDS Network
P.O. Box 12279
Beaumont, Tx. 77706
(409) 832-8338

Univ. of Texas Health Science
6431 Fannin, Ste. 3.204
Houston, Tx. 77030
(713) 792-5360

Univ. of Texas Medical Branch
1700 Strand, Room 236
Galveston, Tx. 77550
(409) 761-2231

University of Texas at Austin
Dept. of Journalism CMA 6.144
Austin, Tx. 78712
(512) 327-2689

Valley AIDS Council
802 East Harrison, Suite 9
Harlingen, Tx. 78550
(512) 428-9322

Visiting Nurse Assoc. Houston
2905 Sackett
Houston, Tx. 77098
(713) 520-8115

Vocational Guidance Services, Inc.
2525 San Jacinto
Houston, Tx. 77002
(713) 659-1800

West Texas Rural Health Providers
P.O. Box 3670
Lubbock, Tx. 79452
(806) 797-3251

Williamson Co. Health Dept.
100 West 3rd Street
Georgetown, Tx. 78627

AIDS Hotline
Bryan, Tx.
(409) 690-AIDS

Victoria Co. Health Dept.
107 W. River Street
Victoria, Tx. 77902
(512) 578-6281

Visiting Nurse Assoc. of Texas
8200 Brookriver Dr., #200 N
Dallas, Tx. 75247
1-800-442-4490

Waco-McLennan Co. Public Health
225 West Waco Drive
Waco, Tx. 76707
(817) 756-5521

Wichita Falls-Wichita Cty Phd
1700 3rd Street
Wichita Falls, Tx. 76301
(817) 322-9702

Community Outreach Center
Ft. Worth, Tx.
(817) 335-1995

PUBLIC HEALTH REGIONAL AIDS COORDINATORS

Jennifer Smith, M.S.H.P.
Public Health Region I
2408 S. 37th
Temple, Tx. 76504
Tx: 820-2201
(817) 778-6744

Ron Tomlinson
Public Health Region 5
2561 Matlock Road
Arlington, Tx. 76015
Tx: 833-9011
(817) 792-7213

Duncan MacKellor, M.P.H.
Public Health Region 2
4709 66th Street
Lubbock, Texas 79414
Tx: 842-5299
Tx: 820-1532
(806) 797-4331

Mary Martinez
Public Health Region 6
P.O. Drawer 630
Uvalde, Texas 78801
(817) 792-7213
(512) 278-7173
San Antonio: (512) 534-8857x462

Sarana Savage
Public Health Region
619 West Texas, #300
Midland, Texas 79701
Tx: 840-1010
(915) 683-9492

Bruce Mammeli, D.V.M.
Public Health Region 7
1517 W. Front Street
P.O. Box 2501
Tx: 830-6011
(214) 595-3585

Judy Spong, M.S.
Public Health Region 4
10500 Forum Place, Suite 200
Houston, Texas 77036
Tx: 851-3229
(713) 995-1112

David Cavazos, R.N.
Public Health Region 8
1401 S. Rangervisille Road
Harlingen, Texas 78552
Tx: 820-4501
(512) 423-0130

NATIONAL

National AIDS Hotline 1-800-342-AIDS
Nationally Sexually Transmitted Disease Hotline 1-800-227-8922
AIDS Action Council (202) 547-3103
American Red Cross (202) 737-8300
Centers for Disease Control (404) 329-2891
Drug Abuse Hotline 1-800-662-HELP
Gay Men's Health Crisis (212) 807-7035
National AIDS Network (202) 347-0390
National Association of People with AIDS (202) 483-7979
National Gay Task Force 1-800-221-7044
San Francisco AIDS Foundation (415) 864-4376
U.S. Public Health Service (202) 472-4248
National Sheriffs' Association 1-800-424-7827
National Institute of Justice-AIDS Clearinghouse (303) 251-5500

APPENDIX F
AIDS SURVEY

The Impact of Acquired Immunodeficiency Syndrome on Texas Adult Probation Departments

TEXAS ADULT PROBATION COMMISSION

February 1989

The Acquired Immunodeficiency Syndrome (AIDS) survey was issued statewide to assess the impact of this disease on the operations of adult probation departments. The following table represents 87% or 97 of the 111 participating judicial districts of the TAPC. Because some questions were unanswered by the departments, not all responses total 100%.

TABLE

Questions	Y	N	Number of Responses
1. Do you know if any offender, while receiving probation services in your jurisdiction, has been HIV infected and/or diagnosed with AIDS?	53 (56%)	44 (43%)	97
2. Has your department developed any written policies or guidelines for the supervision of persons that have been HIV infected and/or diagnosed with AIDS?	8 (8%)	89 (92%)	97
3. Has your department developed any written policies or guidelines for managing AIDS in the workplace?	10 (10%)	85 (89%)	95
4. Have you reviewed HB 1829 and its provisions regarding confidentiality and testing?	35 (37%)	59 (63%)	94
5. Do you have any resources in your jurisdiction for offenders that are HIV infected and/or diagnosed with AIDS?	29 (31%)	64 (69%)	93
6. Does your department have on file a resource guide to assist supervisory staff in referring HIV infected and/or diagnosed person w/AIDS to appropriate resources?	6 (6%)	90 (94%)	96
7. Does your department require the AIDS antibody testing on any probationers?	6 (6%)	90 (94%)	96
8. Does your department offer or have access to an AIDS education program for staff and/or for probationers?	33 (34%)	64 (66%)	97

Questions	Y	N	Number of Responses
9. Is there anyone in your department who serves as a resource person for AIDS education?	20 (21%)	74 (78%)	94
10. In your opinion would guidelines on AIDS issues and on the interpretation of the state law be beneficial to your department?	85 (89%)	10 (10%)	95
11. What issues would you like to see the AIDS committee address?	Refer to Summary of Findings		

SUMMARY

Responses from the survey demonstrate that 55% of the departments have directly been effected by AIDS. Approximately 130 offenders that are either HIV infected or have been diagnosed with AIDS have received services within the probation system. Of these 130 offenders, 102 were on regular probation (felony and misdemeanor), 22 were on Intensive Probation, and six were in residential programs.

Although over half of the departments have felt the impact of this disease, only eight percent have developed policies to manage this problem. Only 30% of the probation departments have resources for probationers with HIV/and or AIDS and only 34% offer AIDS education and training for department staff and probationers. The majority of these departments rely on local MHMR Centers, Red Cross and county health facilities for education and counseling services.

Eighty-five percent (85%) of the departments stated that TAPC guidelines on AIDS would be beneficial in the operation of their probation departments. They requested that the following issues be addressed: confidentiality, testing, liability, training, education, resources, supervision of persons with HIV and/or AIDS, and the precautions needed for the prevention of transmission of the virus. The survey findings were used as a basis for the development of the enclosed guidelines.