ISSN 0725-3141

Communicable Diseases Intelligence

Bulletin number 85/24
Issue date: 29 November 1985

Contents:

Editor: Dr I F Cook.

VIRUS REPORTING SCHEME - A total of 1,453 reports were processed for this period.

Nineteen cases of Coxsackie B4 virus were reported, ten from the Royal Children's Hospital, Victoria. The virus was isolated from the CSF of a one month old female with meningitis.

Migratory poly-arthritis together with rash and lethargy was observed in two males (20 and 27 years) with rubella. This clinical finding, although relatively common in females is uncommon in children and adult males with rubella.

Q fever was reported in eight patients during this period. Occupational exposure details were available for four patients, three meatworkers and a hunter. None of the patients were involved in the South Australian Q fever vaccine trial.

Twenty-nine cases of Ross River virus infection were reported during this period (QLD 24, NSW 3, WA 1, NT 1). In Queensland the cases were reported from Mackay (6), Townsville (5), Cairns (4), Sarina (2), Brisbane (2), Rockhampton (1), the Gold Coast (1), Mt Isa (1), Roma (1), Charter's Towers (1), Blackwater* (1), and Theodore* (1). (* Personal communication from T.B. Lynch, pathologist, Rockhampton, Queensland.)

Cytomegalovirus was identified in a 58 year old male renal transplant patient with pneumonia and urinary tract infection. The virus was isolated from bronchial washings, saliva, nasal samples, urine and leucocytes.

Calici virus was identified by electron microscopy in the faeces of a 3 year old girl with gastroenteritis.

Opportunistic cytomegalovirus infections were reported in 3 males with either AIDS, HTLV-III antibody or lymphadenopathy syndrome. Adenovirus 35 was also isolated from the AIDS patient.

Sera from a New Zealand patient with ARC (AIDS Related Complex) was repeatedly negative with two commercial ELISA tests but was Western blot positive (NZ Virus Report No 9/85).

The Bulletin is compiled and distributed by the Communicable Diseases Branch, Department of Health, P.O. Box 100, Woden, A.C.T. 2606, Australia, and is available on request.

RECOMMENDATIONS FOR PREVENTING TRANSMISSION OF INFECTION WITH LYMPHADENOPATHY-ASSOCIATED VIRUS/HUMAN T-LYMPHOTROPIC VIRUS TYPE III IN THE WORKPLACE

(Based on MMWR (1985) 34, 682-686.)

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

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

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

These recommendations are based on the well-documented modes of LAV/HTLV-III transmission identified in epidemiological studies

and on comparison with the hepatitis B experience. Other recommendations are based on the hepatitis B model of transmission.

COMPARISON WITH THE HEPATITIS B VIRUS EXPERIENCE

The epidemiology of LAV/HTLV-III infection is similiar to that of hepatitis B virus (HBV) infection and much that has been learned over the last 15 years related to the risk of acquiring hepatitis B in the workplace can be applied to understanding the risk of LAV/HTLV-III transmission in the health-care and other occupational settings. Both viruses are transmitted through sexual contact, parenteral exposure to contaminated blood or blood products and perinatal transmission from infected mothers to their offspring. Thus, some of the same major groups at high risk for HBV infection (e.g. homosexual men, IV drug abusers, persons with haemophilia, infants born to infected mothers) are also the groups at highest risk for LAV/HTLV-III infection. Neither HBV nor LAV/HTLV-III has been shown to be transmitted by casual contact in the workplace, contaminated food or water, or airborne or faecal-oral routes[5].

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

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

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

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

TRANSMISSION FROM PATIENTS TO HEALTH-CARE WORKERS

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

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

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

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

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

1. Sharp items (needles, scalpel blades and other sharp instruments) should be considered as potentially infective and be handled with extraordinary care to prevent accidental injuries.
2. Disposable syringes and needles, scalpel blades and other sharp items should be placed into puncture-resistant containers located as close as practical to the area in which they were used. To prevent needlestick injuries, needles should not be recapped, purposefully bent, broken, removed from disposable syringes or otherwise manipulated by hand.
3. When the possibility of exposure to blood or other body fluids exists, routinely recommended precautions should be followed. The anticipated exposure may require gloves alone, as in handling items soiled with blood or equipment contaminated with blood or other body fluids, or may also require gowns, masks and eye-coverings when performing procedures involving more extensive contact with blood or potentially infective body fluids, as in some dental or endoscopic procedures or postmortem examinations. Hands should be washed thoroughly and immediately, if they are accidentially contaminated with blood.
4. To minimise the need for emergency mouth-to-mouth resuscitation, mouth pieces, resuscitation bags, or other ventilation devices should be strategically located and available for use in areas where the need for resuscitation is predictable.
5. Pregnant HCWs are not known to be at greater risk of contracting LAV/HTLV-III infections than HCWs who are not pregnant; however, if a HCW develops LAV/HTLV-III infection during pregnancy, the infant is at increased risk of infection resulting from perinatal transmission. Because of this risk pregnant HCWs should be especially familiar with precautions for preventing LAV/HTLV-III transmission[19].

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

When providing health-care service in the home to persons infected with LAV/HTLV-III, measures similar to those used in hospitals are appropriate. As in the hospital, needles should not be recapped, purposefully bent, broken, removed from disposable syringes, or otherwise manipulated by hand. Needles and other sharp items should be placed into puncture-resistant containers and disposed of in accordance with local regulations for solid waste. Blood and other body fluids can be flushed down the toilet. Other items for disposal that are contaminated with blood or other body fluids that cannot be flushed down the toilet should be wrapped securely in a plastic bag that is impervious and sturdy (not easily penetrated). It

should be placed in a second bag before being discarded in a manner consistent with local regulations for solid waste disposable. Spills of blood or other body fluids should be cleaned with soap and water or a household detergent. As in the hospital, individuals cleaning up such spills should wear disposable gloves. A disinfectant solution or a freshly prepared solution of sodium hypochlorite (household bleach, see below) should be used to wipe the area after cleaning.

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

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

Management of parenteral and mucous membrane exposures of HCWs. If a HCW has a parenteral (e.g. needlestick or cut) or mucous membrane (e.g. splash to the eye or mouth) exposure to blood or other body fluids, the source patient should be assessed clinically and epidemiologically to determine the likelihood of LAV/HTLV-III infection. If the assessment suggests that infection may exist, the patient should be informed of the incident and requested to consent to serological testing for evidence of LAV/HTLV-III infection. If the source patient has AIDS or other evidence of LAV/HTLV-III infection, declines testing, or has a positive test, the HCW should be evaluated clinically and serologically for evidence of LAV/HTLV-III infection as soon as possible after the exposure, and, if seronegative, be retested after 6 weeks and on a periodic basis thereafter (e.g. 3, 6, and 12 months following exposure) to determine if transmission has occurrred. During this follow-up period, especially the first 6-12 weeks, when most infected persons are expected to seroconvert, exposed HCWs should receive counselling about the risk of infection and follow US Public Health Service (PHS) recommendations for preventing transmission of AIDS[20, 21]. If the source patient is seronegative and has no other evidence of LAV/HTLV-III infection, no further follow-up of the HCW is necessary. If the source patient cannot be identified, decisions regarding appropriate follow-up should be individualised based on the type of exposure and the likelihood that the source patient was infected.

Serological testing of patients. Routine serological testing of all patients for antibody to LAV/HTLV-III is not recommended to prevent transmission of LAV/HTLV-III infection in the

workplace. Results of such testing are unlikely to further reduce the risk of transmission, which, even with documented needlesticks, is already extremely low. Furthermore, the risk of needlestick and other parenteral exposures could be reduced by emphasising and more consistently implementing routinely recommended infection-control precautions (e.g. not recapping needles). Moreover, results of routine serological testing would not be available for emergency cases and patients with short lengths of stay and additional tests to determine whether a positive test was a true or false positive would be required in populations with a low prevalence of infection. However, this recommendations is based only on consideration of occupational risks and should not be construed as a recommendation against other uses of the serological test, such as for diagnosis or to facilitate medical management of patients. Since the experience with infected patients varies substantially among hospitals (75% of all AIDS cases have been reported by only 280 of the more than 6,000 acute-care hospitals in the United States) some hospitals in certain geographic areas may deem it appropriate to initiate serological testing of patients.

TRANSMISSION FROM HEALTH-CARE WORKERS TO PATIENTS

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

Precautions to prevent transmission of LAV/HTLV-III infection from HCWs to patients. These precautions apply to all HCWs, regardless of whether they perform invasive procedures:

1. All HCWs should wear gloves for direct contact with mucous membranes or non-intact skin of all patients; and
2. HCWs who have exudative lesions or weeping dermatis should refrain from all direct patient care and from handling patient-care equipment until the condition resolves.

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

Serological testing of HCWs. Routine serological testing of HCWs who do not perform invasive procedures (including providers of home and prehospital emergency care) is not recommended to prevent transmission of LAV/HTLV-III infection. The risk of transmission is extremely low and can be further

minimized when routinely recommended infection-control precautions are followed. However, serological testing should be available to HCWs who may wish to know their LAV/HTLV-III infection status. Whether indications exist for serological testing of HCWs who perform invasive procedures is currently being considered.

Risk of occupational acquisition of other infectious diseases by HCWs infected with LAV/HTLV-III. HCWs who are known to be infected with LAV/HTLV-III and who have defective immune systems are at increased risk of acquiring or experiencing serious complications of other infectious diseases. Of particular concern is the risk of severe infection following exposure to patients with infectious diseases that are easily transmitted if appropriate precautions are not taken (e.g. tuberculosis). HCWs infected with LAV/HTLV-III should be counselled about the potential risk associated with taking care of patients with transmissible infections and should continue to follow existing recommendations for infection control to minimize their risk of exposure to other infectious agents[18, 19]. The HCWs' personal physician(s), in conjunction with their institutions' personnel health services or medical directors, should determine on an individual basis whether the infected HCWs can adequately and safely perform patient-care duties and suggest changes in work assignments, if indicated. In making this determination, recommendations of the Immunization Practices Advisory Committee and institutional policies concerning requirements for vaccinating HCWs with live-virus vaccines should also be considered.

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

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

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

instruments or devices to be sterilized or disinfected should be thoroughly cleaned before exposure to the germicide and the manufacturer's instructions for use of the germicide should be followed.

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

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

Sharp items should be considered as potentially infective and should be handled and disposed of with extraordinary care to prevent accidential injuries. Other potentially infective waste should be contained and transported in clearly identified impervious plastic bags. If the outside of the bag is contaminated with blood or other body fluids, a second outer bag should be used. Recommended practices for disposal of infective waste[23] are adequate for disposal of waste contaminated by LAV/HTLV-III. Blood and other body fluids may be carefully poured down a drain connected to a sanitary sewer.

CONSIDERATIONS RELEVANT TO OTHER WORKERS

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

All PSWs should be educated about transmission of bloodborne infections, including LAV/HTLV-III and HBV. Such education should emphasize principles of good hygiene, antisepsis and disinfection. This education can be accomplished by national or state professional organisations, with assistance from state

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

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

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

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

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

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

OTHER ISSUES IN THE WORKPLACE

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

DEVELOPMENT OF THESE RECOMMENDATIONS

The information and recommendations contained in these recommendations, were developed and compiled by Centers for Disease Control and other Public Health Services agencies in consultation with individuals representing various organisations.

References:

1. MMWR (1982) 31:577-80.
2. MMWR (1983) 32:450-1.
3. MMWR (1985) 34:517-21.
4. MMWR (1985) 34:373-5.
5. MMWR (1985) 34:313-24,329-335.
6. Infect Control (1985) 6:24-31.
7. Am J Epidemiol (1982) 115:26-39.
8. Am J Epidemiol (1975) 101:59-64.
9. JADA (1985) 110:634-6.
10. Ann Intern Med (1981) 95:133-8.
11. Lancet (1982)i:731-3.
12. Ann Intern Med (1978) 88:285-93.
13. J. Infect Dis (1978) 138:625-38.
14. J. Infect Dis (1977) 136:571-6.
15. MMWR (1985) 34:575-8.
16. JAMA (1985) 254:2089-93.
17. Lancet (1984) ii:1376-7.
18. Infect Control (1983) 4:245-325.
19. Infect Control (1983) 4:326-49.
20. MMWR (1983) 32:101-3.
21. MMWR (1985) 34:1-5.
22. Manual of Clinical Microbology, 4th ed, Washington, D.C: American Society for Microbiology (1985) P129-37.
23. Centers for Disease Control, Atlanta Georgia (1985) Publication no. 99-1117.
24. Kneedler JA, Dodge GH, Perioperative patient care. Boston: Blackwell Scientific Publications, (1983) 210-1.
25. J. Infect Dis (1985) 152:400-3.
26. DHEW publication no. (FDA) 78-2081 (1978).

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD 11/11/85-24/11/85 BULLETIN NUMBER 85/24
VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW)/ WVH (ACT)	RAHC (NSW)	PHH/ POW (NSW)	FAIR-FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
0100 ADENOVIRUS NOT TYPED		2	8	1	4	1	11	1	28
0101 ADENOVIRUS TYPE 1	1			1	1	3		3	9
0102 ADENOVIRUS TYPE 2	2			2	3	6		2	15
0103 ADENOVIRUS TYPE 3				1	1	7			9
0104 ADENOVIRUS TYPE 4			1						1
0105 ADENOVIRUS TYPE 5					3				3
0106 ADENOVIRUS TYPE 6						2			2
0107 ADENOVIRUS TYPE 7	1	1				1			3
0108 ADENOVIRUS TYPE 8	2								2
0114 ADENOVIRUS TYPE 14						1			1
0119 ADENOVIRUS TYPE 19	1								1
0128 ADENOVIRUS TYPE 28						1			1
0135 ADENOVIRUS TYPE 35				1					1
0199 ADENOVIRUS TYPING PENDING					6	2			8
0201 INFLUENZA A VIRUS	3		8			1	1		13
0202 INFLUENZA A VIRUS SUBTYPE H3N2	1				1				2
0203 INFLUENZA B VIRUS				1	3	5		6	15
0301 PARAINFLUENZA VIRUS TYPE 1	1								1
0302 PARAINFLUENZA VIRUS TYPE 2	1				1				2
0303 PARAINFLUENZA VIRUS TYPE 3	2	2		6	21	11	6	6	54
0399 PARAINFLUENZA VIRUS TYPING PENDING						4			4
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)	2	1	6	1	3	5			18
0500 RHINOVIRUS (ALL TYPES)	1			2	39	22	4		68
0600 MYCOPLASMA PNEUMONIAE	2		2			1	1	4	10
0700 ORNITHOSIS-PSITTACOSIS				1	1			1	3
0816 COXSACKIEVIRUS A16	1								1
0904 COXSACKIEVIRUS B4	3			2	10		4		19
0905 COXSACKIEVIRUS B5						1			1
1003 ECHOVIRUS TYPE 3	1	1							2
1007 ECHOVIRUS TYPE 7					1			6	7
1014 ECHOVIRUS TYPE 14								1	1
1100 POLIOVIRUS NOT TYPED			3		1				4
1101 POLIOVIRUS TYPE 1		1				1			2
1102 POLIOVIRUS TYPE 2	2			1		2		1	6
1103 POLIOVIRUS TYPE 3	1					3			4
1104 POLIOVIRUS-VACCINAL STRAIN						1	1		2
1199 POLIOVIRUS TYPING PENDING		1							1
1200 MUMPS VIRUS				2			1		3
1300 HERPES VIRUS GROUP-NOT TYPED	33		3	3		1	1	5	46
1301 HERPES SIMPLEX VIRUS NOT-TYPED		1		1				3	5
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	8	2	1	1				5	17
1303 VARICELLA-ZOSTER VIRUS	6			1		1	2		10
1306 HERPES SIMPLEX TYPE 1	18		1	31	4	22	35	23	134
1307 HERPES SIMPLEX TYPE 2	108			49		29	65	64	315
1399 HERPES VIRUS TYPING PENDING					13	1		1	15
1401 COXIELLA BURNETI	1					2	5		8
1502 PICORNA VIRUS-NOT TYPED	2	1	2				2	1	8
1512 VACCINIA VIRUS	1								1
1521 MEASLES VIRUS	1		4				1		6
1522 RUBELLA VIRUS	8		3	7		2	1	5	26
1532 HEPATITIS B ANTIGEN	37	2	15	46	7	14	26	9	156
1535 HEPATITIS A ANTIBODY	4		1	5		14	1	17	42
1541 CHLAMYDIA A - C TRACHOMATIS	18	1	3	13		46	19	57	157
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART)				1					1
1556 CMV - CYTOMEGALOVIRUS	12		1	22	13	6	6	6	66
1564 ROTAVIRUS	30	1	9	2	10	11			63
1565 CALICI VIRUS	1								1
1599 ENTEROVIRUS TYPING PENDING		1	6		9	3			19
9992 ROSS RIVER VIRUS							25	2	27
9994 SMALL VIRUS (LIKE) PARTICLE	1								1
9995 DENGUE							1		1
9998 ARBO. GROUP B.							1		1
Total	317	18	77	204	155	233	220	229	1,453

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 11/11/85-24/11/85
Viral Identifications by Clinical Information Table 1.
Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Encephalitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CNS other unspec.; 07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.

	VIRUS OR VIRAL ANTIGEN	No-ill or data	Respiratory	Encephalitis	Meningitis	Paralysis	CNS other unspec	GI	Hepatic	CVS	Urinary	Skin/mucs memb
0100	ADENOVIRUS NOT TYPED.....	1	15			1		6				
0101	ADENOVIRUS TYPE 1.....	3	5					2				
0102	ADENOVIRUS TYPE 2.....		9				1	3				
0103	ADENOVIRUS TYPE 3.....		7					1				
0104	ADENOVIRUS TYPE 4.....				1							
0105	ADENOVIRUS TYPE 5.....		1					1				
0106	ADENOVIRUS TYPE 6.....		1					1				
0107	ADENOVIRUS TYPE 7.....	1	1					1				
0114	ADENOVIRUS TYPE 14.....							1				
0128	ADENOVIRUS TYPE 28.....							1				
0135	ADENOVIRUS TYPE 35.....							1				
0201	INFLUENZA A VIRUS.....		8									
0202	INFLUENZA A VIRUS SUBTYPE H3N2		2									
0203	INFLUENZA B VIRUS.....	1	9									
0301	PARAINFLUENZA VIRUS TYPE 1....		1									
0302	PARAINFLUENZA VIRUS TYPE 2....		2									
0303	PARAINFLUENZA VIRUS TYPE 3....		54									
0400	RESPIRATORY SYNCYTIAL VIRUS (RS).....		13									
0500	RHINOVIRUS (ALL TYPES).....		34		1							
0600	MYCOPLASMA PNEUMONIAE.....		7	1								
0700	ORNITHOSIS-PSITTACOSIS.....		1									
0816	COXSACKIEVIRUS A16.....											1
0904	COXSACKIEVIRUS B4.....	2	12		1			3				
0905	COXSACKIEVIRUS B5.....							1				
1003	ECHOVIRUS TYPE 3.....		1									
1007	ECHOVIRUS TYPE 7.....		2				1	3				
1014	ECHOVIRUS TYPE 14.....							1				
1100	POLIOVIRUS NOT TYPED.....							3				
1102	POLIOVIRUS TYPE 2.....	2	3									
1103	POLIOVIRUS TYPE 3.....						1	2				
1200	MUMPS VIRUS.....						1					
1300	HERPES VIRUS GROUP-NOT TYPED..	4	1	2			1				1	20
1301	HERPES SIMPLEX VIRUS NOT-TYPED			1								3
1302	EPSTEIN-BARR VIRUS (EB VIRUS).	2	1	1	1				1			
1303	VARICELLA-ZOSTER VIRUS.....	1										8
1306	HERPES SIMPLEX TYPE 1.....	5	7					1			1	69
1307	HERPES SIMPLEX TYPE 2.....	11					1					74
1399	HERPES VIRUS TYPING PENDING...								1			1
1401	COXIELLA BURNETI.....	1			1				1			
1502	PICORNA VIRUS-NOT TYPED.....	1						2				
1512	VACCINIA VIRUS.....											1
1521	MEASLES VIRUS.....	1	2				1					
1522	RUBELLA VIRUS.....	2	1									18
1532	HEPATITIS B ANTIGEN.....	77						1	71			1
1535	HEPATITIS A ANTIBODY.....	7						1	31			
1541	CHLAMYDIA A - C.TRACHOMATIS...	1	2				1					
1555	PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART).....											1
1556	CMV - CYTOMEGALOVIRUS.....	2	17				1		3		3	1
1564	ROTAVIRUS.....	1				1		51	4			
1565	CALICI VIRUS.....							1				
9992	ROSS RIVER VIRUS.....	7	2				1		1			3
9994	SMALL VIRUS (LIKE) PARTICLE...							1				
9998	ARBO. GROUP B.											1
Total	.....	133	221	5	5	2	10	89	113		5	202

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 11/11/85 - 24/11/85
Viral Identifications by Clinical Information Table 2.
Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
G8 -Fever/malaise; 09 -Other; A1 -SIDS ...

VIRUS OR VIRAL ANTIGEN	Eye	Genital	Endo/sal gland	RES	Muscle/joint	Congenital	PUO	Fever/malaise	Other	SIDS
0100 ADENOVIRUS NOT TYPED.....								1		
0102 ADENOVIRUS TYPE 2.....								1	1	
0103 ADENOVIRUS TYPE 3.....	1									
0105 ADENOVIRUS TYPE 5.....										1
0108 ADENOVIRUS TYPE 8.....	2									
0119 ADENOVIRUS TYPE 19.....	1									
0135 ADENOVIRUS TYPE 35.....		1								
0201 INFLUENZA A VIRUS.....	2			1			1	1		
0203 INFLUENZA B VIRUS.....					1		1	2		1
0303 PARAINFLUENZA VIRUS TYPE 3....							1	1		1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....								2	2	
0600 MYCOPLASMA PNEUMONIAE.....							2	1		
0700 ORNITHOSIS-PSITTACOSIS.....								1	1	
0904 COXSACKIEVIRUS B4.....								1		
1003 ECHOVIRUS TYPE 3.....									1	
1007 ECHOVIRUS TYPE 7.....								1		
1100 POLIOVIRUS NOT TYPED.....										1
1101 POLIOVIRUS TYPE 1.....									2	
1102 POLIOVIRUS TYPE 2.....							1			
1103 POLIOVIRUS TYPE 3.....									1	
1104 POLIOVIRUS-VACCINAL STRAIN....										2
1300 HERPES VIRUS GROUP-NOT TYPED..	2	6							3	
1301 HERPES SIMPLEX VIRUS NOT-TYPED								1		
1302 EPSTEIN-BARR VIRUS (EB VIRUS).		1	5	3				4	1	
1303 VARICELLA-ZOSTER VIRUS.....								2		
1306 HERPES SIMPLEX TYPE 1.....	6	47							3	
1307 HERPES SIMPLEX TYPE 2.....		233							1	
1401 COXIELLA BURNETI.....							2	5		
1502 PICORNA VIRUS-NOT TYPED.....							2	2	1	
1521 MEASLES VIRUS.....								4		
1522 RUBELLA VIRUS.....			1	1			1	2	4	
1532 HEPATITIS B ANTIGEN.....	1				1				5	
1535 HEPATITIS A ANTIBODY.....								1	2	
1541 CHLAMYDIA A - C.TRACHOMATIS...	1	152							2	
1556 CMV - CYTOMEGALOVIRUS.....		8	2			9		2	20	1
9992 ROSS RIVER VIRUS.....		1			14			9		
9995 DENGUE.....								1		
9998 ARBO. GROUP B.					1					
Total.....	16	449	9	4	17	9	11	45	50	7