LOUISIANA MORBIDITY REPORT

September/October 1989

EPIDEMIOLOGY

DAVID L. RAMSEY
SECRETARY
(504) 342-6711

DEPARTMENT OF HEALTH AND HOSPITALS
OFFICE OF PUBLIC HEALTH
DIVISION OF DISEASE CONTROL
P.O. BOX 60630
NEW ORLEANS, LOUISIANA 70160

INFECTIOUS WASTE

Public and private concerns regarding infectious waste and/or articles perceived to be infectious have been very much in the news recently in our state and particularly in the area around New Orleans. In other parts of the United States in 1987 and 1988, there were a few newsworthy incidents involving improper handling of infectious waste. These included children playing with vials of HIV infected blood that came from an unlocked dumpster outside of several physicians' offices in Indianapolis, children playing with syringes from a dumpster in Ohio, and medical waste washing onto beaches in New York and New Jersey.

Attempting to assess public health risks associated with infectious waste is difficult. In reviewing the literature, there is no microbiologic evidence to suggest that hospital waste is more infective than waste generated from households. Nor is there epidemiologic evidence that hospital waste disposal practices have caused disease in the community.

Persons at significant risk are hospital personnel, particularly in the laboratory, who must handle infective body substances in performing their job-related duties. Risk to the public outside of infectious waste generating facilities appears to be minimal. However, infectious wastes are cited as occupational hazards for refuse haulers and landfill personnel.

There is presently some concern in both the medical and refuse-hauling industries over the knowledge that the U.S. Environmental Protection Agency (EPA) is considering nationwide regulation of infectious waste. The fear is that EPA will create "over-regulations" that will cause serious complications related to enforcement.

A definition of what constitutes infectious waste has become an important aspect of the infectious waste issue. The EPA defines infectious waste as "waste capable of producing an infectious disease." Factors necessary for introduction of disease include the presence of a pathogen of sufficient virulence, dose, portal of entry and host resistance. In order for disease to occur as a result of exposure to such waste, a susceptible host must be present at the proper time and place. The EPA categorizes waste into the following groups: Isolation wastes, cultures and stocks of infectious agents and associated biologicals, human blood and blood products, pathological waste, contaminated sharps, contaminated animal carcasses, body parts and bedding.

The Centers for Disease Control (CDC) uses the term "infective

waste" defined as "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."

CDC guidelines are available upon request that emphasize the need to treat blood and other body fluids from all patients as potentially infective. These guidelines should be followed in all settings in which persons may be exposed to blood or other body fluids.

The Office of Health and Hospitals is presently working on the final draft of infectious waste regulations proposed to become a part of the Louisiana Sanitary Code.

(Adapted from the Journal of Environmental Health. Vol.51,No.4, "Infectious Waste" by Richard Clark, R.S., M.P.H.)

- NOTICE -

The Office of Public Health, Division of Laboratories is utilizing two new laboratory request forms. The rabies form (Lab 32) is to be used when submitting animal heads for rabies testing. The new retroviral laboratory form (Lab 94) is to be used when requesting any HIV or Western blot testing. Both forms may be obtained from your local parish health unit. If you have any questions, please contact the Epidemiology Office at 504-568-5005.

Congratulations to the Louisiana Public Health Association 40 Years Young!

The Louisiana Public Health Association is celebrating its 40th year as one of the leading groups in the state working for the advancement of public health. The Association of over 500 members welcomes new members interested in working towards a healthier population and in protecting the health of Louisiana. Those interested in knowing more about the Association and its annual meeting to be held in Metairie in April 1990, may contact the President: Mrs. Ellyce Goins, 5420 Coach Road, Bossier City, LA 71111, (318) 747-3314.

Health Information for International Travel

United States Public Health Service Recommendations

Introduction

Recommendations for individuals engaging in international travel apply primarily to vaccinations and prophylactic measures not required by countries but generally advisable for U.S. travelers planning to spend time in areas of the world where diseases such as measles, poliomyelitis, typhoid fever, viral hepatitis, and malaria occur either in endemic form or epidemic form and, therefore, pose a threat to their health. In addition, some countries require an International Certificate of Vaccination against cholera and/or yellow fever as a condition for entry. The majority of U.S. international travelers probably do not need any additional immunizations or prophylaxis, provided their routine immunization status is up-to-date according to the standards of the Public Health Service Immunization Practices Advisory Committee (ACIP).

The extent to which advisory statements can be made specific for each country and each disease is limited by the lack of reliable data. Although data on the occurrence of many of these diseases are published regularly by WHO, these figures represent only a small percentage of the total number of cases that actually occur - in fact, many countries do not report these

diseases at all. Furthermore, communicable diseases are not well reported by practicing physicians, and in some countries where the number of physicians is inadequate, many cases never come to medical attention. For these reasons, any recommendations must be interpreted with care.

In general, the risk of acquiring illness when engaging in international travel depends on the areas of the world to be visited - travelers in developing countries are at greater risk than those traveling in developed areas. In most developed countries, Canada, Australia, New Zealand, Japan, and the continent of Europe, the risk to the general health of the traveler will be no greater than that incurred throughout the United States; however, there may be a higher risk of measles, mumps, and rubella. In many developed countries such as the Federal Republic of Germany, Ireland, Italy, Spain, Sweden, and the United Kingdom, pertussis immunization is not as widely practiced as in the United States, and the risk of acquiring pertussis is greater. In the countries in Africa, Asia, South America, Central America, Mexico, the South Pacific, Middle East, and Far East, living conditions and standards of sanitation and hygiene vary considerably, and immunization coverage levels may be low. There the risk of acquiring disease also can vary greatly. Travelers visiting primarily tourist areas on itineraries that do not include travel or visits in rural areas have less risk of exposure to food or water of questionable quality. Travelers who visit smaller cities off the usual tourist routes and those who spend time in small villages or rural areas for extended periods or who expect to have extended contact with children are at greater risk of acquiring infectious diseases, because of exposure to water and food of uncertain quality and closer contact with local residents who may harbor the organisms that cause such diseases. Consequently, the added protection of booster or additional doses of certain vaccines and prophylaxis is recommended for these persons.

General Recommendations on Human Immunodeficiency Virus (HIV) Infection and Acquired Immunodeficiency Syndrome (AIDS)

Acquired Immunodeficiency Syndrome (AIDS) is the severest manifestation of infection by the human immunodeficiency virus (HIV). Other less severe illnesses, sometimes grouped under the term AIDS-related complex (ARC), as well as asymptomatic infections may also result from infection with HIV, but all infected persons remain at risk for developing AIDS indefinitely. The incubation period for AIDS may be long, ranging from a few months to many years. Some individuals infected with HIV remain asymptomatic for 8 years or more. Currently, there is no vaccine to protect against infection with HIV, and there is no cure for AIDS.

AIDS has been reported from more than 125 countries on every continent of the world. Adequate surveillance systems are lacking in many countries, so that the true number of cases is likely to be far greater than the number reported. In all countries, the number of persons infected with HIV will be far greater than the number of AIDS cases. Because HIV infection and AIDS are globally distributed, the risk to international travelers is determined less by their geographic destination than by their individual behavior.

The global epidemic of AIDS has raised several issues regarding HIV infection and international travel. The first is the increasing need of information for international

travelers on how HIV is transmitted and how HIV infection can be prevented. Second is the use of a public conveyance by a person with AIDS or HIV infection. And finally, the recent policy by several countries for serologic testing for HIV and exclusion of those persons with AIDS or positive tests for HIV.

HIV infection is preventable. There is no documented evidence of HIV transmission through casual contacts; air, food, or water routes; contact with inanimate objects; or through mosquitoes or other arthropod vectors. The use of any public conveyance (e.g. airplane, boat, bus, train) by persons with AIDS or HIV infection does not pose a risk of HIV infection for other passengers. HIV is transmitted through sexual intercourse, blood or blood components, and perinatally from an infected pregnant woman.

Travelers are at risk if they:

-have sexual intercourse (homosexual or heterosexual) with an infected person, or a person whose infection status is unknown.

-use or allow the use of contaminated, unsterilized syringes or needles for any injections, e.g. illicit drugs, acupuncture, medical/dental procedures, or tattooing; or

-use infected blood, blood components, or clotting factor concentrate. This would be an extremely rare occurrence in those countries or cities where donated blood/plasma is screened for HIV antibody.

Travelers should avoid sexual encounters with a person who is thought to be infected with HIV or whose HIV infection status is unknown. This will mean avoiding sexual activity with intravenous drug users and persons with multiple sexual partners, including male or female prostitutes. Condoms may decrease, but not entirely eliminate, the risk of transmission of HIV. Persons who engage in vaginal, anal, or oral-genital intercourse with anyone who is infected with HIV or whose infection status is unknown should use condoms in combination with a spermicide.

In many countries, needlesharing by IV drug users is a major source of HIV transmission. Do not use drugs intravenously or share needles.

In the United States, Australia, Canada, Japan, and western European countries, the risk of infection of transfusion-associated HIV infection is greatly reduced through mandatory testing of all donated blood for the presence of antibodies to HIV.

If produced in the United States by procedures approved by the Food and Drug Administration, immune globulin preparations (such as those used for the prevention of hepatitis A and B) and hepatitis B virus vaccine are free of HIV and therefore safe to receive.

In other countries, especially less-developed nations, there may or may not be a formal testing program for testing blood or biological products for antibody to HIV. In these countries, use of locally-produced blood clotting factor concentrates should be avoided. If transfusion is necessary, the blood should be tested, if at all possible, for HIV antibodies by appropriately-trained laboratory technicians using a reliable test. Needles used to draw blood or administer injections should be sterile, preferably disposable, and prepackaged in a sealed, single unit container. Diabetics or other persons who require routine or frequent injections should carry a supply of syringes and needles sufficient to last their entire stay abroad.

International travelers should also be aware that some countries have recently established a policy to serologically screen incoming travelers (primarily those with extended visits) and to exclude persons with AIDS and those whose serum tests positive for HIV antibody. Persons intending to visit a country for a prolonged period should be informed of the policies of the particular country.

General Recommendations On Vaccination and Prophylaxis

The Immunization Practices Advisory Committee (ACIP) meets periodically and makes recommendations to the Public Health Service. Benefits and risks are associated with the use of all products - no vaccine is completely effective or completely safe. The recommendations represent a balancing of scientific evidence of benefits and risks in order to achieve optimal levels of protection against infectious or communicable diseases. The recommendations include information on general immunization issues and on the use of specific vaccines. When these recommendations are revised, they are published in the MMWR.

Vaccinations against diphtheria, tetanus, pertussis, measles, mumps, rubella, and poliomyelitis are routinely administered in the United States, usually in childhood. Whether or not international travel is planned, if persons do not have a history of adequate protection against these diseases, immunizations appropriate to their age and previous immunization status should be obtained. Vaccination against Haemophilus influenzae type b meningitis and invasive disease is recommended for children 18 months of age. For specific vaccines and toxoids, details on background, side effects, adverse reactions, precautions, and contraindications are available in the appropriate ACIP statements.

AGE AT WHICH IMMUNOBIOLOGICS ARE ADMINISTERED

Factors which influence recommendations concerning the age at which vaccine is administered include age-specific risks of disease and complications, ability of individuals of a given age to respond to the vaccine(s), and potential interference with the immune response by passively transferred maternal antibody. Vaccines are recommended for the youngest age group at risk with an acceptable level of antibody response following vaccine administration.

The routine immunization recommendations and schedules for infants and children in the United States do not provide specific guidelines for infants and young children who will travel internationally before the age when specific vaccines and toxoids are recommended routinely or during the period before primary series have been completed. The section titled

Immunization Schedule Modifications for International Travel for Infants and Inadequately Immunized Young Children < 2 Years of Age (p. 10)

provides revised recommendations and schedules for active immunization and, when appropriate, passive immunization.

SPACING OF IMMUNOBIOLOGICS

Multiple doses of the same antigen

Some products require more than 1 dose of full protection. Doses given at less than recommended intervals may lessen the antibody response. It is unnecessary to restart an interrupted series of a vaccine or toxoid or to add extra doses. However, it is necessary to give periodic booster doses of some preparations to maintain protection.

Different antigens

Experimental evidence and extensive clinical experience have strengthened the scientific basis for giving certain vaccines at the same time. Most of the widely used antigens can safely and effectively be given simultaneously. This knowledge is particularly helpful for international travelers for whom exposure to several infectious diseases may be imminent.

Simultaneous Administration

Inactivated vaccines usually can be administered simultaneously at separate sites. However, when vaccines commonly associated with local or systemic side effects (such as cholera, typhoid, and plague vaccines) are given simultaneously, the side effects can be accentuated. Whenever possible, these vaccines should be given on separate occasions.

In general, simultaneous administration (on the same day) of the most widely used live and inactivated vaccines has not resulted in impaired antibody responses or increased rates of adverse reactions. There are equivalent antibody responses and no significant increases in the frequency of adverse events when DTP, MMR, and OPV are administered either simultaneously or on separate occasions. As a result, routine simultaneous administration of DTP, MMR, and OPV to all children 15 months or older who are eligible to receive these vaccines is recommended. An acceptable alternative continues to be administration of MMR at 15 months followed by DTP and OPV at 18 months, especially for individuals known to be generally compliant with other health-care recommendations.

Data are lacking on concomitant administration of Haemophilus b conjugate or polysaccharide vaccines, and MMR or OPV vaccines. However, if return of a vaccine recipient for further immunization is doubtful, simultaneous administration of all vaccines appropriate to the age and previous vaccination status of the recipient is recommended, (including DTP, OPV, MMR, and Hb conjugate or polysaccharide vaccines).

The safety and efficacy of hepatitis B vaccine, DTP and OPV administered simultaneously is similar to separate administration of the vaccines. The safety and efficacy of hepatitis B and yellow fever vaccines administered simultaneously has also been demonstrated. However, the antibody responses to both yellow fever and cholera vaccines can be lowered when they are given simultaneously or within 3 weeks of each other. Therefore, when possible the administration of cholera and yellow fever vaccines should be separated by at least 3 weeks. However, if there are time constraints, the vaccines can be given simultaneously or anytime within the 3 week period.

If time constraints do not allow 3 weeks delay between vaccines, the following issues should be considered: Vaccination with yellow fever vaccine and a documented International Certificate of Vaccination are required for certain countries. In addition, yellow fever vaccination is recommended for travelers in countries with probable or recognized current yellow fever transmission. The major benefit of cholera vaccine is to provide entry to the few countries which require a certificate.

Non-Simultaneous Administration

Inactivated vaccines have not been shown to interfere with the immune response of other inactivated vaccines. In general, the second inactivated vaccine can be given either simultaneously or at any time following the first inactivated vaccine.

While data are lacking on potential interference with antibody responses to measles, mumps, rubella, and/or trivalent oral polio and other live virus vaccines administered at different times within 30 days of each other, there are theoretical concerns that the immune response to such a vaccine might be impaired if it were given within 30 days of another such vaccine. Whenever possible, live virus vaccines not administered on the same day should be given at least 30 days apart.

Recent studies indicate that decreased levels of antibodies have been observed when yellow fever and cholera vaccines are administered within 3 weeks of each other, compared with administration of these vaccines at longer intervals. However, there is no evidence to indicate similar interference between other inactivated and live vaccines given within 30 days of each other.

Immune Globulin (IG)

Live attenuated vaccine viruses might not successfully replicate and antibody response could be diminished when the vaccine is given with IG preparations. In general, parenterally administered live vaccine (e.g. MMR) should not be given for at least 6 weeks, and preferably 3 months, after IG administration. However, IG does not interfere with immune response to either OPV or yellow fever vaccine, and this recommendation does not apply to these vaccines.

If IG administration becomes necessary after a live vaccine has been given, interference may occur. Vaccine virus replication and stimulation of immunity usually will occur within 7 to 10 days. Thus, if the interval between vaccine and IG is less than 14 days, vaccine should be repeated at least 3 months after IG was given, unless serologic testing indicates that antibodies have been produced; if the interval was longer, vaccine need not be readministered. If administration of IG becomes necessary because of imminent exposure to disease, live virus vaccines may be administered simultaneously with IG, with the recognition that vaccine-induced immunity may be compromised. The vaccine should be administered in a site remote from that chosen for the IG inoculation. Vaccination should be repeated about 3 months later, unless serologic testing indicates antibodies have been produced.

There is little interaction between IG preparations and inactivated vaccines. Therefore, inactivated vaccines can be given simultaneously or at any time interval after or before an IG product is used. However, vaccines should be administered at sites different than the IG product.

HYPERSENSITIVITY TO VACCINE COMPONENTS

Vaccine components can be responsible for local or allergic reactions in some recipients. These reactions can be local or systemic, and can include mild to severe anaphylaxis. The vaccine components that can be responsible include: (1) animal proteins, (2) antibiotics, (3) preservatives, and (4) stabilizers. The most common animal protein allergen is egg protein in vaccine prepared using embryonated hen eggs. Generally, persons who are able to eat eggs or egg products may receive these vaccines. Persons with histories of anaphylactic allergy to eggs or egg proteins should ordinarily not receive these vaccines. Yellow fever vaccine is produced in chicken embryos. Influenza vaccines (whole or split), are prepared from viruses grown in embryonated eggs. They are highly purified during preparation and have only very rarely been reported to be associated with hypersensitivity reactions.

Hypersensitivity reactions to

measles and mumps vaccines have been reported on very rare occasions in persons with anaphylactic hypersensitivity to eggs. However, both vaccines can be given safely to persons allergic to eggs provided the allergies have not been manifested by anaphylactic symptoms.

Screening persons by asking whether they can eat eggs without adverse effects is a reasonable way to identify those who might be at risk from receiving measles, mumps, yellow fever and influenza vaccines. Persons with anaphylactic hypersensitivity to eggs (e.g., hives, swelling of the mouth and throat, difficulty breathing, hypotension, or shock) can be vaccinated against measles and mumps, but only with extreme caution. Protocols have been developed for testing and vaccinating with measles and mumps vaccines those persons with anaphylactic reactions to egg ingestion. (Herman JJ, Radin R, Schneiderman R. J Pediatr 1983; 102:196-9). A regimen for administering influenza vaccine to children with severe asthma has also been published. (Murphy and Strunk. J Pediatr 1985; 106:931-3)

Some vaccines contain preservatives (thimerosal, a mercurial compound) or trace amounts of antibiotics (e.g., neomycin) to which patients may be hypersensitive. Those administering vaccines should carefully review the information provided in the package insert before deciding whether the rare patient with such hypersensitivity should be given the vaccine(s). No currently recommended vaccine contains penicillin or its derivatives. Some vaccines (e.g., MMR or its individual component vaccines) contain trace amounts of neomycin. This amount is less than would usually be used for the skin test to determine hypersensitivity. Persons who have experienced anaphylactic reactions to neomycin should not receive these vaccines.

Most often, neomycin allergy is a contact dermatitis, a manifestation of a delayed-type (cell-mediated) immune response rather than anaphylaxis. In persons with this type of neomycin allergy, an adverse reaction would be an erythematous, pruritic papule at 48-96 hours. A history of delayed-type reactions to neomycin is not a contraindication to receiving these vaccines.

Bacterial vaccines, such as cholera, DTP, plague, and typhoid, are frequently associated with local or systemic adverse effects. These common reactions appear to be of a toxic rather than a hypersensitivity nature. On rare occasions, urticarial or anaphylactic reactions have been reported in DTP, DT or Td recipients. These reactions are difficult to link with a specific sensitivity to vaccine components. Appropriate skin testing should be performed to determine sensitivity to diphtheria and tetanus toxoids before discontinuing further immunization with these toxoids.

ALTERED IMMUNOCOMPETENCE

Virus replication after administration of live, attenuated-virus vaccines can be enhanced in persons with immune deficiency diseases, and in those with suppressed capacity for immune response, as occurs with leukemia, lymphoma, generalized malignancy, symptomatic Human Immunodeficiency Virus (HIV) infections, or therapy with corticosteroids, alkylating agents, antimetabolites, or radiation. Severe complications have been reported following vaccination with live attenuated virus vaccines and with live-bacterial vaccines in patients with leukemia, lymphoma and other persons with suppressed capacity for immune response. In general, patients with such conditions should not be given live virus vaccines. They also should not receive live-bacterial vaccines (e.g. BCG).

After consideration of the reports of severe measles disease in symptomatic HIV-infected children, and because limited studies of MMR immunization in symptomatic patients have not documented serious or unusual adverse events, the administration of MMR vaccine should be considered for all HIV infected children, regardless of symptoms. If polio immunization is indicated, these persons and their household members and other close contacts should receive IPV rather OPV. Although a protective immune response following receipt of vaccine cannot be assured, some protection may be provided to the immunocompromised patient.

OPV should not be used for immunizing immunodeficient patients and their household contacts; IPV is recommended. Because of the possibility of immunodeficiency in other children born to a family in which there has been 1 such case, family members should not receive OPV until the immune status of the recipient and other children in the family is known.

Patients with leukemia in remission whose chemotherapy has been terminated for at least 3 months may receive live virus vaccines. Short term systemic corticosteroid therapy (<2 weeks), topical steroid therapy (e.g., nasal, skin), and intra-articular, bursal or tendon injection with corticosteroids should not be immunosuppressive and do not contraindicate live vaccine administration. However, live vaccine should be avoided if systemic immunosuppressive levels are reached by prolonged, extensive, topical application.

VACCINATION OF PERSONS WITH FEBRILE ILLNESS

Minor illnesses, such as mild upper-respiratory infections with or without low grade fever, do not necessitate deferral of vaccination. In persons whose compliance with medical care cannot be assured, it is particularly important to take every opportunity to provide appropriate vaccinations. However, children with an illness who have a temperature equal to or greater than 38°C (100.4°F) should have their immunization postponed until they have recovered. This precaution is to avoid superimposing adverse effects from the vaccine on the underlying illness or mistakenly attributing a manifestation of the underlying illness to the vaccine.

Routine physical exams or measuring temperature are not necessary prerequisites to the vaccination of infants and children who appear to be in good health. Considering the importance of protecting children against disease, asking the parent if the child is ill, postponing vaccination in those with moderate or severe febrile illnesses, and immunizing those without contraindications are appropriate procedures in childhood immunization programs.

VACCINATION DURING PREGNANCY

On the grounds of a theoretical risk to the developing fetus, live, attenuated-virus vaccines are not generally given to pregnant women or to those likely to become pregnant within the next 3 months after receiving vaccine(s). With some of these vaccines - particularly rubella, measles, and mumps - pregnancy is a contraindication. Both yellow fever vaccine and OPV can be given to pregnant women at substantial risk of exposure to natural infection. When a vaccine is to be given during pregnancy, waiting until the second or third trimester is a reasonable precaution to minimize any concern over teratogenicity. Although there are theoretical risks in giving rubella vaccine during pregnancy, data on previously and currently available rubella vaccines indicate that the risk, if any, of teratogenicity from

live rubella vaccine is very small. There has been no evidence of congenital rubella syndrome in infants born to susceptible mothers who inadvertently received rubella vaccine during pregnancy.

Since persons given measles, mumps, or rubella vaccine viruses do not transmit them (although virus shedding does occur), these vaccines can be administered safely to children of pregnant women. Although live polio virus is shed by children recently immunized with OPV (particularly following the first dose), this vaccine can also be administered to children of pregnant women. Polio immunization of children should not be delayed because of pregnancy in close adult contacts. Experience to date has not revealed any risks of polio vaccine virus to the fetus.

There is no convincing evidence of risk to the fetus from immunization of pregnant women using inactivated viral vaccines, bacterial vaccines, or toxoids. A previously unimmunized pregnant woman who may deliver her child under unhygienic circumstances or surroundings should receive two properly spaced doses of Td before delivery preferably during the last two trimesters. Incompletely immunized pregnant women should complete the three-dose series. Those immunized more than 10 years previously should have a booster dose.

There is no known risk to the fetus from passive immunization of pregnant women with IG (see above).

IMMUNIZATION SCHEDULE MODIFICATIONS FOR INTERNATIONAL TRAVEL FOR INFANTS AND INADEQUATELY IMMUNIZED YOUNG CHILDREN < 2 YEARS OF AGE

Routine Childhood Vaccine Preventable Diseases (measles, mumps, rubella, polio, diphtheria, tetanus and pertussis)

Diphtheria and tetanus toxoid and pertussis vaccine

Diphtheria is an endemic disease in many developing countries. Tetanus is ubiquitous world wide. Pertussis is common in developing countries and in other countries where routine immunization against pertussis is not practiced widely. Because the risk of contracting pertussis in other countries and of diphtheria in developing countries is higher than in the United States, children who will be leaving the United States should be as well immunized as is possible before departing. Optimum protection against diphtheria, tetanus and pertussis in the first year of life is achieved with 3 doses of DTP, the first administered at 6-8 weeks of age and the next two at 4-8 week intervals, as is generally the practice in the United States. A fourth dose, generally 6-12 months after the third dose, maintains protection. Infants traveling to areas where diphtheria and/or pertussis are endemic or epidemic preferably should have received 3 doses, the first dose no sooner than 6 weeks of age and the next 2 doses at intervals of no less than 4 weeks. Two doses of DTP received at intervals of at least 4 weeks may provide some protection particularly against diphtheria and tetanus, while a single dose is of little protective benefit. Parents who are traveling with young infants should be informed that infants who have not received 3 doses of DTP are at greater risk of contracting pertussis than children who have been adequately protected. Infants and other children less than 7 years of age who at the time of travel have received less than 3 doses of DTP and who will remain for extended periods in areas of increased risk of exposure to pertussis and/or diphtheria should complete their remaining doses at 4 week intervals.

For infants and children traveling internationally or remaining in areas of increased risk of exposure,

reducing the interval between the third and fourth doses of the primary series to 6 months may be considered.

Measles vaccine

Measles is an endemic disease in many developing countries and in other countries where measles immunization is not routinely practiced. Because the risk of contracting measles in many countries is far greater than that in the United States, children should be as well protected as possible before departing the United States. Measles vaccine, preferably in combination with rubella and mumps vaccines i.e. MMR vaccine, should be administered to all children 15 months of age and older.

The age at vaccination should be lowered for those children traveling to areas where measles is endemic or epidemic. Children 12-14 months of age may receive MMR before their departure, without need for revaccination. Children 6-11 months of age should receive a dose of single measles antigen vaccine (without rubella or mumps antigens) before departure and must be revaccinated with MMR vaccine. While the optimal age at revaccination is 15 months, the age at revaccination may be as low as 12 months if the child remains in a high risk area. In this situation, further doses of measles vaccine are not indicated. Since virtually all infants less than 6 months of age will be protected by maternally derived antibodies, no additional means to provide protection against measles is generally necessary.

Mumps and Rubella Vaccine(s)

The risk of serious disease from infection with either mumps or rubella in infants is so small that there is no justification to administer mumps or rubella vaccine below the age of 12 months.

Polio

Trivalent oral polio vaccine (OPV) is the vaccine of choice for all infants and children if there are no contraindications to vaccination. Enhanced potency inactivated polio vaccine (IPV) also is available.

When time permits, children traveling to endemic areas should receive at least 3 doses of OPV at intervals of at least 6-8 weeks. Children who have received 3 prior doses of OPV should receive a fourth dose if at least six weeks have elapsed since the third dose. In the United States, the Immunization Practices Advisory Committee (ACIP) recommends that a primary series of 3 doses of oral poliovirus vaccine (OPV) be given beginning preferably at 6 weeks of age and at intervals of at least 6 weeks (the third dose is typically given several months after the second). However, in polio endemic areas, the Expanded Programme of Immunizations of the World Health Organization recommends that a dose of OPV be given in the newborn period, e.g., at birth or before 6 weeks of age, with 3 additional doses (the primary series) given subsequently at 6, 10, and 14 weeks of age. While ideally the ACIP recommendations on age and intervals between doses of OPV should be followed, if travel to an endemic country will occur before a child is 6 weeks of age, a dose of OPV should be given prior to travel. A dose of vaccine administered before 6 weeks of age should not be counted as part of the standard 3 dose primary series. If the child remains in an endemic country, the child should receive the first dose of the standard 3 dose primary series no sooner than 4 weeks after the newborn period dose and the remaining 2 doses of the primary series at 4 week entervals. If the child has left the endemic area, the first dose of the primary series should be given 6 weeks after the newborn period dose, the second dose 6 weeks after the first dose and the

third dose of the primary series 8-12 months after the second as is generally the practice in the United States.

Children traveling to an endemic country who have received a first or second dose of the primary series of OPV should receive prior to departure their second and/or third doses of OPV 4 weeks after their prior dose(s). Children with less than a primary series at the time of departure to an endemic area and who remain in an endemic area should complete the 3 dose primary series within the endemic area with doses at 4 week intervals.

No data or recommendations are available for the use of IPV prior to 6 weeks of age. Otherwise, a primary series of IPV consists of three doses which can be given at the same intervals as are recommended for OPV.

Other Vaccines and Immune Globulin

Cholera vaccine

The risk of cholera to U.S. travelers of any age is so low that it is questionable whether vaccination is of benefit. No data are available concerning the efficacy or side effects of cholera vaccine in children less than 6 months of age. Cholera vaccine is not recommended for children less than 6 months of age. Breast-feeding is protective against cholera; careful preparation of formula and food from safe water and foodstuffs should protect nonbreast-fed infants. If a child less than 6 months of age is to travel to areas requiring cholera immunization, a medical waiver should be obtained before travel. For older infants and children traveling to countries that require vaccination, a single dose of vaccine is sufficient to satisfy country requirements.

Typhoid Vaccine

Typhoid vaccination is not required for international travel. No data are available concerning the efficacy or side effects of typhoid vaccine in infants, although the vaccine is probably immunogenic in this age group. Breast-feeding is likely to be protective against typhoid; careful preparation of formula and food from safe water and foodstuffs should protect nonbreast-fed infants. Typhoid vaccine is recommended for older children traveling to areas where there is a recognized risk of exposure to Salmonella typhi.

Yellow Fever Vaccine

Because immunization of infants against yellow fever carries an increased risk of encephalitis, the requirement for vaccination should be considered on an individual basis. Although the risk has not been clearly defined, 14 of 17 reported cases of encephalitis were seen in infants vaccinated under 4 months of age. The current recommendations of the ACIP and the World Health Organization are that yellow fever vaccine should be administered to children 9 months of age and older if they are traveling to or living in areas of South America and Africa where yellow fever infection is officially reported or to countries which require yellow fever immunization. Children 9 months of age or older should also be immunized for travel within the yellow fever endemic zone if they go outside urban areas. Infants 6-9 months of age should be vaccinated only if traveling to areas of ongoing epidemic yellow fever when travel cannot be postponed and a high level of protection against mosquito bites is not possible. Immunization of children 4-6 months of age would be considered only under unusual circumstances (consult CDC), and in no instance should infants under 4 months of age receive yellow fever vaccine. Information on yellow fever risk is also available from Division of Vector-Borne Viral

Disease, CDC, Fort Collins, Colorado, Telephone 303-221-6400.

Hepatitis B Vaccine

Infants and young children traveling to areas with highly endemic hepatitis B infection may be at risk if they are directly exposed to blood from the local population. Circumstances in which disease transmission could occur include receipt of blood transfusions not screened for HBsAg, exposure to unsterilized needles (or other medical/dental equipment) in local health facilities, or continuous close contact with local children who have open skin lesions (impetigo, scabies, scratched insect bites). Such exposures are most likely to occur if the child is living for long periods in smaller cities or rural areas and in close contact with the local population. Children who expect to live in an HBV endemic area for six or more months and who are expected to have the above exposures should receive the HB vaccine, in 3 doses of 10ug each, at the same schedule as recommended for adults.

Immune Globulin for Hepatitis A

Infants and children traveling to developing countries are at increased risk of acquiring hepatitis A, especially if their travel is outside usual tourist routes, if they will be eating food or drinking water in settings of questionable sanitation, or if they will be in contact with local young children in settings of poor sanitation. Although hepatitis is rarely severe in children under age 5 years, infected children efficiently transmit infection to older children and adults. Immune globulin (IG) should be given to infants and children as prophylaxis in the same schedule as recommended for adults.

BREAST - FEEDING

Inactivated or killed vaccines do not multiply within the body; therefore, they pose no special problems for mothers who are breastfeeding or for their infants.

Although live vaccines do multiply within the mother's body, most have not been demonstrated to be excreted in breast milk. In the few circumstances where there could be transmission from breast milk (e.g., rubella), the virus usually does not infect the infant and if it does the infection is well tolerated.

Yellow fever virus is not excreted in breast milk following vaccination, and there is no contraindication for vaccinating breast-feeding mothers with yellow fever vaccine.

ADVERSE EVENTS FOLLOWING IMMUNIZATION: REPORTING

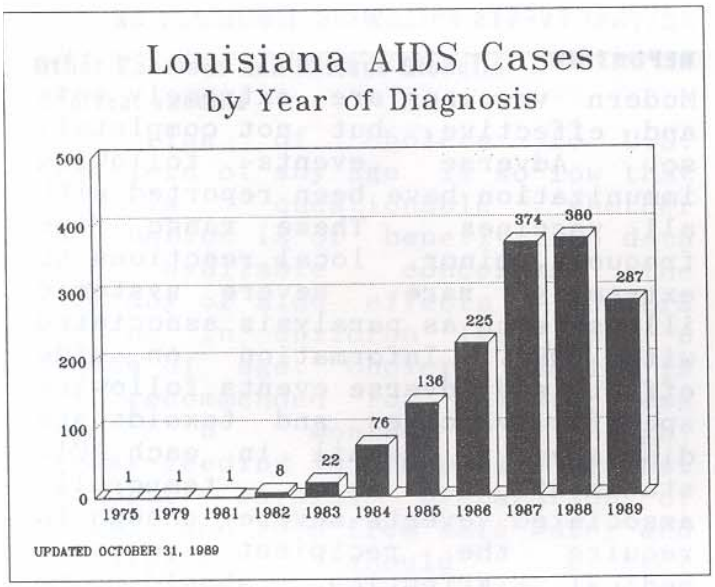
Modern vaccines are extremely safe and effective, but not completely so. Adverse events following immunization have been reported with all vaccines. These range from frequent, minor, local reactions to extremely rare, severe systemic illness such as paralysis associated with OPV. Information on side effects and adverse events following specific vaccines and toxoids are discussed in detail in each ACIP statement. All temporally associated events severe enough to require the recipient to seek medical attention should be evaluated and reported in detail to local or State health officials and to the vaccine manufacturer.

COMMUNICABLE DISEASES IN DISEASTERS

Natural disasters can contribute to the transmission of some diseases; however, unless the causative agent is in the environment, transmission cannot take place. Studies of flood and earthquake disasters have shown that communicable disease outbreaks

rarely result. Natural disasters often disrupt water supplies and sewerage systems. Epidemic typhoid has been conspicuously absent following natural disasters in developing countries where typhoid is endemic. It takes several weeks for typhoid antibodies to develop and even then immunization provides only moderate protection. Floods pose no additional risk of typhoid.

Of greatest importance in preventing enteric disease transmission when water and sewage systems have been disrupted is to assure that water and food supplies are safe to consume. When contamination is suspected, water should be boiled or appropriately disinfected (see Louisiana Morbidity Report, September/December 1988, p.9).



CONGENITAL SYPHILIS OUTBREAK - NEW ORLEANS

History and Background

The incidence of congenital syphilis under one year of age in Louisiana and New Orleans has traditionally been very small. During the past twenty years, cases in Louisiana were highest in the five years from 1970 to 1974, averaging 23 cases per year. Since 1975, however, fewer than 5 cases per year, on the average, were reported for the state.

In New Orleans, the number of congenital syphilis cases for the previous seven years ranged from 0 in 1982 and 1985 to 4 in 1983 (see Table).

CONGENITAL SYPHILIS CASES IN NEW ORLEANS

1982	1983	1984	1985	1986	1987	1988
0	4	2	0	1	2	1

During the past two years the number of early syphilis cases in New Orleans has shown dramatic increases of 59% and 48%, respectively. A review of these cases (primary, secondary and early latent) establishes a shift in the male-female ratio in cases for the past seven years. In 1983 the male-female ratio was 2.12:1, as compared with the 1989 ratio of 1.60:1. The principle factor for this shift in sex distribution has been a steady decline in the number of cases occurring among homosexual/bisexual men. A significant shift in the age distribution of infected patients was seen over the last five years as well, with more cases

occurring among younger age groups. This meant that women infected with syphilis were more often at an age at which pregnancy was more likely to occur.

Previous investigators have observed a relationship between rates of infectious female syphilis and newly diagnosed congenital syphilis. They report that the incidence curve for congenital syphilis may lag behind changes in that for infectious syphilis in women of child bearing age by approximately one year. This observation appears valid for New Orleans as significant increases in infectious syphilis among women of child bearing age have occurred during the past two years.

Current Scope of New Orleans Outbreak

Early in 1989 an increase was seen both in the number of pregnant women infected with syphilis and in the number of newborns with positive cord bloods delivered at Charity Hospital in New Orleans. In response to this observation, increased surveillance efforts were instituted among involved departments at Charity Hospital including the labor and delivery area, serology laboratory, infection control, prenatal and OB/GYN clinics. Identification of new or potential cases is now more rapidly made. Babies who might have previously been discharged prior to recognition of a positive cord blood serology now receive adequate medication before leaving the hospital. Since field followup of these patients is not always successful, prompt identification and treatment has improved the effectiveness of the New Orleans Congenital Syphilis program.

In order to verify the surveillance information provided by private hospitals and laboratories in New Orleans, visits were made to several area hospitals by the New Orleans dramatic increases in recent months. Equally alarming was the fact that reports from diagnosing physicians and reference laboratories had not been made on these cases. Nearly fifty percent of all newly diagnosed congenital syphilis cases are now found in private hospitals in New Orleans.

Through the end of October, 1989, forty-eight newborn babies in New Orleans have been classified under the current CDC case definition as Presumptive Congenital Syphilis cases. Twelve of the forty-eight children were symptomatic for syphilis at birth or within six weeks of birth. Symptoms included long bone damage, hepatosplenomegaly, interstitial disease, patchy lung disease, alopecia, cutaneous lesions, palmar-plantar rash, microcephaly, extreme prematurity and stillbirth. Two babies had VDRL-positive cerebral spinal fluids (CSF), twenty-one of thirty-one babies had elevated protein counts greater than 50 mg/dl, and eleven of twenty-four babies had elevated CSF WBC's greater than 5 per mm^3. Two babies died and two remain on life-support systems at this time. Only one of the current forty-eight mothers of new congenital syphilis cases had appropriate prenatal care.

Thirty-six of the forty-eight children were asymptomatic and born to mothers untreated or inadequately treated for syphilis and had positive non-treponemal and treponemal tests. With prompt treatment their prognosis is good.

Eighteen of the forty-eight mothers had previously been treated for early syphilis. Twenty-three mothers tested positive for cocaine at delivery, though not all mothers were tested for drug use. Though information is incomplete, three mothers were HIV-positive at the time of birth. The average age of the women delivering a child infected with syphilis was 24 years old.

Access to and utilization of prenatal care is the most significant factor in preventing congenital transmission of Treponema pallidum. Since only one of these pregnant females received any prenatal care, it is vital that all health care providers determine whether adequate prenatal care is being received. Use of drugs and previous history of syphilis are clear risk factors for congenital syphilis in this outbreak. Therefore it is advisable that the presence of either of these conditions should be carefully explored at the time of referral so that appropriate followup can be planned.

Because cases from private hospitals are now regularly found in the New Orleans outbreak, it is suggested that reporting mechanisms be reviewed and updated, if necessary. Physicians, nurses, Disease Intervention Specialists and other health care personnel should carefully review the pregnancy status for all females treated for syphilis. It is important to not overlook recent deliveries as some cases involved babies that had negative cord bloods but who were infected just before birth or during delivery. Reference laboratories that perform serologic tests for syphilis (STS) should also be contacted.

The following is a summary of the surveillance case definition currently used by CDC to classify congenital syphilis:

Confirmed Cases
Identification of T. pallidum by darkfield or other specific stains in specimens from lesions, autopsy material, placenta or umbilical cord.

Presumptive Cases
A. Any infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs or symptoms in the infant; or

B. Any infant or child who has a positive treponemal test for syphilis and any one of the following:

1) any evidence of congenital syphilis on physical examination; or
2) any evidence of congenital syphilis on long bone x-ray; or
3) a reactive CSF-VDRL; or
4) an elevated CSF count or protein (without other cause**; or
5) quantitative nontreponemal serologic titers which are fourfold higher than the mother's (both drawn at birth); or
6) reactive test for FTA-ABS-19S-IMG

A SYPHILITIC STILLBIRTH is defined as a fetal death, occurring after a 20 week gestation or weighing over 500 grams, in which the mother had untreated or inadequately treated syphilis at delivery.

* Inadequate treatment consists of any non-penicillin therapy or penicillin given less than 30 days prior to delivery.

** Abnormal values for CSF are white cells >5/mm3 and protein >50 mg/dl. These values are difficult to interpret and should be done in consultation with an expert.

Selected Diseases by Parish, September 1, 1989 – October 31, 1989

PARISH	HEP A	HEP B	SALMO	SHIGE	VIBRI	Total
ALLEN	1	0	0	0	0	1
ASCENSION	0	0	2	0	0	2
ASSUMPTION	0	0	1	0	0	1
AVOYELLES	2	0	0	0	0	2
BEAUREGARD	1	0	0	0	0	1
BOSSIER	1	1	2	1	0	5
CADDO	1	3	13	9	0	26
CALCASIEU	2	2	3	1	1	9
CONCORDIA	0	0	2	0	0	2
E. BATON ROU.	7	8	13	8	1	37
E. FELICIANA	0	1	0	0	0	1
EVANGELINE	1	0	1	0	0	2
IBERIA	0	2	4	2	0	8
JACKSON	0	1	0	0	0	1
JEFF. DAVIS	1	0	0	0	0	1
JEFFERSON	5	9	7	8	1	30
LA SALLE	0	0	1	0	0	1
LAFAYETTE	0	0	5	1	0	6
LAFOURCHE	0	0	3	1	0	4
LIVINGSTON	1	0	1	0	0	2
MADISON	1	0	0	0	0	1
ORLEANS	6	16	13	12	0	47
OUACHITA	0	1	1	1	0	3
PLAQUEMINES	0	0	2	0	0	2
PTE. COUPEE	0	1	0	0	0	1
RAPIDES	0	2	6	3	0	11
SABINE	0	0	1	0	0	1
ST. BERNARD	6	1	0	1	0	8
ST. JAMES	0	0	0	1	0	1
ST. JOHN BAP.	0	1	1	0	0	2
ST. LANDRY	1	3	2	0	0	6
ST. MARTIN	0	0	1	0	0	1
ST. MARY	0	2	0	0	0	2
ST. TAMMANY	0	0	6	10	0	16
TERREBONNE	0	0	2	2	0	4
VERMILION	1	1	2	6	0	10
VERNON	2	0	0	0	0	2
W. BATON ROU.	3	0	0	0	0	3
W. FELICIANA	0	0	1	0	0	1
WASHINGTON	0	0	4	2	0	6
WINN	0	1	1	0	0	2
Total	43	56	101	69	3	272

Communicable Disease Surveillance, Louisiana

DISEASE	Sept-Oct 1989	Sept-Oct 1988	Total to Date 1989	Total to Date 1988
Aids	51	48	364	270
Campylobacter	23	19	85	87
Gonorrhea	2973	2262	12858	12749
Hepatitis A	43	37	232	132
Hepatitis B	56	71	320	314
Measles	38	0	49	0
Meningitis				
H. Inf.	15	16	75	89
N. Men.	0	8	34	47
Mumps	71	20	629	280
Pertussis	5	1	19	17
Rubella	0	0	5	0
Salmonella	101	139	526	494
Shigella	69	98	372	536
Syphilis	358	166	1243	735
Tuberculosis	75	78	276	276
Vibrio cholera	0	0	0	1
Vibrio other	3	7	30	25

Diseases of Low Frequency

	Total to Date
Blastomycosis	4
Legionella	8
Leprosy	0
Lyme	1
Malaria	2
Rocky Mountain Spotted Fever	1
Tetanus	1
Typhoid	1

Animal Rabies

September 1989

Parish	Species	# cases
Ouachita	Bat	1