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

NATIONAL RESPIRATORY VIRUS SURVEILLANCE SYSTEM

To provide public health officials and health-care providers with additional information about the epidemiology of respiratory viruses such as respiratory syncytial virus (RSV), parainfluenza, and adenoviruses, the Centers for Disease Control (CDC) maintains a nationwide respiratory virus surveillance system. Nationwide data for RSV are collected from 94 centers representing 49 states. Data for parainfluenza and adenoviruses are collected from 52 and 44 centers, respectively.

For the purposes of this surveillance program, the US is divided into nine geographic regions. Texas, Oklahoma, Arkansas, and Louisiana constitute the West South Central Region. In Texas, data are submitted monthly from the Medical Virology Section of the TDH Bureau of Laboratories and from nine major hospital laboratories across the state.* Most of these laboratories perform enzyme immunoassay (EIA) and/or direct fluorescent antibody (DFA) tests to detect RSV and DFA and/or indirect fluorescent antibody (IFA) tests to detect parainfluenza and adenoviruses.

RSV: RSV is the single most important respiratory pathogen of infancy and early childhood worldwide. In temperate climates, RSV causes yearly outbreaks of pneumonia and bronchiolitis in the winter and early spring. In the West South Central Region, virus activity begins to intensify during the months of September through November, with peak activity occurring from December through March (Figure 1). RSV season usually precedes influenza season by at least two months.

Symptoms of RSV infection in all age groups include fever, rhinitis, and/or pharyngitis, with minimal involvement of the bronchi. Among healthy older children and adults, RSV infection resembles a cold which may or may not be accompanied by cough and fever. In younger children, RSV is an important cause of otitis media.

RSV infections pose the greatest risk of severe morbidity among infants, particularly those between the ages of 2 and 6 months. Approximately 1% of infants with severe RSV infection require hospitalization. Symptoms in these severe cases include rhinorrhea, fever, and cough, progressing to dyspnea, wheezing, and cyanosis. Current antiviral therapy for these severe cases includes ribavirin administered via a nebulizer.

Parainfluenza virus: Although parainfluenza virus infections occur throughout the year nationwide, there are distinct seasonal trends in many of the geographic regions. In the West South Central Region, periods of intense viral activity occur in the fall during the months of September through early December, and in the spring from late March through June (Figure 1). Parainfluenza virus type 1 is most active in the fall, while parainfluenza virus type 3 predominates in spring. (Antigen detection assays demonstrate that parainfluenza virus type 3 circulates throughout the year at low levels and peaks in the spring.) Parainfluenza virus type 2 circulates in the population during both times of the year, but at less intense levels.

The vast majority (97%) of parainfluenza virus infections are relatively mild, with coryza, pharyngitis, low-grade fever, and minor bronchitis as the main symptoms. As with RSV, parainfluenza viruses can cause serious infection in infants and young children and

* Driscoll Foundation Children's Hospital - Corpus Christi; Children's Medical Center - Dallas; Providence Memorial Hospital - El Paso; R.E. Thomason General Hospital - El Paso; University of Texas School of Medicine - Houston; Mercy Regional Medical Center - Laredo; University Medical Center - Lubbock; Methodist Hospital - Lubbock; Santa Rosa Medical Center - San Antonio.

severe disease in the elderly and immunocompromised. Parainfluenza virus type 3 can cause a respiratory disease clinically indistinguishable from severe RSV infection in infants under the age of 6 months. Among children 6 months to 5 years of age, parainfluenza virus type 1 is the principle etiologic agent of croup. Symptoms include fever, cough, stridor, and respiratory distress that may progress to laryngeal obstruction requiring a tracheotomy.

Adenovirus: Although 41 serotypes of adenovirus are now identified, only one fourth of these are commonly associated with respiratory disease. Adenovirus infections can occur throughout the year. Although many specimens are submitted for adenovirus testing during the winter months, adenovirus does not appear to be a principle cause of respiratory disease during the winter. In the West South Central Region, adenovirus activity peaks during late spring, in the months of April, May, and June (Figure 1).

Several respiratory syndromes are associated with adenovirus infection. Acute febrile pharyngitis, caused primarily by adenovirus types 1 and 2, generally is seen among young children and infants. Symptoms include cough, nasal congestion, lymphadenopathy, and sore throat, with otitis media or pneumonia occurring in severe cases.

In the late spring and summer months, adenovirus types 3 and 7 cause outbreaks of pharyngo-conjunctival fever among children. Among military recruits, adenovirus types 4 and 7 cause outbreaks of acute respiratory disease consisting of fever, pharyngitis, cervical adenitis, cough, and malaise.

The most severe manifestation of adenovirus-associated respiratory disease is pneumonia, which can occur in both children and adults. Among children, these severe infections are attributed primarily to adenovirus types 3 and 7, while adenovirus types 4 and 7 account for most of the severe infections among military recruits. Among immunocompromised patients, adenovirus types 34 and 35 have been associated with pneumonia and other life-threatening infections.

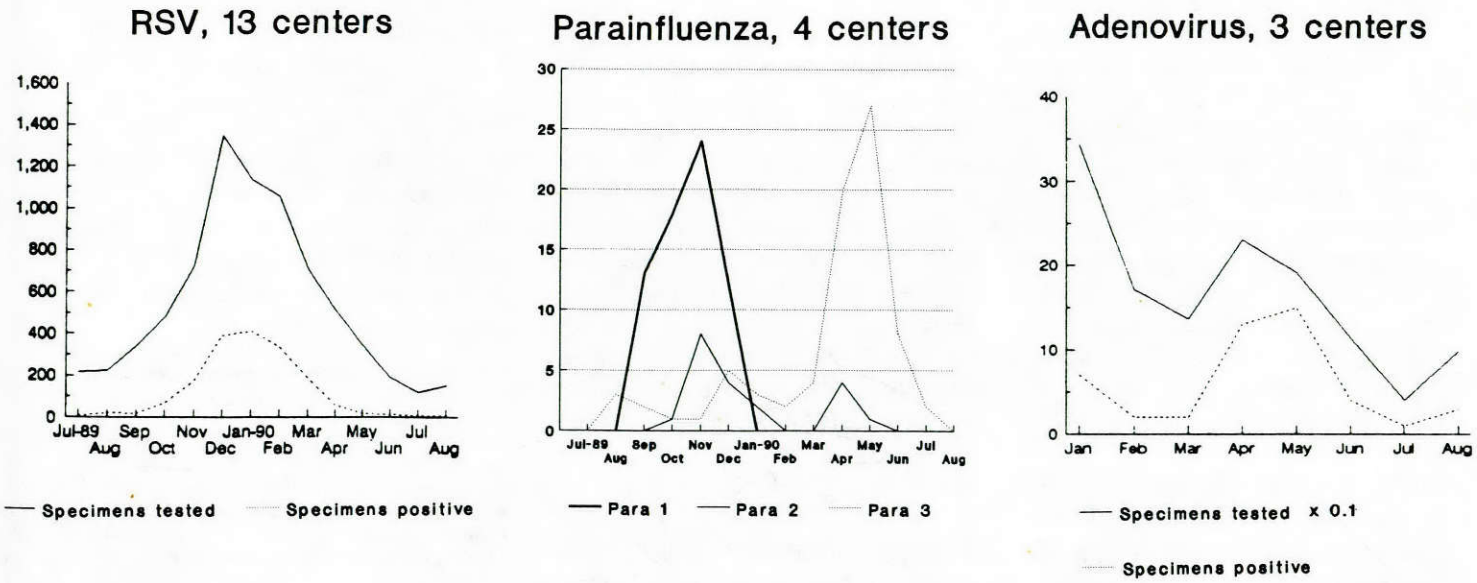
Prepared by: Lynne Schulster, PhD, Infectious Disease Program, Epidemiology Division, TDH.

References:

1. White DO, Fenner F. Medical virology, 3rd ed. Orlando, FL: Academic Press, 1986.

2. CDC. Respiratory syncytial virus and parainfluenza virus surveillance -- United States, 1989-90. MMWR

Figure 1.
Specimens tested and specimens positive for selected respiratory pathogens -- US West South Central Region, July 1989-August 1990



Meeting Announcement

Physicians' TB Conference

Title: The Physician's Challenge -- The Elimination of Tuberculosis in Texas by 2010

Date: July 24-25, 1991

Location: Radisson Plaza Hotel at Austin Centre
700 San Jacinto St., Austin

Sponsored by: Texas Department of Health
American Lung Association of Texas

This conference is designed for Texas physicians who treat TB patients or who have a role in TB program management. State and national experts will present current topics on the management and control of tuberculosis with emphasis on the elimination of TB in Texas by the year 2010.

For programs and registration materials contact:

John Bybee, Director
Tuberculosis Division
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756-3199
(512) 458-7447

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Policy Statement

TDH PHILOSOPHY ON BREASTFEEDING

The Texas Department of Health's major concern is for the health of the people of Texas. The department promotes policies which will optimizc the health of all its citizens. It is well documented that there are significant advantages in breastfeeding an infant. Breastmilk provides species-specific nourishment for infants. Human milk has been shown to help reduce the incidence of certain infections and allergic disorders. Breastfeeding promotes a special closeness between a mother and her infant and offers other physiologic, economic, and hygienic benefits.

In order to optimize the health of Texas' infant population, the Texas Department of Health will support policies which promote and support breastfeeding. It will:

Continued next page

1. Encourage the support of breastfeeding in the health care system. This will be accomplished in the public health sector through the Bureau of Maternal and Child Health and the Bureau of Women, Infants, and Children. The private sector is encouraged to use procedures and routines that promote and support breastfeeding.

2. Encourage development of support services in the community.

3. Develop public education strategies through various promotional efforts.

4. Encourage industry to promote and support breastfeeding by providing information on practices that foster a positive environment for the breastfeeding employee.

5. Encourage child-care facilities to develop policies which will create an environment that allows women to continue to breastfeed.

By implementing this philosophy to promote and support breastfeeding, Texas hopes to come closer to the national goal set by the Surgeon General of the US Department of Health and Human Services, which is to have 75% of infants breastfed at hospital discharge and 35% of those infants still being breastfed at six months.

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A PUBLIC HEALTH PERSPECTIVE ON THE POSSIBILITY OF INFECTIOUS DISEASES IMPORTED FROM THE PERSIAN GULF

During the last few months a number of journals and newsletters have addressed the topic of illnesses that may be seen among military personnel returning from the Persian Gulf.[1,2] Although it is expected that active duty military personnel will be cared for by military doctors, reservists may be seen by civilian physicians. In the NEJM (March 21, 1991), Gasser outlines some differential diagnoses and therapeutic options to consider among returnees with gastrointestinal or systemic illness.

Although the author briefly mentions intestinal helminths under the section on gastrointestinal illness, two additional points are worth noting. First, persons with helminths are not necessarily ill. Second, infestations with some helminths may last more than a decade.

The incidence of antibiotic resistance associated with gastrointestinal bacterial illness endemic to the Persian Gulf region is extraordinarily high.[2] This further underscores the utility of obtaining stool for culture and sensitivity prior to the institution of empiric therapy, especially from individuals with a history of overseas travel.

Physicians treating suspected cases of the diseases noted in Table 1 may consult the TDH Infectious Disease Program at (512) 458-7328 for assistance with submission of clinical specimens (with the exception of bacteriologic cultures) for diagnostic purposes.

Most of these diseases are reportable. Physicians treating reportable cases should promptly notify their local health department or the TDH Infectious Disease Program.

Prepared by: Infectious Disease Program, Bureau of Disease Control and Epidemiology, TDH.

References:

1. Health problems in the Persian Gulf. The Medical Letter 1991; 33(838):13-15.

2. Gasser RA Jr. The threat of infectious disease in Americans returning from Operation Desert Storm. NEJM 1991;324(12):859-64.

Table 1.
Infectious diseases that may be imported
from the Middle East by US armed forces

	Disease	Bacteriologic Culture	Serology*	Examination of stool and/or urine	Examination of blood/tissue	Precautions in addition to universal**	Reportable in Texas
Bacterial/Rickettsial	Brucellosis	✓	✓				✓
	Enteric Fever	✓				E	✓
	Gastroenteritis	✓	✓			E	
	Meningococcal Disease	✓				R	✓
	Plague, pneumonic	✓	✓			S	✓
	Q Fever		✓				✓
	Tuberculosis, pulmonary	✓				AFB	✓
	Typhus, Flea-borne		✓				✓
	Typhus, Louse-borne		✓				✓
Parasitic	Amebiasis		✓	✓		E	✓
	Echinococcosis		✓		✓		
	Giardiasis			✓		E	
	Intestinal helminthic infections			✓		E	
	Leishmaniasis		✓		✓		
	Malaria				✓		✓
	Schistosomiasis		✓	✓			
Viral	Congo-Crimean hemorrhagic fever		✓			S	✓
	Hepatitis A		✓			E	✓
	Hepatitis B		✓				✓
	Rabies				✓	C	✓

* Acute and convalescent specimens necessary except for hepatitis.
** Precautions: Contact, Enteric, Respiratory, Acid Fast Bacilli, Strict

▷ **Universal Precautions** apply for all the diseases listed in Table 1.

▷ **Contact Isolation** requires a private room, a mask for persons close to the patient, gowns when soiling is likely, gloves for touching possibly infectious material, and **handwashing.**

▷ **Enteric Precautions** require a private room for patients with poor hygiene, gowns when soiling is likely, gloves for touching infectious material, and **handwashing.**

▷ **Respiratory Isolation** requires a private room, masks, and **handwashing.** No gowns or gloves are necessary.

▷ **AFB Isolation** requires a private room, masks if patient is coughing and does not cover his mouth, gowns to avoid gross contamination of clothing, and **handwashing.** Gloves are not necessary.

▷ **Strict Isolation** requires a private room, and all persons entering the room must wear a mask, gown, and gloves and must wash their hands on leaving.

STD TRAINING COURSES

1. The **Dallas Sexually Transmitted Disease (STD) Prevention and Training Center** is one of eleven clinical STD training centers in the United States. Dallas was one of the four original training centers in the nation. Since 1979, the Training Center has trained over 5,400 physicians, physician assistants, nurse practitioners, and nurses employed in public STD clinics.

   Training courses available for public health clinicians consist of curricula designed to enhance knowledge and clinical and patient/provider interaction skills. The following courses are currently being offered:

   · STD Clinician Course - Comprehensive

   · STD Clinician Course - Intensive

   · STD Laboratory Methods

   · HIV in the STD Clinic

   · STD Physician Update

   · Bimonthly Seminar

Public health clinicians interested in attending these courses should plan well in advance since demand is high.

FOR MORE INFORMATION CONTACT:

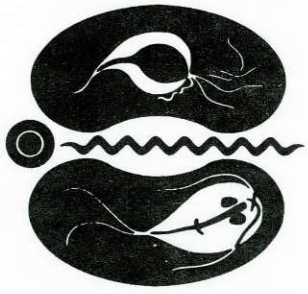
Tom Davis, STD Training Coordinator
Dallas STD Professional Training Center
1936 Amelia Court
Dallas, Texas 75235
Phone: (214) 920-7984 or
FAX (214) 920-7976

2. The **TDH STD Control Division** now offers a one-day STD training session entitled "STD -- Facts and Fallacies." The course, conducted locally upon request, is targeted to health care workers from family planning, HIV, maternal and child health, substance abuse, and correctional programs who care for patient populations at high risk for STDs. It is designed to increase health care workers' knowledge of STDs, heighten awareness of the STD problem, and improve communication skills relating to STDs.

   The course provides an orientation to syphilis, gonorrhea, chlamydia, herpes, chancroid, and human papilloma virus (HPV). It includes history, transmission, course of infection, symptomatology, complications, relationship to HIV, treatment, and morbidity trends. Information on TB and hepatitis can be included upon request.

FOR INFORMATION, CONTACT:

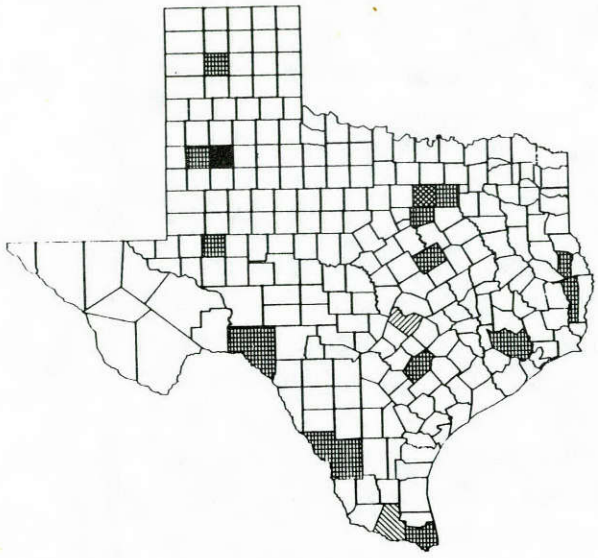
Beverly Nolt, Training Specialist
STD Control Division, TDH, Austin
(512) 458-7225 or
Tex-An 824-9225.



VACCINE-PREVENTABLE DISEASE UPDATE *

Provisional Data
Weeks 19-20
May 5-18, 1991

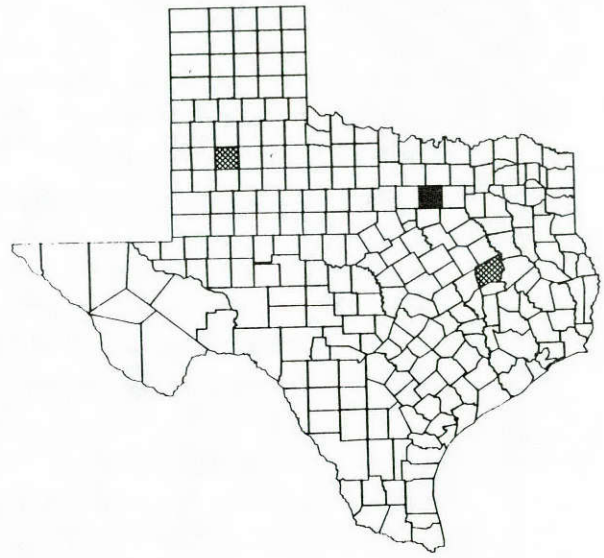
Measles



# of Cases

1 5
2 23
3

Rubella & Pertussis



# of Cases

1 Rubella
2 Pertussis

Summary:

	Latest Onset Date	Total This Period	YTD Total
MEASLES	05/18/91	44	264
RUBELLA	05/09/91	2	65
PERTUSSIS	05/16/91	2	87

*** Figures indicate counties reporting suspected/confirmed cases with onsets during this period.**

IMMUNIZATION NOTES

Measles Outbreak: The Lubbock City Health Department and Public Health Region 2 are investigating a measles outbreak in Lubbock. The majority of recent onsets are being reported from Texas Tech University. The potential for spread in such confined populations is extremely high. As of May 24, 51 rash illnesses consistent with measles have been reported; 38 are university students. Ten serological confirmations of measles disease have been reported. Active surveillance, including disease investigation and immunization of contacts, is ongoing. Over 1,500 students at Texas Tech have been immunized.

Classes at Texas Tech ended May 8, 1991. Risk of transmission to other areas of the state is a very serious threat. Ten counties in Texas have reported measles activity associated with the outbreak at Texas Tech, with the most recent occurrence in Travis county.

Health personnel should be alerted to the continued presence of measles in Texas. All suspected rash/fever illnesses, especially those meeting measles case-definition criteria, should be closely monitored. Such cases should be **reported immediately** to your local or regional health department.

For additional information regarding serologic confirmation of cases, outbreak control recommendations, or updates on the Lubbock County outbreak, call 1-800-252-9152.

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