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Texas Preventable Disease NEWS

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FATAL *YERSINIA ENTEROCOLITICA* SEPSIS ASSOCIATED WITH A TRANSFUSION

Recently, the Texas Department of Health, Division of Epidemiology participated in the investigation of an episode of *Yersinia enterocolitica* sepsis associated with a transfusion of packed red blood cells in Florida. While such occurrences appear to be rare, the Division believes that a short description of the investigation and the preliminary recommendations from that work may be of public health interest. The Florida Department of Health and Rehabilitative Services, the US Food and Drug Administration, and the Hospital Infections Branch, CDC, were the lead agencies conducting the investigation. An American Red Cross blood banking center and local health agency in Texas participated in the investigation.

Two days after his cardiac bypass graft surgery, a 64-year-old man received packed red blood cells (RBCs) to raise his hematocrit. He received one unit without incident, however within 30 minutes of starting the second unit, the patient developed nausea and chills; the transfusion was terminated after he had received approximately 125 ml of RBCs.

There was no evidence of incompatability between donor and recipient blood upon retesting and appropriate blood banking procedures had been followed. Blood for culture was obtained from the patient approximately 12 hours later; the blood culture grew the aerobic, gram-negative rod *Yersinia enterocolitica*. Both RBC bags were retrieved, the first was culture negative, the second unit grew *Y. enterocolitica*. The patient became febrile and hypotensive within two hours of transfusion and, despite intensive medical management, died 19 days after transfusion.

The implicated unit was traced back to a 19-year-old Texas donor. All documents involved in the collection, storage, and transportation of the unit were reviewed; there was no evidence of improper handling of the unit. The young man, a college student, felt well on the day of his donation. He did report having had a brief gastrointestinal illness approximately two weeks prior to his blood donation. He had no exposure to farm animals, unpasteurized dairy products, or raw meat. He had travelled out of Texas, but had felt well during that trip. He did not know if any of his fellow travellers were ill.

Additional testing identified extremely high levels of endotoxin in the second unit bag and administration set tubing. Preliminary serological examination of the donor's blood demonstrated a very high level of antibodies against *Y. enterocolitica*.

CDC has recently investigated two similar cases of *Y. enterocolitica* sepsis associated with RBC transfusion. Each was extensively reviewed, and no apparent association between these three cases was found. However, since this is such an unusual organism, and because contamination of blood for transfusion is such a rare event, careful investigation of each report was warranted.

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The following recommendations were made pending completion of this third investigation.

1. Patients with reactions to transfusion of blood products should have the transfusion immediately discontinued and have a complete work-up, including repeat typing, cross-match, antibody screening, and other studies as appropriate.

2. Blood cultures from the patient and culture of the implicated product should be done if the cause of the reaction is not readily determined to be blood-antibody mediated.

3. Remaining transfusion-related materials (including RBCs, segments, and all bags and related tubing) should be retrieved and saved under refrigeration by the hospital blood bank until investigation has eliminated either microbial contamination or endotoxin as possible explanations for the reaction.

4. All significant transfusion reactions should be evaluated by the hospital blood bank and reported to the regional blood center which supplied the blood to the hospital. In the case of contaminated blood products, the blood center originally processing the unit should be notified so that all components of the implicated unit can be traced, removed from the distribution system, and stored until the investigation is complete.

5. Existing state and federal regulations for reporting complications of blood transfusion and for reporting infectious diseases should be followed.

Adapted from the preliminary CDC investigation report by Dennis M. Perrotta, PhD, Director, Epidemiology Division, TDH.

* * * *

22nd NATIONAL IMMUNIZATION CONFERENCE

The 22nd National Immunization Conference, sponsored by the Centers for Disease Control (CDC), will be held at the St. Anthony Inter-Continental Hotel in San Antonio, Texas during the week of June 20, 1988 - June 24, 1988.

The major themes of the conference will be: 1) coordinating immunization activities among federal, state, and local health agencies and private medicine; 2) developing methods to improve and maintain immunization levels; and 3) vaccine delivery issues regarding both preschool and adult immunization.

At this time, only a tentative schedule is available. Interested individuals may contact the TDH Immunization Division (telephone: (512) 458-7284) in Austin for details. A conference registration form and final agenda will soon be available from CDC. The registration form will be distributed to individuals indicating an interest in attending the conference.

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NOTICE TO READERS

The Editor of Texas Preventable Disease News (PDN) welcomes written accounts of communicable disease and other public health problems encountered and investigated by local health professionals throughout the state. During 1987, numerous articles published in PDN were contributed by individual health care workers in Texas. The Bureau of Disease Control and Epidemiology encourages public health workers to share their experiences and information relating to matters of professional public health interest or concern. Previously published accounts of this nature have been favorably received by the readership. Interested authors are requested to contact the Editor of PDN for additional information pertaining to general guidelines for publication at (512) 458-7455 or STS 824-9455.

MONTHLY SUMMARY OF REPORTABLE DISEASES IN TEXAS

(Counties listed below reflect only those with populations of 100,000 or more, based on 1987 population estimates.)

Cumulative through: March 1988

County	Amebiasis	Campylo-bacteriosis	Chickenpox	Encephalitis	H. influenzae Infections	Hepatitis A	Hepatitis B	Hepatitis NA-NB	Influenza	Measles	Meningococcal Infections	Aseptic Meningitis	Mumps	Pertussis	Rubella	Salmonella	Shigella
BEXAR	6	13	405	0	21	24	7	1	1876	0	0	11	0	0	0	22	25
BRAZORIA	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0
CAMERON	7	0	145	0	0	10	1	0	611	0	0	0	6	0	0	5	5
COLLIN	0	0	120	0	1	1	4	0	5555	0	0	1	1	0	0	1	2
DALLAS	3	4	584	2	47	72	34	3	5368	1	6	14	5	0	0	35	29
DENTON	1	1	22	1	3	4	2	0	37	0	1	1	0	0	0	2	0
EL PASO	0	5	357	0	3	54	14	0	51	0	2	0	2	0	0	10	7
FORT BEND	0	2	16	0	3	0	3	0	113	0	0	1	0	0	0	3	5
GALVESTON	0	4	52	0	4	1	3	0	1205	0	1	2	0	0	0	5	14
HARRIS	1	16	1441	0	31	32	24	9	12633	0	1	17	17	0	0	46	24
HIDALGO	2	0	106	0	0	3	1	0	0	0	0	0	3	0	0	5	4
JEFFERSON	0	1	55	0	1	2	4	0	1140	0	0	2	12	0	0	7	1
LUBBOCK	0	0	41	0	2	17	3	0	516	0	1	2	0	0	0	5	5
MCLENNAN	1	0	157	0	3	10	5	1	347	0	0	0	1	0	0	2	4
MONTGOMERY	2	0	28	0	13	3	6	1	381	0	0	0	0	0	0	5	3
NUECES	0	1	207	0	3	2	7	0	6177	0	0	0	0	0	0	22	0
TARRANT	0	9	364	0	29	30	30	4	2328	0	4	5	3	0	0	23	6
TRAVIS	8	12	7	0	11	11	7	2	111	0	1	6	1	0	0	10	15
All Other Counties	13	15	1960	4	61	130	91	12	16875	0	15	12	21	0	0	85	80
Cumulative TX 1988	44	83	6075	7	238	407	248	33	57324	1	34	74	72	0	0	301	229
Cumulative TX 1987	55	146	9244	24	209	492	349	52	36684	0	55	112	133	14	1	367	245

1988 CUMULATIVE TOTALS FOR OTHER REPORTABLE DISEASES:

Disease	Total	Disease	Total	Disease	Total	Disease	Total	Disease	Total
		Coccidioidomycosis	13	Histoplasmosis	11	Psittacosis	0	Toxic Shock Syndrome	5
Acute Occ. Pesticide Poisoning	2	Dengue	0	Legionellosis	0	Q Fever	0	Trichinosis	0
Anthrax	0	Diphtheria	0	Leptospirosis	0	Rabies	0	Tuberculosis	324
Asbestosis *	0	+ Elevated Blood Lead Levels	221	Listeria Infections	10	Reye Syndrome	0	Tularemia	0
Botulism	0	Gonorrhea	10521	Lyme Disease	0	Rocky Mt Spotted Fever	0	Typhoid	0
Brucellosis	1	Hansen's Disease	8	Malaria	11	Silicosis *	0	Typhus, Murine	0
Chlamydia trachomatis	3462	Hepatitis D (Delta Agent)	0	Plague	1	Syphilis (P&S)	674	Vibrio Infect.	1
Cholera	0	Hepatitis type unspecified	135	Poliomyelitis	0	Tetanus	1	Yellow Fever	0

+ Blood lead level >40ug/dl in persons 15 years of age or older; summarized by date of blood lead test.

* Regular summaries of these reportable occupational diseases will be included as reporting procedures are better established.

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TEXAS DEPARTMENT OF HEALTH
TEXAS AIDS CASES: WEEKLY SURVEILLANCE REPORT
Case Count by Residence at Onset and Year of Diagnosis
April 15, 1988

	1980-1985		1986		1987		1988		CUMULATIVE	
COUNTY *	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Bexar	52	42	43	26	38	8	0	0	133	76
Brazoria	8	8	9	5	7	2	3	1	27	16
Brazos	10	10	5	3	4	3	0	0	19	16
Dallas	246	228	293	196	427	180	50	14	1016	618
Denton	2	2	5	3	14	8	1	0	22	13
El Paso	5	5	8	5	17	4	3	0	33	14
Fort Bend	10	10	10	6	15	2	2	0	37	18
Galveston	11	10	15	11	19	6	4	1	49	28
Harris	603	532	594	402	659	199	68	5	1924	1138
Hays	3	3	4	3	2	1	1	0	10	7
Hidalgo	6	6	0	0	4	2	0	0	10	8

	1980-1985		1986		1987		1988		Cumulative	
COUNTY	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Jefferson	7	6	8	1	16	6	3	1	34	14
Lubbock	4	4	5	3	6	2	0	0	15	9
McLennan	2	2	5	4	5	1	2	1	14	8
Montgomery	5	5	3	1	8	4	1	0	17	10
Nueces	6	4	11	7	20	6	4	0	41	17
Orange	3	3	4	2	4	1	1	1	12	7
Tarrant	41	34	38	20	98	31	7	0	184	85
Travis	58	50	45	22	83	19	8	2	194	93
Walker **	9	9	17	7	11	4	2	0	39	20
All Others	56	51	85	45	122	46	10	2	273	144

	1980-1985		1986		1987		1988		CUMULATIVE	
STATEWIDE	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
	1147	1024	1207	772	1579	535	170	28	4103	2359
CFR %	CFR%	89	CFR%	64	CFR%	34	CFR%	16	CFR%	57

* COUNTIES LISTED INDIVIDUALLY ARE THOSE WITH A CUMULATIVE TOTAL OF 10+
** 27 CASES WERE DIAGNOSED WHILE TEXAS DEPARTMENT OF CORRECTION INMATES

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