Vol. 49, No. 46
November 18, 1989

Texas Preventable Disease NEWS

contents:

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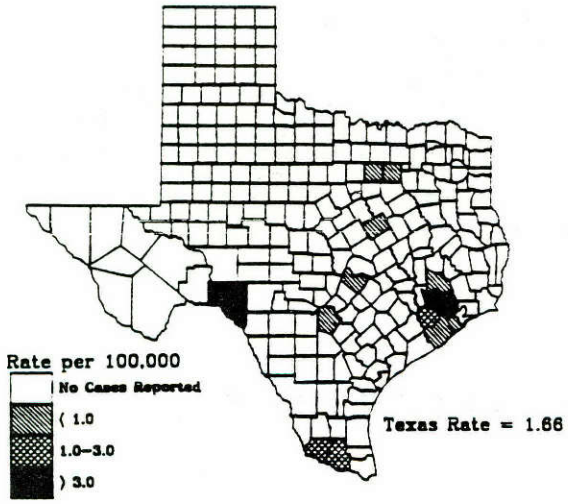
MEASLES SUMMARY -- TEXAS, 1988

In 1988, the Immunization Division investigated 613 reports of rash/fever illness. Of this total, 287 were confirmed as measles, resulting in an overall incidence rate of 1.7 cases per 100,000 population.

Cases were reported from 13 counties throughout the state. The distribution of cases per 100,000 population in these counties is illustrated in Figure 1. The overwhelming majority (92%) of cases occurred in Harris County which experienced an incidence rate of 8.8 cases per 100,000 total population, significantly higher than the state rate of 1.66 per 100,000.

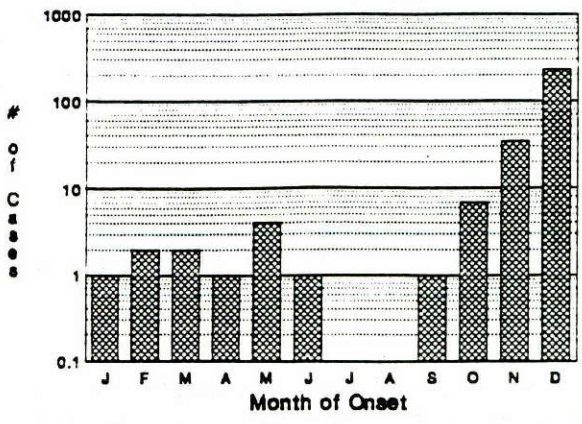
Figure 1.
Reported cases of measles per 100,000 population by county of residence -- Texas, 1988



The majority of cases experienced rash onset during the latter part of the year as illustrated in Figure 2. These year-end cases represent the beginning of one of the largest outbreaks of measles in recent Texas history. The first case reports in the Houston/Harris County area were received in November and continue to the present.

Cases were defined in relation to their preventability. A preventable case of measles was one which occurred in a person who should have been immunized with live measles vaccine according to current recommendations. A case was considered non-preventable if measles illness occurred in: 1) a person "adequately" immunized or in a person who, 2) was less than 16 months of age, 3) was born prior to 1957, 4) had a medical contraindication to receiving vaccine, or 5) had a religious exemption under the state law. Overall, 195 (68%) of the Texas cases in 1988 were considered non-preventable, and 28% (55/195) of those had been previously immunized against measles. A comparable percentage (66%) of Harris County cases were non-preventable.

Figure 2.
Reported cases of measles by month of rash onset -- Texas, 1988



In contrast to 1987, when almost half (48%) of the measles cases occurred in the 15- to 19-year-old age group, the majority (69%) of cases in 1988 occurred in children under five years of age (Figure 3). Only 7% (19/286) of the cases in 1988 were between the ages of 15 and 19 years.

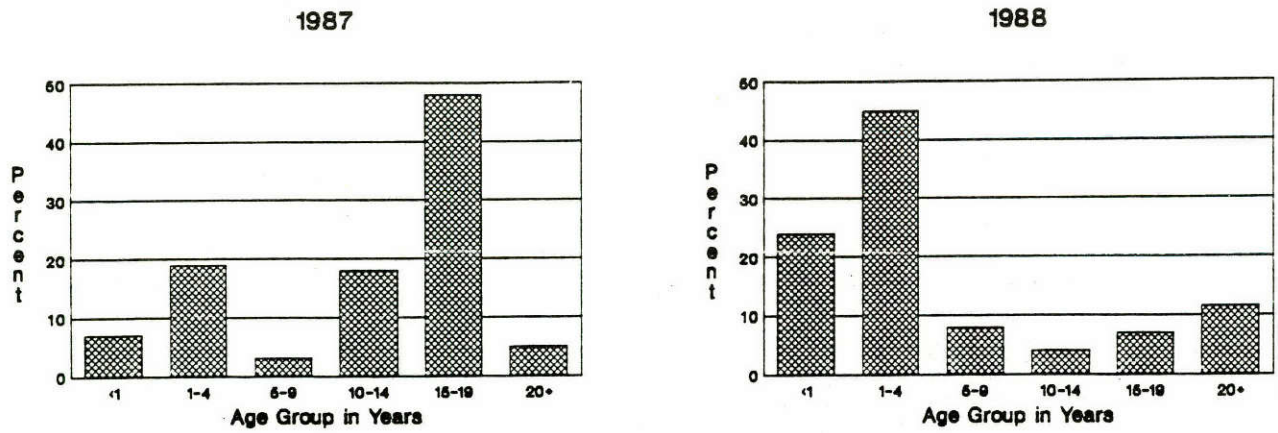
Statewide, the greatest number of Texas measles cases in 1988 was reported among Hispanics. The 125 cases reported in this ethnic group accounted for 44% of the total cases. Thirty percent of the reported cases were white, 24% were black, and the remaining 2% were either Asian or American Indian. Of the major racial/ethnic groups in Texas, blacks experienced the highest incidence rate of measles in 1988. The incidence rate per 100,000 total population was 3.6 for blacks, 3.2 for Hispanics, and 0.74 for whites. As a result of the measles outbreak, the rates in Harris County were significantly different from the state as a whole. In Harris County, Hispanics experienced a rate of 19.1 cases per 100,000 population, whereas blacks had a rate of 11.8 and whites, 4.2.

Nineteen percent (55/286) of the measles cases reported in 1988 were hospitalized, and 87% (48/55) of those were under 5 years of age. The average length of hospital stay was five days.

Information regarding complications associated with measles was available for 30 cases. Otitis media was reported as the primary complication for 18 cases, 9 cases experienced dehydration, and 3 cases developed pneumonia.

Two of the ten measles-related deaths associated with the 1988-89 Houston/Harris County outbreak occurred in persons who had rash onsets in 1988. The first was a 21-year-old, pregnant Hispanic female who died 17 days after rash onset. The other was a 13-month-old, Hispanic male who died 23 days after rash onset. Both died from pneumonia. It is estimated that 60% of measles-related deaths result from pneumonia.

Figure 3.
Distribution of measles morbidity by age group -- Texas, 1987 and 1988 compared



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TUBERCULOSIS CONTROL DIVISION NOTES

Tuberculosis Morbidity Trends: During the first nine months of 1989, 1,299 cases of tuberculosis were reported in the state. This represents a 4.2% reduction over this same period in 1988. About 1% of this reduction is the result of fewer cases reported for six of the seven large metropolitan areas of 250,000 population or more. The Houston/Harris County metropolitan area has reported 363 cases or 16.0% fewer than the 432 cases reported by this time last year. This area usually reports about 30% of the total tuberculosis cases for the state. The San Antonio/Bexar County metropolitan area, however, reported an increase of 23.0% (92 cases) over the 75 cases reported by the end of September 1988.

CADMIUM AND LEAD EXPOSURE ASSOCIATED WITH PHARMACEUTICALS IMPORTED FROM ASIA -- TEXAS *

In August 1988, the Texas Department of Health (TDH) investigated illegal sales in rural west Texas of pharmaceutical drugs manufactured in Asia. These drugs, identified by TDH and Food and Drug Administration (FDA) agents as "chuifong tokuwan" (a pharmaceutical compound manufactured by the Nan Ling Pharmaceutical Company of Hong Kong), are sold in pill form. Chuifong tokuwan contains a drug combination (diazepam, indomethacin, hydrochlorothiazide, mefenamic acid, dexamethasone, lead, and cadmium) that is not approved by FDA and not legal for sale in or importation into the US. The drugs usually were repackaged and relabeled as "The Miracle Herb--Mother Nature's Finest."

TDH tested 93 self-referred persons who had ingested the pills for exposure to lead and cadmium. Of these, 57 (61%) were female; >90% were white non-Hispanics; the mean age was 55 years. Sixty-six (71%) reported taking the pills to relieve symptoms of medical conditions such as arthralgias (51%) and other pain (headache, stiff neck, back pain [26%]). Twenty-two (24%) persons had elevated urine levels of cadmium; none had elevated levels of lead (blood lead ≥25 μg/dL). However, 39 (42%) persons had elevated urine values for retinol-binding protein (RBP), a low-molecular-weight protein indicative of renal tubular dysfunction. The mean urine cadmium level for exposed persons was 1.8 μg/mL, compared with 0.5 μg/mL for a nonrandom sampling of 14 unexposed persons. In exposed persons, 22 (24%) urine samples tested for cadmium were >2.5μg/mL, the upper limit of normal. None of the samples from unexposed persons had elevated values.

The chuifong tokuwan seized in this investigation was destroyed. The investigation is continuing.

Editorial Note: Chuifong tokuwan first appeared in the US in 1974. Although it was banned by FDA in 1978, the drug is distributed illegally in certain parts of the US and is sometimes sold by mail. The primary users of chuifong tokuwan in this study were long-time residents of Texas; however, use of unapproved imported drug combinations is common among recent immigrants to the US, particularly those from Asia and Latin America. Although these products are frequently perceived as relatively harmless herbal "folk remedies," they often contain cortico- or anabolic steroids; nonsteroidal anti-inflammatory drugs (NSAIDs); prescription antibiotics, such as tetracycline and chloramphenicol; and controlled substances, such as diazepam or narcotics, and have potentially serious or fatal health effects.

Use of chuifong tokuwan may increase the body burden of cadmium and may have contributed to renal tubular dysfunction in persons using this compound. Through chronic exposure, cadmium can accumulate in certain organs, particularly the kidneys. Both cadmium and several of the prescription analgesics in chuifong tokuwan can cause renal tubular cell damage. Cadmium can adversely affect function of the proximal renal tubules; increased urinary protein excretion of low-molecular-weight proteins (eg, RBP) is an early consequence of proximal renal tubular damage by cadmium.

In persons who were also taking other medications, the analgesic nephropathy associated with chronic use of many NSAIDs may have contributed to renal tubular dysfunction. Alternatively, increased urinary RBP values could reflect renal dysfunction related to the underlying illness (eg, arthritis) for which many of the patients took this medication. However, adverse effects on renal function have not been reported with use of either indomethacin or mefenamic acid (the NSAIDs present in the pills analyzed), even with prolonged use.

Cadmium is a cumulative toxicant, with a biological half-life of >10 years in humans. Medical evaluation, including urine cadmium and urinary RBP values, is recommended for persons who have used chuifong tokuwan. Additional renal-function evaluation should be included in the medical follow-up of persons whose urinary RBP or urine cadmium values are abnormal.

Complex cultural and linguistic barriers necessitate cooperation with traditional healers (eg, acupuncturists, herbalists) and local leaders of immigrant communities to inform these groups about the hazards associated with use of specific products.

*Also published in: CDC. MMWR 1989; 38(35):612-4.

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IMMUNIZATION NOTES

Texas Measles Update: Texas continues to lead the nation in the number of reported measles cases for 1989. As of November 8, 1989, Texas has reported a cummulative total of 3,119 cases of measles. These case reports are from 97 counties throughout the state. Harris County has reported 49% (1,520 cases) of the measles morbidity. The following Texas counties have recently reported confirmed/suspected cases:

County	Latest Rash Onset	Affected Population	# Cases
Dallas	11/07/89	Pre-school, School-age, College	230.*
Ellis	10/14/89	All Age Groups	2
Harris	10/22/89	Preschool, School-age	1,520
Nueces	11/07/89	All Age Groups	20
Panola**	10/13/89	Pre-school	1
Parker	10/17/89	Pre-school	1
Refugio	11/06/89	Pre-school, School-age	4
Shelby**	10/11/89	Pre-school	1
Tarrant	11/04/89	Pre-school	1
Travis	11/07/89	Pre-school	1
Upton	10/24/89	School-age	1

* cumulative 1989 total, includes 8 recent cases which occurred at SMU, latest rash onset 10/18/89

** imported cases from Shreveport, Louisiana

Health care providers and school personnel should watch for signs/symptoms of measles among their patients and promptly report cases to the local health authority or the Texas Department of Health (TDH) Immunization Division toll-free in Texas at 1-800-252-9152. In addition, local health departments and public health regions are encouraged to contact the TDH Immunization Division in Austin to discuss outbreak control and case management.

Health care providers should make special arrangements for the isolation of patients with rash illnesses who present for care.

TEXAS PREVENTABLE DISEASE NEWS (ISSN 8750-9474) is a free, weekly publication of the Texas Department of Health, 1100 West 49th Street, Austin, TX 78756. Second-class postage paid at Austin, TX. POSTMASTER: Send address changes to TEXAS PREVENTABLE DISEASE NEWS, 1100 West 49th Street, Austin, TX 78756.

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Texas Department of Health
1100 West 49th Street
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