Texas Preventable Disease
NEWS
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contents:

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VIBRIO VULNIFICUS DEATHS IN TEXAS - 1988

This year to date, ten cases of *Vibrio vulnificus* infections have been reported to the Epidemiology Division of the Texas Department of Health. Of the ten individuals infected, six have died. These numbers reflect the common pattern of *V. vulnificus* infections seen in the Gulf Coast states over the past few years -- the number of cases reported is small, but the number of deaths per reported cases is large, often greater than 50%.

V. vulnificus is a bacterium which occurs naturally in the salt waters along the Gulf Coast. The risk of human infection is greatest from April through October, presumably because the bacteria are more numerous when the water is warm.

Infection can occur when an existing wound comes in contact with seawater, when an injury penetrating the skin occurs in the presence of seawater, or after ingestion of raw or inadequately cooked seafood. Raw oysters have been implicated most often. The incubation period ranges from 16 hours to seven days.

V. vulnificus infections are usually opportunistic, and people at risk are those with liver disease, a history of alcoholism, diabetes, immunodeficiencies, or blood disorders such as hemochromatosis or thalassemia major. Also at risk are individuals with therapeutically induced (such as with the use of antacids) or naturally low gastric acid. *V. vulnificus* can cause a primary septicemia, wound infection, or gastroenteritis. These infections, especially septicemia and wound infections, can progress rapidly. Death within two days of exposure has been reported.

The exposure history is known for seven of the ten cases reported this year. Five had eaten raw oysters, and one had eaten cooked fish within seven days of onset of symptoms. Of the nine individuals whose medical history is known, eight had one or more pre-existing conditions placing them at risk. Eight had chronic liver disease, five had a history of alcohol abuse, and two had immunodeficiencies.

Several state and federal agencies, including the Centers for Disease Control, the Federal Drug Administration, and the Texas Department of Health are collaborating in a special investigation to learn more about the epidemiology of *V. vulnificus* infections and develop more effective ways to prevent them. The success of this program depends upon the prompt reporting of *V. vulnificus* infections to the local health department or the Epidemiology Division of the Texas Department of Health.

Currently, these are the recommendations for minimizing risk of infection and reducing morbidity and mortality of those which occur.

1. Persons at risk, such as those with chronic liver disease, diabetes, immunodeficiency, a history of alcohol abuse, or those using antacids should not eat seafood that is raw or only lightly cooked.
2. Persons with chronic liver disease, diabetes, immunodeficiency, or a history of alcohol abuse should avoid exposure of any existing wound to seawater, especially from April through October.

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3. Physicians should begin treatment immediately if a *V. vulnificus* infection is suspected and should not wait for the organism to be identified. Tetracycline is the antibiotic of choice; the bacterium is also sensitive to chloramphenicol, penicillin G, and some aminoglycosides.

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QUARTERLY REPORT TO THE DOMESTIC POLICY COUNCIL ON THE PREVALENCE AND RATE OF SPREAD OF HIV AND AIDS -- US*

This article summarizes the third report to the Domestic Policy Council (DPC) on the prevalence and rate of spread of human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) in the United States. The report was delivered to the DPC on July 22, 1988; its major points are summarized below, with information updated where appropriate.

A. TRENDS IN REPORTED CASES OF AIDS

- By August 29, 1988, a total of 72,024 AIDS cases had been reported in the US, including over 12,500 cases since the last summary on April 15, 1988.
- In 1986, the Public Health Service (PHS) projected that approximately 270,000 cumulative AIDS cases would be diagnosed by the end of 1991, including 15,800 cases diagnosed in 1986 and 23,000 in 1987. The actual numbers of cases for these years, adjusted for reporting delays, are 17,100 and 25,200 cases, respectively. Using a method similar to that used in 1986, the PHS now projects a cumulative total of 365,000 cases diagnosed by the end of 1992, with 263,000 cumulative deaths (Figure 1).
- In 1992 alone, 80,000 cases are expected to be diagnosed and 66,000 deaths to occur. A total of 172,000 AIDS patients will require medical care in 1992 at a cost expected to range from $5 billion to $13 billion.
- In September 1987, the AIDS case definition was revised to include a broader spectrum of HIV-associated diseases and to allow for presumptive diagnoses of certain conditions. Comparisons of cases reported from the 12-month period before September 1987 with those reported since then show this change has led to an increase in the proportion of reported AIDS cases among blacks from 24% to 36% of all reported cases and an increase in the proportion of reported cases among Hispanics from 13% to 16%. Cases in persons thought to have been infected through heterosexual contact also increased from 2.6% of all cases to 3.6%.

B. TRENDS IN PREVALENCE AND INCIDENCE OF HIV INFECTION

- In April 1988, CDC convened a meeting of experts in mathematical modeling techniques to help estimate the number of Americans now infected with HIV. Based on two mathematical approaches, these experts agreed that the current CDC estimate of 1.0 million to 1.5 million is a reasonable working estimate of the number of persons now infected.
- Recent data, including prevalence rates in childbearing women in three states, patients at six sentinel hospitals, and prisoners in 15 states (see below), are consistent with this estimate.
- The current estimate for the number of infected Americans is the same as the estimate made in 1986. This does not mean that no new infections have occurred. The 1986 estimate was based on preliminary data and was probably too high.
- Data on the prevalence rate of HIV infection (based on antibody prevalence) are now available from six urban and suburban sentinel hospitals, predominantly in the midwest. In the first 18,809 tests conducted in persons admitted for reasons not associated with HIV infection, the overall seroprevalence was 0.3%. The observed rate is three to four times that found in military recruit applicants in the same cities. The higher rate in hospital patients is expected because persons with risk behaviors are to some extent excluded from military service.

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* Adapted from: CDC. MMWR 1988; 37 (36): 551-4, 559.

- Seroprevalence in inmates from 15 state correctional systems and the Federal Bureau of Prisons ranges from 0 to 15% (median 0.4%). The risk factor most often reported in seropositive inmates is a history of intravenous-drug abuse.
- Seroprevalence in Job Corps entrants has been 0.4% for the first 65,960 persons tested. Infection rates are highest in males, blacks and Hispanics, and applicants from urban areas.
- Infection rates in sentinel populations that have been followed over time have not shown significant increases. These populations include first-time blood donors (33 months of observation), applicants for military service (30 months of observation), and admissions to sentinel hospitals (15 months of observation). These findings are consistent with some continued HIV transmission (which is also seen in seroconversions in repeatedly tested active-duty military personnel and in repeat blood donors) but argue against an explosive spread of HIV in the population.

C. STATUS OF HIV AND AIDS-ASSOCIATED SURVEYS

- **Implementation of the Comprehensive Family of HIV Surveys**

To conduct sentinel surveillance for HIV in 30 metropolitan areas, funding was awarded to health departments of 23 states, the District of Columbia, and Puerto Rico on January 29, 1988, with additional funds awarded May 1, 1988. More than 420 different surveys will be conducted in sexually transmitted diseases clinics, drug abuse treatment centers, tuberculosis clinics, women's health clinics, sentinel hospitals, and newborn infant screening programs (in which a sample of specimens routinely collected from newborns are anonymously tested to indicate the prevalence of HIV infection in childbearing women).

A program to evaluate HIV seroprevalence in college students has begun. By the end of 1988, a total of 20 colleges will participate, and approximately 20,000 serum samples will have been tested.

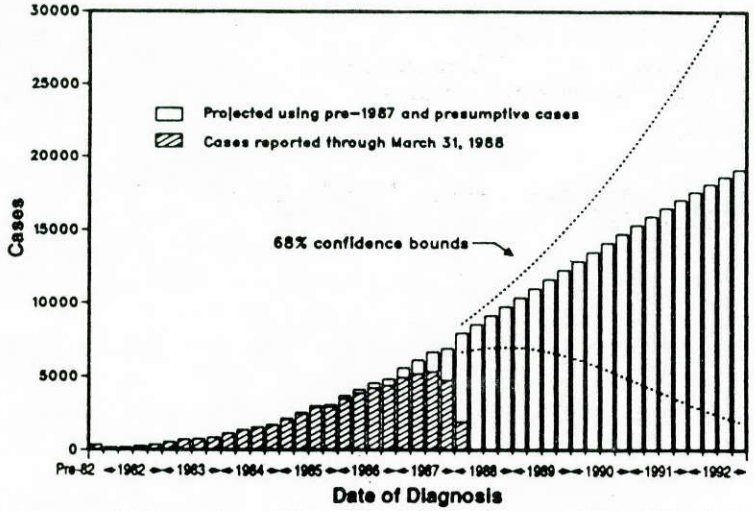
- **National Household Seroprevalence Survey (NHSS)**

A contract for the NHSS was awarded to the Research Triangle Institute. The NHSS will be conducted in two phases. Phase I will be a pilot phase to determine the feasibility of conducting household interviews to obtain demographic information, HIV risk factors, and a blood test for HIV. If Phase I shows that the NHSS is feasible and if funds are available, Phase II, a probability sample of households from throughout the US, would begin late in 1989 and would include approximately 50,000 respondents.

- **National Health Interview Survey: AIDS Attitudes and Knowledge Survey**

An AIDS questionnaire was developed for the National Health Interview Survey to provide estimates of public knowledge and attitudes about AIDS and changes in knowledge and attitudes over time. The first phase of the survey was conducted from August 1987 through January 1988 and showed continuous increases in knowledge of how HIV is transmitted. A second phase that began in early May 1988 contains additional questions to assist in the evaluation of the "Understanding AIDS" mailing.

FIGURE 1. Incidence of AIDS,* by quarter and year of diagnosis — United States, pre-1982–1992



*Projected from cases diagnosed as of June 30, 1987, and reported as of March 31, 1988.

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Erratum: PDN, Vol. 48, No. 37, p. 2. In the article entitled "Pediculosis Capitis," the second sentence of the fifth paragraph should read: "NIX and over-the-counter medications such as RID are as effective as Kwell." Readers are reminded that NIX is available only through prescription.

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