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As part of its commemoration of CDC's 50th anniversary, MMWR *is reprinting selected* MMWR *articles of historical interest to public health, accompanied by a current editorial note.*

On August 3, 1979, MMWR *published a report about infants with a Bartter-like syndrome that was associated with use of one brand of a soy-based formula. This episode prompted the Infant Formula Act of 1980, which was the first in a series of major legislative and regulatory steps taken to insure the safety of infant formulas. This report and a current editorial note appear below.*

Infant Metabolic Alkalosis and Soy-Based Formula — United States

Three cases of a Bartter-like syndrome in infants were reported to CDC from Memphis, Tennessee, on July 26, 1979. The infants were less than 10 months of age and were failing to gain weight. They had poor appetites, and one had a history of constipation. All were hypochloremic and hypokalemic, with varying degrees of alkalosis and microhematuria. The 3 infants were taking the same brand of soy-based formula.

To further investigate this possible association, CDC surveyed a sample of pediatric nephrologists throughout the country for cases of metabolic alkalosis diagnosed since January 1, 1979, in infants with a history of failure to thrive, anorexia, or constipation. Infants known to have pyloric stenosis, cystic fibrosis, or diuretic therapy were excluded.

An additional 15 cases were ascertained through the survey, and another 16 cases were determined from other sources. Cases were scattered throughout the country. The infants ranged in age from 2 to 9 months; none died. There was no unusual sex distribution.

Feeding history was available in 27 of the 31 cases. Of these, 26 were on Neo-Mull-Soy (Syntex, Palo Alto, California), the same formula used by the 3 index cases. Neo-Mull-Soy represents 10%–12% of the soy-based formula market. After diagnosis of the alkalosis, infants who were placed on chloride supplement responded favorably; those who, after treatment for and recovery from the alkalosis, went back on the formula—but without chloride supplementation—had a recurrence.

The manufacturer of Neo-Mull-Soy has voluntarily stopped manufacturing this product, halted its distribution to wholesalers, and requested that wholesalers stop

Infant Metabolic Alkalosis — Continued

sales to retailers. Syntex has also issued a mailgram to pediatricians and pediatric residents notifying them of the problem.

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Editorial Note: Bartter syndrome is characterized by hypochloremic, hypokalemic alkalosis; normal blood pressure; and increased serum levels of renin and aldosterone. The onset is usually during the first year of life. The pathogenesis is not known.

The high percentage of affected infants on Neo-Mull-Soy formula and the fact that infants who were switched to other soy formulas did not have recurrence both support the casual association between Neo-Mull-Soy formula and this outbreak.

Insufficient intake of chloride is a known cause of metabolic alkalosis. The cause of this outbreak is not yet clear, but it is possible that the chloride concentration in this formula falls below the daily requirement for infants, if they are not also receiving chloride from other dietary sources. The current tendencies to delay the addition of solids to infants' diets and to remove sodium chloride from commercial and home-prepared baby foods might be additional contributing factors.

There are no regulations pertaining to the optimal level of chloride in infant formulas. The Committee on Nutrition of the American Academy of Pediatrics recommends a minimum of 11 milliequivalents per liter in infant formula (*1*).

Reference

1. Committee on Nutrition, American Academy of Pediatrics: Commentary on breast-feeding and infant formulas, including proposed standards for formula. Pediatrics 57:278–285, 1976.

Editorial Note—1996: At the time of this cluster of cases of hypochloremic metabolic alkalosis, infant formula was regulated under 21 CFR 105.65, *Infant Foods*. This regulation specified minimum levels of certain nutrients for infant formulas, including protein, fat, and some vitamins and minerals; a level for chloride was not specified. If the specified levels of nutrients were not present in the formula, the label was required to state that the diet should be supplemented. The incident described in this report prompted the Infant Formula Act of 1980*—the amendment of the federal Food, Drug, and Cosmetic Act that established a new section 412 (21 U.S.C. 350a) and created a separate category of food designated as infant formula. Section 412 requires that infant formulas meet specified standards of quality and safety and contain all required nutrients, including chloride, at specified levels. The Infant Formula Act of 1980 was the first in a series of major legislative and regulatory steps taken to ensure the safety of infant formulas† (*1,2*).

This episode underscores the need for regular and adequate testing of infant formulas. Several events may have contributed to the formula chloride deficiency, including removal of sodium chloride from the formula for the purpose of reducing the sodium content of infant diets. The cummulative effect of these contributing events led to a deficiency that was not recognized because regular testing for chloride content was not conducted.

*Public law 96-359.
†Public law 99-570.

Infant Metabolic Alkalosis — Continued

In follow-up to the investigation in 1979, CDC established a registry of children who developed hypochloremic metabolic alkalosis following consumption of chloride-deficient Neo-Mull-Soy and Cho-Free, another soy-based formula manufactured by Syntex. Based on these data, the National Institutes of Health conducted a follow-up study to determine whether the risk for developmental delays or deficiencies was increased in these children (*3*). The study determined that by age 9–10 years, the children appeared to have recovered from their early growth failure and to have achieved normal cognitive development. However, these children remained at potential risk for deficits in language skills that require expressive language abilities (*3*).

This investigation highlights the critical importance of developing and using appropriate case definitions for surveillance and in investigations of outbreaks of both infectious and noninfectious origin. The original diagnosis of these cases was Bartter syndrome, a condition that causes metabolic alkalosis from renal loss of potassium and requires a large replacement dose of potassium chloride throughout life to maintain metabolic homeostasis. The children who had hypochloremic metabolic alkalosis as the result of consuming chloride-deficient formula quickly recovered following treatment with small doses of potassium chloride. This clinical response provided a clue to the physician who reported the first three cases that the formula might be the cause of the metabolic alkalosis. As a result, CDC's survey of pediatric nephrologists was used to search for cases of metabolic alkalosis resembling Bartter syndrome, rather than confirmed cases of that condition. If the case definition in this survey had been restricted to Bartter syndrome only, the association may not have been detected.

The outbreak described in this report highlights the value of a rapid response capability for local and state health departments and the Public Health Service and the important role played by clinicians in identifying public health emergencies. The sequence of problem recognition, investigation, and response unfolded rapidly: on July 26, 1979, CDC was notified of the three cases from Memphis and of the causal hypothesis related to infant formula as suggested by the attending physician. On July 27, two of CDC's Epidemic Intelligence Service (EIS) officers reported for their first day of work on assignment to CDC's Birth Defects Branch and assisted in developing a strategy for collecting information about feeding histories of children with metabolic alkalosis. On July 30, the nationwide survey of pediatric nephrologists was conducted. On August 1, one EIS officer traveled to the manufacturer's corporate headquarters to meet with company officials and three pediatricians. The company tested several formula batches before the meeting and found that none contained sufficient chloride. On August 2, after meeting with representatives of the Food and Drug Administration, the company halted manufacture of the formulas, initiated a voluntary recall of the products, and notified health-care professionals throughout the country about the problem. The *MMWR* article describing the occurrence was released to the news media that same day, only 7 days after CDC received notification of the first three cases from Memphis.

1996 Editorial Note by: Shane Roy, III, Dept of Pediatrics, Univ of Tennessee, Memphis. Frank Greenberg, National Center for Human Genome Research, National Institutes of Health. Gillian Robert-Baldo, Nicholas Duy, John Wallingford, Office of Special Nutritionals, Center for Food Safety and Applied Nutrition, Food and Drug Administration. Heinz Berendes, Div of Epidemiology, Statistics and Prevention Research, National Institute for Child Health and Development, National Institutes of Health. J David Erickson, DDS, Birth Defects and Genetic

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Imported Dengue — United States, 1995

Dengue is an acute disease caused by any of four mosquito-transmitted virus serotypes (DEN-1, DEN-2, DEN-3, and DEN-4) and characterized by the sudden onset of fever, headache, myalgias, rash, nausea, and vomiting. The disease is endemic in most tropical areas of the world and can occur in U.S. residents returning from travel to such areas. This report summarizes information about imported dengue among U.S. residents during 1995 and documents a substantially increased incidence of dengue in the Caribbean, Central America, and Mexico.

Serum samples from 441 persons who had suspected dengue with onset in 1995 were submitted to CDC for diagnostic testing from 31 states and the District of Columbia. Of these, 79 (18%) cases from 21 states were serologically or virologically diagnosed as dengue by isolation of dengue virus, detection of anti-dengue immunoglobulin M, single high titers of immunoglobulin G antibodies in acute serum samples, or a fourfold or greater rise in dengue-specific antibodies between acute- and convalescent-phase serum samples (*1*). Seven additional cases with laboratory-positive dengue were reported by the Texas Department of Health (TDH), all of which were diagnosed at a commercial reference laboratory (Table 1).

Of the 281 suspected cases reported from Texas, most (200 [71%]) resulted from intensified surveillance by the TDH because of an epidemic of dengue in the adjoining state of Tamaulipas, Mexico (*2*). More samples than usual also were received from residents of Oregon and travelers to Tortola (British Virgin Islands). Cases of dengue were diagnosed among a group of disaster-relief workers from Oregon who traveled to St. Thomas, U.S. Virgin Islands, in September following hurricanes Luis and Marilyn. Serum samples were requested from all travel companions of one patient with laboratory-diagnosed dengue who traveled to Tortola in August.

Of the 86 persons with laboratory-diagnosed dengue, 44 (51%) were female. Ages were reported for 54 persons and ranged from 1 year to 73 years (median: 40 years). The virus serotype (DEN-1, DEN-2, and DEN-3) was identified for five cases (Table 1). Based on travel histories available for 81 persons, infections probably were acquired in the Caribbean islands (48 cases), Mexico and Central America (24), Asia (five), South America (three), and Africa (one).

Imported Dengue — Continued

TABLE 1. Suspected and laboratory-diagnosed cases of imported dengue, by state — United States, 1995

State	Cases		Travel history, if known, of persons with laboratory-diagnosed dengue (serotype, if known)
	Suspected	Laboratory-diagnosed	
Alabama	2	0	
Arizona	2	0	
California	4	1	Tortola
Colorado	7	0	
Connecticut	1	1	Tortola
District of Columbia	1	1	Eritrea
Florida	5	3	Honduras, "Virgin Islands," Ecuador
Georgia	13	5	Haiti, Jamaica (2 cases), Puerto Rico, Tortola
Hawaii	2	1	Taiwan
Illinois	1	1	Puerto Rico
Iowa	1	0	
Indiana	1	0	
Maryland	4	2	St. John, Tortola
Massachusetts	12	8	Anguilla, Jamaica, Puerto Rico, Tortola (2 cases)
Michigan	5	2	Tortola, Thailand (DEN-2)
Missouri	3	3	Haiti (2 cases), Puerto Rico and U.S. Virgin Islands
Mississippi	1	0	
Montana	2	0	
North Carolina	7	2	Honduras (DEN-3), Indonesia
Nebraska	1	0	
New Mexico	1	0	
New York	23	12	"Caribbean," Dominican Republic (2 cases), Haiti, Honduras, St. Thomas (DEN-1), Thailand, Tortola (3 cases)
Ohio	8	4	Haiti, Nicaragua, Tortola (2 cases)
Oregon	36	8	Aruba and Venezuela, St. Thomas (7 cases)
Pennsylvania	2	2	Barbados (DEN-2), Tortola
Rhode Island	1	0	
South Carolina	2	1	Tortola
Texas	281	22	Caribbean, El Salvador, Guatemala, Honduras (2 cases), Mexico (13 cases), Mexico and El Salvador (DEN-3), Puerto Rico and Grenada (2 cases), Tortola
Utah	2	0	
Vermont	3	2	St. Thomas, Tortola
Washington	5	1	India
Wisconsin	9	4	Costa Rica, St. Croix and Puerto Rico, Nicaragua, Venezuela
Total	**448**	**86**	

Clinical information was available from 54 patients with laboratory-diagnosed cases. The most commonly reported symptoms were consistent with classic dengue fever (e.g., fever [100%], headache [70%], myalgias [55%], and rash [54%]). Of the 29 patients with rash, in 13 (45%) the rash was described as maculo-papular. Other manifestations included skin hemorrhages, petechiae, or purpura (nine cases); low platelet counts (20,000–134,000/mm^3 [normal: 150,000–450,000/mm^3]) (eight); low

Imported Dengue — Continued

white blood cell counts (1000–2700/mm^3 [normal: 3200–9800/mm^3]) (six); and elevated liver enzymes (six). At least 11 patients were hospitalized.

Reported by: State and territorial health depts. Dengue Br, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: In the Americas, dengue is transmitted by *Aedes aegypti* mosquitoes. Although nearly eradicated from the region in the 1960s, this species is now present in most tropical areas of the Americas and is present year-round in the southernmost areas of Florida and Texas; a small focus also exists on the island of Molokai, Hawaii. Autochthonous transmission of dengue occurred in the United States during 1980, 1986, and 1995; the seven cases in Texas in 1995 were laboratory diagnosed (by serologic testing and the isolation of DEN-2 and DEN-4 virus serotypes) among persons who did not travel outside Texas (*2,3*). Although most cases of dengue are characterized by mild manifestations, infection in some persons can result in the more severe forms of the disease—dengue hemorrhagic fever (DHF) (fever, platelet count ≤100,000/mm^3, hemorrhagic manifestations, and a leaky capillary syndrome [evidenced by hemoconcentration, hypoalbuminemia, or pleural or abdominal effusions]) or dengue shock syndrome (DSS) (DHF plus hypotension or narrow pulse pressure [≤20 mm Hg]) (*4*). The fatality rate for patients with DSS can be as high as 44% (*5*), compared with 1%–2% for patients with appropriately treated DHF.

The incidence of dengue and DHF is increasing in the Americas. In 1995, dengue outbreaks were reported from many countries in Central America and the Caribbean (*6,7*). As a result, the number of laboratory-diagnosed cases reported to CDC in 1995 was larger than the average annual number (n=45) during 1987–1994. This increase especially reflects the impact of active surveillance in Texas initiated in August 1995 and the occurrence of cases among the group of travelers to Tortola and in the group of disaster-relief workers from Oregon.

The cases among disaster-relief workers and persons who traveled to Tortola underscore the importance of prevention measures for susceptible persons who travel to areas with endemic disease. These measures include avoidance of exposure to mosquitoes (*8*) through use of mosquito repellent and protective clothing at all times. Although mosquito activity is greatest in the early morning and in the late afternoon, mosquitos may feed at any time during the day, especially indoors, in shady areas, or during overcast periods. *Ae. aegypti* may be present in dark areas in domestic settings (e.g., closets, bathrooms, behind curtains, and under beds). The risk for exposure to dengue may be lower for tourists in some settings, including beaches and heavily forested areas and jungles.

Health-care providers should consider dengue in the differential diagnosis for all patients who have fever and a recent (i.e., preceding 2 weeks) history of travel to tropical areas. When dengue is suspected, patients should be monitored for evidence of hypotension, hemoconcentration, and thrombocytopenia. Because of the anticoagulant properties of acetylsalicylic acid (i.e., aspirin), only acetaminophen products are recommended for management of fever. Acute- and convalescent-phase serum samples should be obtained for viral isolation and serodiagnosis and sent for confirmation through state or territorial health departments to CDC's Dengue Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, 2 Calle Casia, San Juan, PR 00921-3200; telephone (787) 766-5181; fax (787) 766-6596. Serum specimens should be accompanied by a summary of clinical and

Imported Dengue — Continued

epidemiologic information, including a detailed travel history with dates and location of travel and dates of onset of illness and blood collection.

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Iron Overload Disorders Among Hispanics — San Diego, California, 1995

Approximately 1.5 million persons in the United States are affected by iron overload diseases, which are primarily caused by hereditary hemochromatosis—the most common genetic disorder in the United States (*1*). Hereditary hemochromatosis is characterized by increased iron absorption in the gastrointestinal tract, which may cause lifelong excessive iron absorption and accumulation and serious health effects, including arthritis, cirrhosis, diabetes, impotence, heart failure, and death (*2*). Hereditary hemochromatosis is an autosomal recessive disease; the estimated prevalence of the homozygous genotype is 1:200–1:250 persons, and 10% of persons are carriers (*3*). Although the disease was previously believed to affect primarily white males of northern European descent, recent data indicate hereditary hemochromatosis also occurs among blacks (*2,4*). Moreover, iron overload diseases are underdiagnosed among whites and may not be considered in other racial/ethnic groups (e.g., Hispanics) even when compatible symptoms and clinical findings are present (*5,6*). As part of a joint demonstration project during August–October 1995 to determine the overall prevalence of iron overload, CDC reviewed data from a health-maintenance organization (HMO) in San Diego, California; the prevalence among Hispanics* appeared similar to that for non-Hispanic whites. This report presents the preliminary findings of an analysis of the prevalence of iron overload among Hispanics and compares these findings with nationally representative data from the Third National Health and Nutrition Examination Survey (NHANES III). These findings indicate that the prevalence of possible iron overload among Hispanic clients of the HMO based on initial screening was consistent with the nationwide prevalence of possible iron overload based on a single screening test for Hispanics of Mexican descent and non-Hispanic whites (Table 1).

*In this report, persons who reported their origin as Hispanic of Mexican descent or Filipino were categorized as Hispanic. Persons of Hispanic origin can be of any race.

Iron Overload Disorders — Continued

The demonstration project included screening for iron overload among all persons aged ≥18 years who were newly entering the HMO's medical program during August–October 1995 (n=15,000). The transferrin saturation (TS) test (serum iron/total iron binding capacity X 100) was used to identify abnormal iron metabolism (normal=30%). Preliminary findings indicated that an elevated TS was detected in 420 (2.8%) of the 15,000 persons screened. In comparison, based on NHANES III,[†] the prevalence of elevated TS among non-Hispanic whites was 1.6% and among Hispanics of Mexican descent was 1.5% (Table 1). The 420 persons with elevated TS subsequently received a complete medical examination, follow-up TS, and phlebotomy to confirm the diagnosis of iron overload.

Based on this evaluation, iron overload was diagnosed or confirmed in 60 persons, representing a prevalence of 4.0 cases per 1000 persons screened. Of these 60 persons, 10 (16.7%) reported their ethnicity as Hispanic. The HMO's records indicated that 13.1% of its total population reported their ethnicity as Hispanic; therefore, the prevalence of iron overload among Hispanic patients was five cases per 1000 Hispanic patients.

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Editorial Note: The gene that may cause most cases of hereditary hemochromatosis has been identified (*7*). However, the potential role of variations of this gene and genetic variations at other loci in causing hereditary hemochromatosis among different population subgroups, such as Hispanics described in this report, have not been determined (*4*). Until a test to detect the gene(s) that causes hereditary hemochromatosis is developed, clinicians and public health practitioners must rely on the phenotypic expression of abnormal iron metabolism for screening and case detection.

[†]Data from NHANES III are based on a single elevated TS test indicating an initial positive screening; no follow-up analysis was conducted.

TABLE 1. Prevalence of possible iron overload* among non-Hispanic whites and Hispanics of Mexican descent aged ≥20 years, by sex — United States, Third National Health and Nutrition Examination Survey (NHANES III), 1988–1994

Characteristic	Sample size	%	(95% CI[†])
Non-Hispanic white			
Men	3168	1.4	(0.9%–1.9%)
Women	3648	1.8	(1.1%–2.5%)
Total	**6818**	**1.6**	**(1.1%–2.1%)**
Hispanics of Mexican descent			
Men	2172	2.0	(1.2%–2.7%)
Women	2171	0.9[§]	(0.2%–1.6%)
Total	**4343**	**1.5**	**(0.9%–2.0%)**

*Based on an initial elevated transferrin saturation (TS) (>55% for women and >60% for men).
[†]Confidence interval.
[§]May be unreliable. NHANES III is a multipurpose health survey that was not designed to yield prevalence estimates of <10%. However, because of the public health importance of hemochromatosis, the usual criteria for presentation of prevalences from NHANES were relaxed.

Iron Overload Disorders — Continued

Recent findings suggest that the prevalence of iron overload diseases is more common than previously believed (*2,3*). Screening with TS and early treatment for iron overload diseases are the principal strategies for preventing development of chronic diseases in persons who are homozygotes for the gene. Treatment with periodic phlebotomy can remove excess iron before organ damage occurs and can substantially reduce morbidity and mortality from the associated chronic diseases (*2,6,8*). Systematic screening with TS and case detection also can reduce health-care costs associated with these diseases (*2,9*).

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Notice to Readers

FDA Approval of a Haemophilus b Conjugate Vaccine Combined by Reconstitution with an Acellular Pertussis Vaccine

On September 27, 1996, the Food and Drug Administration (FDA) licensed a Haemophilus b Conjugate Vaccine (ActHIB®*) combined by reconstitution with diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) (Tripedia®†) for use as the fourth dose in the childhood vaccination series. This combination vaccine will be sold under the trade name TriHIBit™. On July 31, 1996, Tripedia® was licensed for

*Haemophilus b Conjugate Vaccine (Tetanus Toxoid Conjugate) is manufactured by Pasteur Mérieux Sérums & Vaccines S.A. ActHIB® is identical to Haemophilus b Conjugate Vaccine (Tetanus Toxoid Conjugate)—OmniHIB® (distributed by SmithKline Beecham Pharmaceuticals). Use of trade names and commercial sources is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

†Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine Adsorbed, prepared and distributed as Tripedia® by Connaught Laboratories, Inc. (Swiftwater, Pennsylvania), was licensed July 31, 1996, for use in infants. The purified acellular pertussis vaccine component is produced by BIKEN/Tanabe Corporation (Osaka, Japan) and is combined with diphtheria and tetanus toxoids manufactured by Connaught Laboratories, Inc.

Notices to Readers — Continued

the initial four doses of the diphtheria, tetanus, and pertussis vaccination series (*1*). TriHIBit™ is the first vaccine to be licensed in the United States that combines DTaP with a Haemophilus b Conjugate Vaccine.

The Advisory Committee on Immunization Practices (ACIP), the Committee on Infectious Diseases of the American Academy of Pediatrics, and the American Academy of Family Physicians recommend that children routinely receive a series of five doses of vaccine against diphtheria, tetanus, and pertussis before age 7 years and four doses of vaccine against *Haemophilus influenzae* type b (Hib) disease before age 2 years (*2–7*). The first four doses of the diphtheria, tetanus, and pertussis vaccination series should be administered at ages 2, 4, 6, and 15–18 months and the fifth dose at age 4–6 years. If diphtheria, tetanus, and whole-cell pertussis vaccine (DTP) is used as a fourth dose, it may be administered as early as 12 months of age provided that 6 months have elapsed since the third dose.

The following evidence supports the use of TriHIBit™ for the fourth dose of the diphtheria, tetanus, pertussis, and Hib vaccination series:

1. In clinical studies, children aged 15–20 months who previously had received three doses of Haemophilus b Conjugate Vaccine and DTP were administered either Tripedia® and ActHIB® vaccines at separate sites or combined as a single injection. In both groups, following administration of the fourth dose, 100% of children had serologic evidence of long-term protection from invasive Hib disease, diphtheria, and tetanus (Connaught Laboratories, Inc., unpublished data). The proportions of children who had at least fourfold antibody responses to pertussis toxin measured by enzyme-linked immunosorbent assay or Chinese hamster ovary cell assay were ≥85% in both groups; a smaller proportion of children who had received the combined vaccine had at least fourfold antibody response to filamentous hemagglutinin, but the clinical importance of this difference is not known.
2. The rates of local reactions, fever, and other common systemic symptoms following receipt of Tripedia® inoculations were lower than those following DTP vaccination for each of the first four doses in the series (*5,8*; Connaught Laboratories, Inc., unpublished data). In randomized trials, the local reactions were mild following administration of TriHIBit™ as a fourth dose as a single injection or ActHIB® simultaneously with Tripedia® as two injections at separate sites. Rates of both local and systemic reactions were similar between children who had received vaccines combined or separate (Connaught Laboratories, Inc., unpublished data).
3. Protective efficacy of TriHIBit™ when used as a fourth dose in the childhood vaccination series has not been evaluated in a clinical trial. This vaccine has been licensed for use as the fourth dose on the basis of seroconversion and safety data.

Because of the reduced frequency of adverse reactions and high efficacy, ACIP recommends DTaP for routine use for all doses of the pertussis vaccination series (*1*). TriHIBit™ can be administered as the fourth dose of the vaccination series at age 15–18 months following administration of either DTaP or DTP. **TriHIBit™ has not been licensed for use as the first three doses of the vaccination series.** Vaccine should be used immediately (within 30 minutes) after reconstitution. A complete ACIP statement

Notices to Readers — Continued

providing recommendations for use of DTaP and DTaP combined with Haemophilus b Conjugate Vaccine is being developed.

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8. Decker MD, Edwards KM, Steinhoff MC, et al. Comparison of 13 acellular pertussis vaccines: adverse reactions. Pediatrics 1995;96 (suppl):557–66.

Notice to Readers

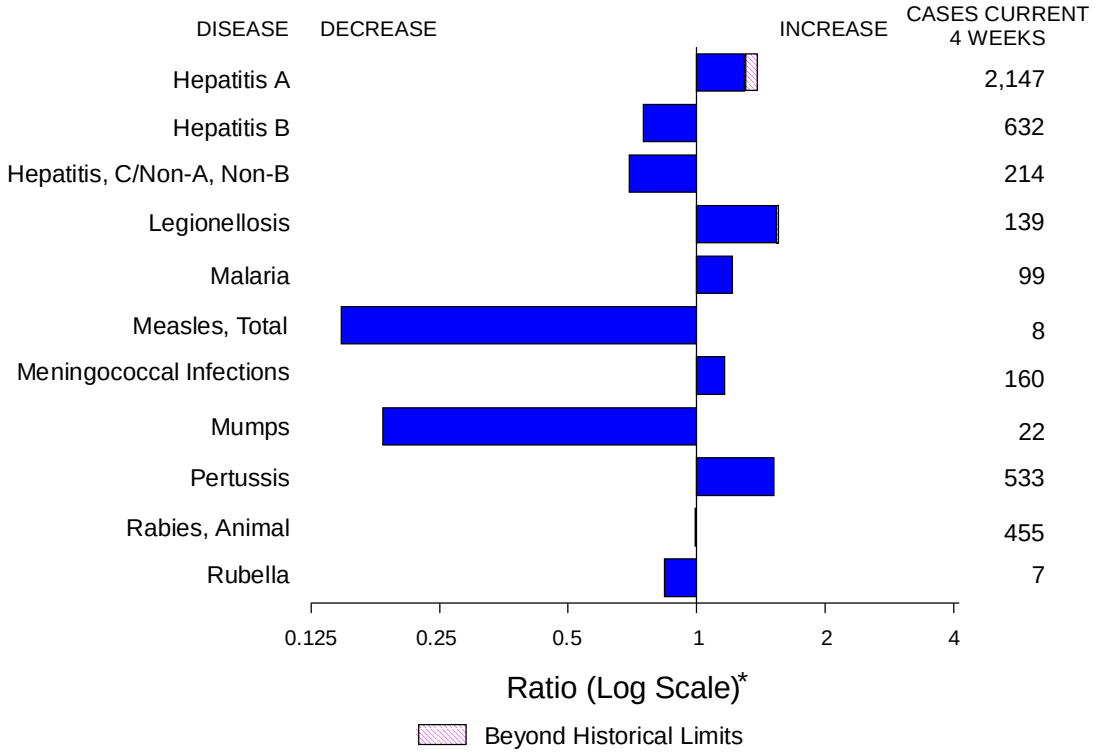
Epidemiology in Action: Intermediate Methods Course

CDC and Emory University's Rollins School of Public Health will cosponsor a course, "Epidemiology in Action: Intermediate Methods," during February 10–14, 1997, at CDC. The course is designed for state and local public health professionals.

The course will review the fundamentals of descriptive epidemiology and biostatistics, analytic epidemiology, and Epi Info 6, but will focus on mid-level epidemiologic methods directed at strengthening participants' quantitative skills, with an emphasis on up-to-date data analysis. Topics include advanced measures of association, normal and binomial distributions, logistical regression, field investigations, and summary of statistical methods. Prerequisite is an introductory course in epidemiology, such as Epidemiology in Action, or any other introductory class. There is a tuition charge.

Additional information and applications are available from Department PSB, Emory University, Rollins School of Public Health, 7th floor, 1518 Clifton Rd. NE, Atlanta GA 30322; telephone (404) 727-3485 or 727-0199; e-mail brachman@sph.emory.edu; fax (404) 727-4590.

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending November 9, 1996, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending November 9, 1996 (45th Week)

	Cum. 1996		Cum. 1996
Anthrax	-	HIV infection, pediatric*§	216
Brucellosis	74	Plague	5
Cholera	4	Poliomyelitis, paralytic¶	-
Congenital rubella syndrome	1	Psittacosis	39
Cryptosporidiosis*	1,953	Rabies, human	1
Diphtheria	1	Rocky Mountain spotted fever (RMSF)	649
Encephalitis: California*	104	Streptococcal toxic-shock syndrome*	12
eastern equine*	2	Syphilis, congenital**	225
St. Louis*	-	Tetanus	22
western equine*	-	Toxic-shock syndrome	117
Hansen Disease	94	Trichinosis	17
Hantavirus pulmonary syndrome*†	18	Typhoid fever	306

-: no reported cases
*Not notifiable in all states.
† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§ Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), last update September 24, 1996.
¶ Three suspected cases of polio with onset in 1996 has been reported to date.
**Updated quarterly from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 1996, and November 11, 1995 (45th Week)

Reporting Area	AIDS*		Chlamydia	*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
				NETSS†	PHLIS§						
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	51,611	60,074	326,941	2,405	1,322	259,316	338,967	2,860	3,472	850	1,008
NEW ENGLAND	2,065	2,943	14,496	324	78	6,091	6,680	104	110	61	30
Maine	32	82	821	22	-	53	78	-	-	2	5
N.H.	66	77	397	38	38	80	98	8	12	3	2
Vt.	18	28	U	34	30	42	55	35	13	4	-
Mass.	997	1,336	6,104	146	10	1,925	2,364	55	78	25	19
R.I.	129	205	1,626	15	-	431	459	6	7	27	4
Conn.	823	1,215	5,548	69	-	3,560	3,626	-	-	N	N
MID. ATLANTIC	14,243	16,428	36,854	208	43	29,649	37,453	268	420	200	176
Upstate N.Y.	1,855	1,973	N	140	16	5,635	8,189	211	216	67	50
N.Y. City	7,855	8,417	15,878	13	-	8,618	14,990	1	1	10	5
N.J.	2,905	3,977	5,753	55	5	4,488	3,468	-	165	13	27
Pa.	1,628	2,061	15,223	N	22	10,908	10,806	56	38	110	94
E.N. CENTRAL	4,076	4,504	70,593	545	359	49,626	68,223	388	296	247	302
Ohio	871	942	15,440	161	97	11,166	20,973	32	13	95	133
Ind.	498	467	8,863	82	48	5,751	7,843	8	12	41	72
Ill.	1,808	1,871	20,796	207	84	15,527	17,921	63	75	9	31
Mich.	685	919	17,705	95	70	13,379	15,760	285	196	81	30
Wis.	214	305	7,789	N	60	3,803	5,726	-	-	21	36
W.N. CENTRAL	1,221	1,397	23,672	545	339	10,796	17,324	113	77	54	71
Minn.	226	303	2,702	248	220	U	2,638	4	4	8	6
Iowa	72	94	3,749	117	88	993	1,386	48	13	10	20
Mo.	626	642	10,354	63	-	7,111	9,810	35	18	17	14
N. Dak.	10	5	2	16	15	-	26	-	5	-	3
S. Dak.	10	17	878	22	-	122	193	-	1	2	3
Nebr.	83	93	2,084	49	4	786	970	7	22	12	17
Kans.	194	243	3,903	30	12	1,784	2,301	19	14	5	8
S. ATLANTIC	13,079	15,364	47,084	128	64	83,680	94,539	227	216	133	157
Del.	232	277	1,148	1	2	1,264	1,965	1	-	11	2
Md.	1,961	2,287	6,016	N	8	12,681	11,748	3	7	27	25
D.C.	1,001	896	N	-	-	3,794	4,145	-	-	8	5
Va.	896	1,204	9,962	N	32	8,127	9,388	16	18	21	21
W. Va.	88	94	1	N	3	473	594	9	44	1	4
N.C.	677	898	-	43	12	16,433	20,971	45	51	12	31
S.C.	667	815	-	10	7	9,819	10,731	28	19	6	30
Ga.	1,867	1,999	9,798	30	-	15,396	17,308	U	15	3	14
Fla.	5,690	6,894	20,159	32	-	15,693	17,689	125	62	44	25
E.S. CENTRAL	1,749	1,919	27,334	66	59	30,340	35,153	491	866	41	52
Ky.	309	245	5,852	13	8	3,685	4,105	27	29	6	10
Tenn.	647	763	11,747	29	48	10,390	12,033	355	835	19	24
Ala.	470	520	7,280	13	3	11,725	14,390	5	2	3	6
Miss.	323	391	U	11	-	4,540	4,625	104	U	13	12
W.S. CENTRAL	5,138	5,173	33,101	71	13	25,537	47,283	406	300	19	21
Ark.	207	241	-	13	4	2,772	4,987	14	7	2	6
La.	1,177	902	6,479	6	4	7,149	9,429	187	165	2	3
Okla.	189	236	6,508	12	1	4,241	5,057	69	47	5	4
Tex.	3,565	3,794	20,114	40	4	11,375	27,810	136	81	10	8
MOUNTAIN	1,533	1,887	14,562	202	97	5,978	8,234	504	420	46	104
Mont.	33	20	-	25	-	32	61	18	14	1	4
Idaho	32	41	1,329	36	13	92	123	93	45	-	2
Wyo.	5	17	502	11	9	33	47	165	176	7	12
Colo.	406	572	-	73	40	1,077	2,490	56	61	8	38
N. Mex.	139	148	3,476	11	-	820	929	64	44	2	4
Ariz.	461	550	6,026	N	24	3,022	3,231	68	48	19	9
Utah	144	113	1,396	31	-	260	231	22	11	3	15
Nev.	313	426	1,833	15	11	642	1,122	18	21	6	20
PACIFIC	8,506	10,459	59,245	316	270	17,619	24,078	359	767	49	95
Wash.	538	780	7,969	109	123	1,770	2,405	50	192	6	20
Oreg.	359	399	4,649	86	59	552	700	7	35	1	-
Calif.	7,440	9,013	44,432	117	78	14,606	19,883	120	463	37	70
Alaska	28	62	1,059	4	2	378	593	3	2	1	-
Hawaii	141	205	1,136	N	8	313	497	179	75	4	5
Guam	4	-	168	N	-	31	89	1	6	2	1
P.R.	1,792	2,159	N	17	U	342	521	84	196	-	-
V.I.	17	30	N	N	U	-	-	-	-	-	-
Amer. Samoa	-	-	-	N	U	-	29	-	-	-	-
C.N.M.I.	1	-	N	N	U	11	51	-	5	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, last update September 24, 1996.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 1996, and November 11, 1995 (45th Week)

Reporting Area	Lyme Disease		Malaria		Meningococcal Disease		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	12,513	9,758	1,290	1,167	2,750	2,594	9,390	14,285	15,978	18,174	5,932	6,845
NEW ENGLAND	3,714	1,882	62	45	124	130	162	320	381	435	638	1,347
Maine	51	25	7	7	13	10	-	2	37	11	96	46
N.H.	43	22	2	2	7	22	1	1	14	17	51	134
Vt.	15	9	7	1	4	10	-	-	1	2	126	164
Mass.	306	132	21	15	52	42	68	60	185	243	96	388
R.I.	464	297	7	4	13	6	3	4	27	43	35	295
Conn.	2,835	1,397	18	16	35	40	90	253	117	119	234	320
MID. ATLANTIC	7,610	6,382	356	327	253	315	409	718	2,777	3,685	1,290	1,757
Upstate N.Y.	3,895	3,252	74	61	78	88	66	76	367	445	954	1,051
N.Y. City	285	400	192	179	33	48	106	326	1,315	2,054	-	-
N.J.	1,809	1,596	60	64	58	71	126	139	632	672	120	304
Pa.	1,621	1,134	30	23	84	108	111	177	463	514	216	402
E.N. CENTRAL	71	408	113	146	375	360	1,354	2,469	1,737	1,699	88	96
Ohio	44	25	13	11	139	102	493	803	258	243	12	12
Ind.	24	16	13	17	54	51	174	305	155	159	8	14
Ill.	3	17	35	71	102	93	370	924	904	887	23	15
Mich.	-	5	38	26	40	67	166	257	324	330	31	39
Wis.	U	345	14	21	40	47	151	180	96	80	14	16
W.N. CENTRAL	184	195	47	24	220	162	315	662	414	501	465	335
Minn.	97	109	21	4	25	26	51	41	92	124	27	27
Iowa	19	13	3	3	46	29	17	43	55	54	215	115
Mo.	27	46	10	8	92	61	204	540	173	194	18	30
N. Dak.	1	-	1	1	4	1	-	-	6	4	63	27
S. Dak.	-	-	-	2	10	6	-	-	17	22	105	89
Nebr.	5	6	3	3	20	16	11	12	21	20	5	5
Kans.	35	21	9	3	23	23	32	26	50	83	32	42
S. ATLANTIC	647	607	268	233	550	445	3,283	3,592	2,995	3,231	2,446	1,947
Del.	105	45	3	1	2	6	35	15	30	49	68	82
Md.	377	388	75	62	65	36	569	437	262	342	559	388
D.C.	3	3	7	16	10	7	121	97	120	91	10	11
Va.	47	50	47	53	54	59	351	530	234	255	537	395
W. Va.	11	22	5	4	14	8	3	10	50	61	92	108
N.C.	63	65	27	15	68	71	958	996	435	376	619	425
S.C.	6	16	12	1	55	55	351	505	291	279	82	116
Ga.	1	13	26	36	125	97	565	675	547	612	254	255
Fla.	34	5	66	45	157	106	330	327	1,026	1,166	225	167
E.S. CENTRAL	71	66	34	24	205	183	2,117	2,903	1,096	1,251	194	261
Ky.	25	13	7	3	27	42	135	161	203	281	39	26
Tenn.	20	28	14	10	56	72	729	781	334	384	77	91
Ala.	7	9	6	8	74	37	481	562	362	348	75	135
Miss.	19	16	7	3	48	32	772	1,399	197	238	3	9
W.S. CENTRAL	109	104	38	48	301	309	1,217	2,888	1,996	2,653	370	557
Ark.	24	8	-	2	33	31	131	456	168	208	28	46
La.	5	7	6	5	55	48	450	899	175	297	15	42
Okla.	22	45	-	1	35	38	159	164	149	326	29	28
Tex.	58	44	32	40	178	192	477	1,369	1,504	1,822	298	441
MOUNTAIN	7	12	54	56	157	183	120	187	537	578	135	169
Mont.	-	-	7	3	6	3	-	4	14	10	20	43
Idaho	1	-	-	1	22	10	4	-	7	14	-	3
Wyo.	2	3	7	-	3	8	2	1	6	4	27	26
Colo.	-	-	22	25	36	45	23	98	74	68	41	9
N. Mex.	1	1	2	6	25	33	1	6	72	70	6	6
Ariz.	-	1	7	10	38	53	75	43	209	280	30	55
Utah	1	1	5	6	15	15	2	4	51	38	4	15
Nev.	2	6	4	5	12	16	13	31	104	94	7	12
PACIFIC	100	102	318	264	565	507	413	546	4,045	4,141	306	376
Wash.	16	10	20	21	91	80	6	13	206	234	6	15
Oreg.	19	17	19	18	106	92	11	21	137	118	3	3
Calif.	64	75	268	212	355	319	395	510	3,483	3,560	289	351
Alaska	-	-	3	3	8	12	-	2	59	68	8	7
Hawaii	1	-	8	10	5	4	1	-	160	161	-	-
Guam	-	-	-	1	1	2	3	8	35	97	-	-
P.R.	-	-	-	1	4	23	114	259	63	162	40	37
V.I.	-	-	-	2	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	4	-	-
C.N.M.I.	-	-	-	1	-	-	1	9	-	36	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending November 9, 1996, and November 11, 1995 (45th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (viral), by type				Measles (Rubeola)			
			A		B		Indigenous		Imported†	
	Cum. 1996*	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	843	978	24,465	25,934	8,463	8,573	-	414	-	46
NEW ENGLAND	27	38	356	277	174	201	-	11	-	4
Maine	-	3	21	27	2	12	-	-	-	-
N.H.	9	10	22	11	17	20	U	-	U	-
Vt.	1	2	10	5	11	5	-	1	-	1
Mass.	15	12	171	121	59	78	-	9	-	3
R.I.	2	5	20	32	9	8	-	-	-	-
Conn.	-	6	112	81	76	78	-	1	-	-
MID. ATLANTIC	127	147	1,642	1,659	1,276	1,213	-	23	-	5
Upstate N.Y.	15	37	392	424	296	331	-	-	-	-
N.Y. City	33	34	514	788	515	365	-	9	-	3
N.J.	51	24	311	248	227	326	-	3	-	-
Pa.	28	52	425	199	238	191	-	11	-	2
E.N. CENTRAL	144	165	2,076	2,827	861	972	-	6	-	7
Ohio	82	84	678	1,574	112	94	-	2	-	3
Ind.	15	20	315	164	133	199	-	-	-	-
Ill.	32	42	515	583	226	254	-	2	-	1
Mich.	8	17	412	332	327	355	-	-	-	3
Wis.	7	2	156	174	63	70	-	2	-	-
W.N. CENTRAL	41	76	2,256	1,693	448	557	-	20	-	2
Minn.	25	42	115	166	57	54	-	16	-	2
Iowa	6	3	321	73	72	42	-	-	-	-
Mo.	7	24	1,122	1,176	241	378	-	3	-	-
N. Dak.	-	-	117	22	2	4	-	-	-	-
S. Dak.	1	1	42	67	5	2	-	-	-	-
Nebr.	1	3	194	49	42	31	-	-	-	-
Kans.	1	3	345	140	29	46	-	1	-	-
S. ATLANTIC	168	190	1,254	1,011	1,299	1,131	-	5	-	9
Del.	2	-	18	9	7	8	-	1	-	-
Md.	54	61	218	193	265	224	-	-	-	2
D.C.	6	-	35	24	30	21	-	1	-	-
Va.	9	28	163	185	128	98	-	-	-	3
W. Va.	10	7	14	23	28	48	-	-	-	-
N.C.	24	26	157	94	277	259	-	3	-	1
S.C.	4	2	47	42	84	49	-	-	-	-
Ga.	37	60	150	53	32	62	U	-	U	2
Fla.	22	6	452	388	448	362	-	-	-	1
E.S. CENTRAL	26	10	1,123	1,734	733	738	-	2	-	-
Ky.	4	4	41	41	54	61	-	-	-	-
Tenn.	12	-	726	1,436	432	579	-	2	-	-
Ala.	9	5	173	78	62	98	-	-	-	-
Miss.	1	1	183	179	185	U	U	-	U	-
W.S. CENTRAL	37	57	5,122	3,881	1,137	1,209	-	26	-	2
Ark.	-	6	450	517	72	58	-	-	-	-
La.	4	1	167	128	134	203	-	-	-	-
Okla.	29	21	2,139	1,065	59	149	-	-	-	-
Tex.	4	29	2,366	2,171	872	799	-	26	-	2
MOUNTAIN	88	106	3,903	3,667	1,010	740	-	153	-	5
Mont.	-	-	106	142	14	20	-	-	-	-
Idaho	1	4	215	288	83	87	-	1	-	-
Wyo.	35	7	33	100	43	26	-	1	-	-
Colo.	14	16	413	459	120	115	-	4	-	3
N. Mex.	10	13	325	720	371	272	-	17	-	-
Ariz.	12	26	1,547	1,065	222	105	-	8	-	-
Utah	8	11	910	632	82	62	-	117	-	2
Nev.	8	29	354	261	75	53	-	5	-	-
PACIFIC	185	189	6,733	9,185	1,525	1,812	-	168	-	12
Wash.	4	9	581	763	91	171	-	51	-	-
Oreg.	26	25	754	2,425	84	107	-	10	-	-
Calif.	151	150	5,294	5,801	1,322	1,509	-	37	-	5
Alaska	2	1	39	43	16	11	-	63	-	-
Hawaii	2	4	65	153	12	14	U	7	U	7
Guam	-	-	2	7	-	4	U	-	U	-
P.R.	1	3	116	92	369	560	-	7	-	-
V.I.	-	-	-	8	-	15	U	-	U	-
Amer. Samoa	-	-	-	6	-	-	U	-	U	-
C.N.M.I.	10	11	1	24	5	22	U	-	U	-

N: Not notifiable U: Unavailable -: no reported cases

*Of 201 cases among children aged <5 years, serotype was reported for 47 and of those, 16 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending November 9, 1996, and November 11, 1995 (45th Week)

Reporting Area	Measles (Rubeola), cont'd. Total		Mumps			Pertussis			Rubella		
	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
UNITED STATES	460	291	4	547	744	69	4,751	3,902	1	201	113
NEW ENGLAND	15	10	-	2	11	8	1,019	571	-	27	47
Maine	-	-	-	-	4	-	20	42	-	-	-
N.H.	-	-	U	-	1	U	117	45	U	-	1
Vt.	2	-	-	-	-	8	131	67	-	2	-
Mass.	12	3	-	2	2	-	692	387	-	21	8
R.I.	-	5	-	-	1	-	30	4	-	-	-
Conn.	1	2	-	-	3	-	29	26	-	4	38
MID. ATLANTIC	28	12	1	78	110	11	420	361	1	12	14
Upstate N.Y.	-	1	1	25	25	11	248	190	1	5	4
N.Y. City	12	5	-	17	16	-	38	49	-	4	8
N.J.	3	6	-	2	17	-	16	18	-	2	2
Pa.	13	-	-	34	52	-	118	104	-	1	-
E.N. CENTRAL	13	15	2	93	149	19	533	490	-	3	3
Ohio	5	2	1	41	47	4	242	140	-	-	-
Ind.	-	-	-	9	9	10	93	55	-	-	-
Ill.	3	2	-	20	45	1	149	104	-	1	-
Mich.	3	5	1	22	48	4	44	64	-	2	3
Wis.	2	6	-	1	-	-	5	127	-	-	-
W.N. CENTRAL	22	2	-	18	43	11	360	246	-	-	1
Minn.	18	-	-	6	6	9	288	125	-	-	-
Iowa	-	-	-	2	10	2	20	11	-	-	-
Mo.	3	1	-	7	22	-	34	60	-	-	-
N. Dak.	-	-	-	2	1	-	1	8	-	-	-
S. Dak.	-	-	-	-	-	-	4	11	-	-	-
Nebr.	-	-	-	-	4	-	9	10	-	-	-
Kans.	1	1	-	1	-	-	4	21	-	-	1
S. ATLANTIC	14	19	1	91	109	6	538	316	-	93	10
Del.	1	-	-	-	-	-	15	10	-	-	-
Md.	2	1	1	26	32	2	200	41	-	-	1
D.C.	1	-	-	1	-	2	4	6	-	2	-
Va.	3	-	-	12	21	-	71	19	-	2	-
W. Va.	-	-	-	-	-	-	2	-	-	-	-
N.C.	4	-	-	20	16	-	100	110	-	78	1
S.C.	-	-	-	6	11	1	41	26	-	1	-
Ga.	2	4	U	3	8	U	17	24	U	-	-
Fla.	1	14	-	23	21	1	88	80	-	10	8
E.S. CENTRAL	2	-	-	21	11	-	136	268	-	2	1
Ky.	-	-	-	-	-	-	84	25	-	-	-
Tenn.	2	-	-	3	4	-	20	206	-	-	1
Ala.	-	-	-	3	4	-	23	35	-	2	-
Miss.	-	-	U	15	3	U	9	2	N	N	N
W.S. CENTRAL	28	33	-	32	49	-	115	278	-	3	7
Ark.	-	2	-	2	7	-	12	36	-	-	-
La.	-	18	-	13	12	-	9	19	-	1	-
Okla.	-	-	-	1	-	-	17	31	-	-	-
Tex.	28	13	-	16	30	-	77	192	-	2	7
MOUNTAIN	158	70	-	21	30	5	388	559	-	6	4
Mont.	-	-	-	-	1	-	33	3	-	-	-
Idaho	1	2	-	-	3	1	103	99	-	2	-
Wyo.	1	-	-	-	-	-	6	1	-	-	-
Colo.	7	26	-	3	2	-	98	90	-	2	-
N. Mex.	17	31	N	N	N	1	61	123	-	-	-
Ariz.	8	10	-	1	2	-	27	153	-	1	3
Utah	119	-	-	2	11	3	22	27	-	-	1
Nev.	5	1	-	15	11	-	38	63	-	1	-
PACIFIC	180	130	-	191	232	9	1,242	813	-	55	26
Wash.	51	19	-	19	12	9	552	297	-	2	1
Oreg.	10	1	-	-	-	-	34	55	-	1	-
Calif.	42	108	-	142	198	-	624	412	-	49	20
Alaska	63	-	-	3	12	-	4	1	-	-	-
Hawaii	14	2	U	27	10	U	28	48	U	3	5
Guam	-	-	U	5	4	U	1	2	U	-	1
P.R.	7	3	-	1	2	-	1	1	-	-	-
V.I.	-	-	U	-	3	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	1	U	-	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 121 U.S. cities,* week ending November 9, 1996 (45th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	598	445	93	46	10	4	26
Boston, Mass.	146	97	34	12	2	1	3
Bridgeport, Conn.	40	30	7	2	1	-	2
Cambridge, Mass.	16	13	1	2	-	-	1
Fall River, Mass.	21	18	2	-	1	-	-
Hartford, Conn.	56	37	10	6	2	1	-
Lowell, Mass.	26	23	1	2	-	-	3
Lynn, Mass.	18	14	4	-	-	-	1
New Bedford, Mass.	23	19	1	2	-	1	-
New Haven, Conn.	40	29	8	3	-	-	-
Providence, R.I.	52	42	7	3	-	-	2
Somerville, Mass.	8	6	1	1	-	-	-
Springfield, Mass.	50	34	9	5	1	1	3
Waterbury, Conn.	30	25	3	1	1	-	2
Worcester, Mass.	72	58	5	7	2	-	9
MID. ATLANTIC	2,192	1,451	420	232	42	47	100
Albany, N.Y.	32	22	4	3	2	1	1
Allentown, Pa.	18	12	6	-	-	-	1
Buffalo, N.Y.	99	71	22	3	3	-	7
Camden, N.J.	36	16	6	9	2	3	2
Elizabeth, N.J.	16	11	2	2	-	1	2
Erie, Pa.§	49	38	10	1	-	-	1
Jersey City, N.J.	35	14	6	13	-	2	1
New York City, N.Y.	1,202	778	236	138	26	24	36
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	32	20	6	5	1	-	1
Philadelphia, Pa.	299	184	62	41	4	8	15
Pittsburgh, Pa.§	48	35	7	4	1	1	4
Reading, Pa.	7	7	-	-	-	-	3
Rochester, N.Y.	131	102	21	4	1	3	14
Schenectady, N.Y.	30	24	4	2	-	-	1
Scranton, Pa.§	37	28	7	1	-	1	2
Syracuse, N.Y.	69	54	11	2	2	-	4
Trenton, N.J.	33	21	5	4	-	3	5
Utica, N.Y.	19	14	5	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,222	1,527	400	180	62	50	125
Akron, Ohio	38	28	7	3	-	-	-
Canton, Ohio	34	28	5	1	-	-	2
Chicago, Ill.	446	268	83	62	18	13	20
Cincinnati, Ohio	174	125	28	11	4	6	18
Cleveland, Ohio	139	93	26	11	4	4	3
Columbus, Ohio	201	149	27	13	6	6	13
Dayton, Ohio	136	94	29	7	5	1	14
Detroit, Mich.	183	99	46	29	5	4	5
Evansville, Ind.	41	33	6	2	-	-	1
Fort Wayne, Ind.	62	47	11	2	2	-	4
Gary, Ind.	14	9	4	1	-	-	-
Grand Rapids, Mich.	65	46	8	6	4	1	5
Indianapolis, Ind.	186	126	37	12	4	7	10
Madison, Wis.	47	32	7	5	2	1	4
Milwaukee, Wis.	111	91	14	4	1	1	8
Peoria, Ill.	47	38	8	1	-	-	4
Rockford, Ill.	67	49	11	2	2	3	4
South Bend, Ind.	57	39	13	3	2	-	3
Toledo, Ohio	101	77	17	4	1	2	6
Youngstown, Ohio	73	56	13	1	2	1	1
W.N. CENTRAL	791	562	130	50	19	18	48
Des Moines, Iowa	79	60	14	3	2	-	4
Duluth, Minn.	40	25	12	3	-	-	1
Kansas City, Kans.	28	15	8	5	-	-	-
Kansas City, Mo.	107	67	17	7	1	3	8
Lincoln, Nebr.	29	25	2	1	1	-	1
Minneapolis, Minn.	175	133	17	13	5	7	7
Omaha, Nebr.	93	61	20	6	5	1	6
St. Louis, Mo.	114	87	13	6	3	5	12
St. Paul, Minn.	65	49	13	2	-	1	8
Wichita, Kans.	61	40	14	4	2	1	1

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,210	749	262	119	53	26	53
Atlanta, Ga.	131	72	37	12	7	3	4
Baltimore, Md.	163	101	28	25	6	2	10
Charlotte, N.C.	51	36	8	3	2	2	1
Jacksonville, Fla.	141	90	31	13	4	3	14
Miami, Fla.	152	90	35	20	5	2	1
Norfolk, Va.	71	39	12	8	8	4	3
Richmond, Va.	80	54	17	5	3	1	1
Savannah, Ga.	59	40	15	4	-	-	3
St. Petersburg, Fla.	43	28	8	2	4	1	-
Tampa, Fla.	167	118	31	8	6	4	12
Washington, D.C.	140	72	37	19	8	4	4
Wilmington, Del.	12	9	3	-	-	-	-
E.S. CENTRAL	801	549	156	62	14	17	47
Birmingham, Ala.	118	74	25	7	5	4	3
Chattanooga, Tenn.	72	56	10	4	-	2	3
Knoxville, Tenn.	79	48	16	9	4	2	8
Lexington, Ky.	64	42	19	2	-	1	6
Memphis, Tenn.	186	122	37	23	3	1	12
Mobile, Ala.	95	74	10	9	-	2	1
Montgomery, Ala.	46	35	7	3	-	1	-
Nashville, Tenn.	141	98	32	5	2	4	14
W.S. CENTRAL	1,576	999	323	159	48	44	83
Austin, Tex.	71	48	13	9	-	1	3
Baton Rouge, La.	43	27	8	4	2	2	-
Corpus Christi, Tex.	49	36	6	2	3	2	4
Dallas, Tex.	182	110	36	20	12	4	2
El Paso, Tex.	69	42	15	8	4	-	1
Ft. Worth, Tex.	139	84	38	8	2	7	3
Houston, Tex.	450	288	98	48	9	7	41
Little Rock, Ark.	76	47	18	7	4	-	4
New Orleans, La.	154	83	25	27	5	11	-
San Antonio, Tex.	203	135	41	18	4	5	18
Shreveport, La.	43	31	6	4	-	2	2
Tulsa, Okla.	97	68	19	4	3	3	5
MOUNTAIN	943	625	182	85	30	21	74
Albuquerque, N.M.	91	66	14	8	3	-	5
Colo. Springs, Colo.	50	30	14	5	-	1	5
Denver, Colo.	125	91	22	10	1	1	8
Las Vegas, Nev.	213	142	42	19	6	4	21
Ogden, Utah	22	16	2	3	1	-	-
Phoenix, Ariz.	167	107	33	14	6	7	14
Pueblo, Colo.	22	19	3	-	-	-	3
Salt Lake City, Utah	110	60	27	12	6	5	9
Tucson, Ariz.	143	94	25	14	7	3	9
PACIFIC	1,480	1,048	258	127	28	18	84
Berkeley, Calif.	13	12	1	-	-	-	1
Fresno, Calif.	123	82	31	4	3	3	9
Glendale, Calif.	29	21	3	4	1	-	1
Honolulu, Hawaii	66	51	12	1	1	-	6
Long Beach, Calif.	89	68	16	2	1	2	9
Los Angeles, Calif.	587	406	101	65	10	5	27
Pasadena, Calif.	U	U	U	U	U	U	U
Portland, Oreg.	112	89	13	6	2	2	6
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	125	79	25	14	6	1	9
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	U	U	U	U	U	U	U
Santa Cruz, Calif.	42	30	6	6	-	-	7
Seattle, Wash.	163	119	26	12	2	4	5
Spokane, Wash.	55	34	12	6	2	1	2
Tacoma, Wash.	76	57	12	7	-	-	2
TOTAL	11,813¶	7,955	2,224	1,060	306	245	640

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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