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Human Rabies — Texas and New Jersey, 1997

On October 19 and October 23, 1997, a man in Texas and a man in New Jersey, respectively, died from rabies. This report summarizes the clinical features of these cases and the epidemiologic investigations by the Texas Department of Health and the New Jersey State Department of Health and Senior Services, which indicated that a bat-associated variant of the rabies virus was responsible for infection in both cases.

Case 1

On October 3, a 71-year-old man from Houston, Texas, developed malaise, anorexia, and sharp left-side face and ear pain that radiated to his chest. On October 7, his evaluation as an outpatient included a computerized tomography (CT) scan, which suggested left frontal and sphenoid sinusitis with normal brain parenchyma, and a laryngeal examination, which revealed left vocal-cord paralysis. On October 8, he was admitted to a hospital in Houston for further evaluation of generalized pruritus, agitation, confusion, and fever; treatment of sinusitis; and possible alcohol withdrawal. He was anxious and tremulous but mentally coherent and was treated empirically with antibiotics and benzodiazepines. During the next 2 days, he developed fever of 103.6 F (39.8 C), ocular motor paralysis, myoclonic tremors, and dysphagia, manifested by an inability to swallow his saliva. Notable laboratory findings included a peripheral white blood cell (WBC) count of 11,000/μL (normal: 4000–10,000/μL), cerebrospinal fluid (CSF) protein of 67 mg/dL (normal: <45 mg/dL), and CSF WBC count of 17/μL (normal: <5/μL). An electroencephalogram showed mild bilateral cerebral dysfunction.

On October 11, he became hypotensive and hypopneic, necessitating mechanical ventilation. On October 12, rabies was suspected; a sample of the patient's serum was sent to a commercial laboratory for evaluation for rabies virus neutralizing antibodies, and he was placed in respiratory isolation. By October 16, he was comatose with flaccid extremities. On October 17, he was found to have absent brainstem reflexes, ventilator support was withdrawn, and the patient died.

After previous unsuccessful attempts by physicians to elicit from the patient and his wife a history of animal exposure, on October 12, the wife reported that the patient had had recent contact with a bat. On August 3, while sleeping in a motel in Harrison County, the patient had been awakened by a bat that had settled on his left shoulder. He removed and disposed of the bat. The patient's wife had examined his

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skin immediately after removing the bat and had not detected a bite wound. She did not recall whether the bat had been clinging directly to the patient's skin or to a shirt he may have been wearing. Investigation by state and local health officials revealed that, in the bathroom of the patient's motel room, a separation between the wall and the ceiling connected the bathroom to the attic. In addition, several openings to the outside were noted in the attic, but there was no evidence of current or previous occupation by bats.

The serum sample sent to the commercial laboratory on October 12 did not demonstrate evidence of rabies virus neutralizing antibodies. However, on October 18, rabies was diagnosed by the direct fluorescent antibody (DFA) test from postmortem brain samples tested by the Houston Department of Health and Human Services. The diagnosis was confirmed at CDC using the DFA test and reverse transcriptase polymerase chain reaction (RT-PCR) on brain tissue samples. Nucleotide sequence analysis of viral RNA implicated a variant associated with silver-haired (*Lasionycteris noctivagans*) and eastern pipistrelle (*Pipistrellus* sp.) bats.

A total of 46 persons (four personal contacts and 42 health-care workers) received postexposure prophylaxis (PEP) because of possible percutaneous or mucous membrane exposure to the patient's saliva or CSF.

Case 2

On October 12, a 32-year-old man from Warren County, New Jersey, developed an aching sensation in his right shoulder and neck. These symptoms persisted and progressed to include vomiting, chills, and a sore throat, prompting a visit on October 13 to an emergency department where he received oral antibiotics and an anesthetic throat spray. After presenting to his primary physician with additional complaints of fever, insomnia, agitation, and dysphagia, he was admitted to the hospital on October 14. The patient developed dysarthria, hallucinations, myalgias, and fever of 104 F (40 C) and was transferred to a referral hospital on October 15. At the referral hospital, laboratory findings included a peripheral WBC count of 10,800/μL, a creatine phosphokinase of 2500 U/L (normal: 35–185 U/L), CSF protein of 61 mg/dL, and a CSF WBC count of 1/μL. A CT scan was reported normal, and he was started on empiric broad-spectrum antibiotics for his febrile syndrome. The following day, he was electively intubated for airway protection and started on treatment for possible tetanus and herpes encephalitis.

On October 17, rabies was suspected, and serum, saliva, CSF, tears, and nuchal skin biopsy specimens were submitted to CDC for testing; serum and CSF samples were negative for rabies virus neutralizing antibodies. On October 20, the nuchal biopsy specimen tested positive for rabies antigen by the DFA test, which was later confirmed by nested RT-PCR. Saliva and tears also were positive by nested RT-PCR. Nucleotide sequence analysis of viral RNA implicated a variant associated with the silver-haired (*L. noctivagans*) and eastern pipistrelle (*Pipistrellus* sp.) bats. The patient developed severe hypotension and renal failure, and he died on October 23. On autopsy, brain tissue specimens collected for evaluation tested positive for rabies virus by RT-PCR.

On initial presentation, the patient reported exposure to his two pet parakeets but not to other animals. Additional history obtained from his wife revealed that on two separate occasions in early July, bats had been found in the living room of the patient's home. The patient had captured the bats by hand by using a cloth and had then

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released them outside. The patient and his wife did not recall whether he had been bitten. Investigation by state and local health officials revealed that the patient and his family had resided in a second-floor apartment of an old wooden house in poor repair. The attic had numerous openings around the chimneys and between the roofing slates. Although bats were not present at the time of inspection in October, the amount of bat guano present in the attic suggested that a colony of up to 200 bats had been present in the attic during the summer.

PEP was administered to 50 persons (eight personal contacts, 22 health-care workers at the first hospital, and 20 health-care workers at the second hospital) because of possible percutaneous or mucous membrane exposure to the patient's saliva.

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Editorial Note: Four cases of human rabies were documented in the United States during 1997, including the two described in this report. This report describes the first case of human rabies in New Jersey since 1971 and the 12th case in Texas during the same period. Of those 12 humans in whom rabies had been diagnosed in Texas, seven (58%) involved variants of rabies virus associated with dog and coyote populations and three (25%), including the case in this report, involved variants of the rabies virus associated with bats. Since 1980, a total of 21 (58%) of the 36 cases of rabies diagnosed in the United States have been associated with bat variants of the rabies virus, and the silver-haired bat/eastern pipistrelle rabies virus variant has accounted for 15 (71%) of the 21.

Bats are increasingly implicated as important wildlife reservoirs for variants of rabies virus transmitted to humans. Recent epidemiologic data suggest that transmission of rabies virus can occur through minor bites from bats (*1*). The limited injury inflicted by a bat bite (*2*) (compared with lesions caused by terrestrial carnivores) and situations in which the exact exposure history is unavailable may limit the ability of health-care providers to determine the risk for rabies resulting from an encounter with a bat.

In all potential human exposures involving bats, the bat in question should be safely collected, if possible, and submitted through local or state health departments for rabies diagnosis. PEP is recommended for all persons who have sustained bite, scratch, or mucous membrane exposures to a bat unless the bat is available for testing and is negative for evidence of rabies. Although both cases described in this report had histories of contact with a bat, neither reported being bitten. Of the 21 cases of human rabies reported since 1980 that were caused by bat-associated rabies virus variants, only one had a definite history of a bat bite. Therefore, PEP also is appropriate even in the absence of a demonstrable bite, scratch, or mucous membrane exposure in situations in which there is reasonable probability that such contact occurred (e.g., a sleeping person awakens to find a bat in the room or an adult witnesses a bat in the room with a previously unattended child or mentally disabled or intoxicated

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person). This recommendation used in conjunction with current Advisory Committee for Immunization Practices (ACIP) guidelines (*3*) should maximize the ability of health-care providers to respond to situations in which accurate exposure histories may not be obtainable and should minimize inappropriate PEP.

ACIP recently recommended a change in the administration of human rabies immune globulin (HRIG) for PEP (Table 1): as much as possible of the full dose of HRIG should be thoroughly infiltrated into and around the wound(s). Any remaining volume should be administered intramuscularly at a site distant from vaccine inoculation.

Because bat rabies has been documented in the 49 continental United States (*4*) and reduction of bat populations is not a feasible, practical, or desirable strategy for rabies control in bats, human and domestic animal contact with bats should be minimized. Bats should be physically excluded from houses and surrounding structures by sealing potential entrances (*5*). In addition, bats should never be handled by untrained and unvaccinated persons without safety precautions and should never be kept as pets.

TABLE 1. Type of treatment and regimen for rabies postexposure prophylaxis, by vaccination status

Vaccination status	Treatment	Regimen*
Not previously vaccinated	Local wound cleansing	All postexposure treatment should begin with immediate thorough cleansing of all wounds with soap and water.
	Human rabies immune globulin (HRIG)	20 IU per kg body weight. As much as possible of the **full dose** should be infiltrated into and around the wound(s), and the remainder should be administered intramuscularly at an anatomical site distant from vaccine administration. HRIG should not be administered in the same syringe as vaccine. Because HRIG may partially suppress active production of antibody, no more than the recommended dose should be given.
	Vaccine	1.0 mL of human diploid cell vaccine (HDCV), rabies vaccine adsorbed (RVA), or purified chick embryo cell culture (PCEC) vaccine administered intramuscularly (deltoid area†), on days 0, 3, 7, 14, and 28 (day 0 indicates the first day of treatment).
Previously vaccinated§	Local wound cleansing	All postexposure treatment should begin with immediate thorough cleansing of all wounds with soap and water. HRIG should not be given.
	Vaccine	1.0 mL of HDCV, RVA, or PCEC administered intramuscularly (deltoid area†) on days 0 and 3.

*These regimens are applicable for all age groups, including children.

†The deltoid area is the only acceptable site of vaccination for adults and older children. For younger children, the outer aspect of the thigh may be used. Vaccine should never be administered in the gluteal area.

§Any person with a history of pre-exposure vaccination with HDCV, RVA, or PCEC; previous postexposure prophylaxis with HDCV, RVA, or PCEC; or previous vaccination with any other type of rabies vaccine and a documented history of antibody response to the previous vaccination.

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In both of the cases in this report, many health-care workers received PEP. Strict adherence to universal precaution procedures should minimize the number of persons who need PEP because of exposures of mucous membranes or nonintact skin to potentially infectious body fluid (*6*).

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Years of Healthy Life — Selected States, United States, 1993–1995

Some public health policy goals in the United States have been expressed as increases in the number of years of healthy life (YHL) (i.e., quality-adjusted life years), a measure of health that combines the effects of mortality with information about morbidity and disability (*1*). Data from national health surveys, in combination with lifetable death rates and other information, have been used to calculate national estimates of the expected number of YHL at a given age (*2,3*). This report summarizes an analysis of data from the Behavioral Risk Factor Surveillance System (BRFSS) using these methods to estimate YHL for state populations during 1993–1995. The findings indicate substantial variability among the participating states.

The BRFSS is a continuous, state-based, random-digit–dialed telephone survey of the U.S. adult, noninstitutionalized population that measures the prevalence of health-risk behaviors and preventive health-care practices in the population (*4–6*). During 1993–1995, a total of 16 states* participating in BRFSS gathered the additional information required to estimate the expected YHL. Expected YHL was estimated using BRFSS interview data about limitations in activities of daily living and self-rated overall health status (categorized as excellent, very good, good, fair, or poor); preliminary, unofficial lifetable estimates for states for 1993; and national data about the institutionalized population. BRFSS estimates were weighted to provide representative estimates, and confidence intervals were computed using SUDAAN.

An index of health-related quality of life (HRQL) was computed (*2*). YHL was calculated by first computing the index of HRQL for each respondent (HRQL ranged from 1.0 [for those in excellent health and with no limitations] to 0.1 [for those who were limited in self-care activities of daily living and who were in poor health]). Second, the HRQL index was combined with lifetable functions to compute age-group specific expected YHL. This computation was based on multiplying the age-group specific lifetable number of total person-years lived by the average HRQL (range: 0.1–1.0) within

*Alabama, Arizona, Colorado, Indiana, Kansas, Kentucky, Louisiana, Michigan, Missouri, Montana, Nebraska, New Hampshire, New York, Oregon, Virginia, and Wyoming.

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each age group. The number of healthy person-years lived was summed for each age group and divided by the number of persons at each age. These data were adjusted using data from previous national estimates of the relative size and HRQL of institutionalized persons (*2*). Age-specific estimates of YHL represent the average number of YHL remaining to a person at a given age.

When averaged over all ages, state-specific estimates of HRQL ranged from 0.79 to 0.85 (Table 1). In most states, HRQL was higher for men (range: 0.79–0.87 across states) than for women (0.79–0.85).

The estimated YHL at age 25 years was 39–44 years and at age 65 years was 11–14 years. YHL was higher for women: at age 25 years, YHL was 41–47 years for women compared with 38–43 years for men; at age 65 years, YHL was 12–16 years for women and 10–13 years for men. State-specific HRQL varied directly with life expectancy. For example, expectation of life at age 25 years is correlated with average HRQL index ($r=0.77$, $p<0.001$).

TABLE 1. Estimated health-related quality of life (HRQL) index* and years of healthy life (YHL) among persons aged 25 and 65 years, by sex and state — 16 states, Behavioral Risk Factor Surveillance System, 1993–1995

State/Year†	Male	Female	Total
Alabama (1994)	(n=730)	(n=1331)	**(n=2061)**
HRQL	0.81	0.79	**0.80**
YHL (25)	38	41	**39**
YHL (65)	10	12	**11**
Arizona (1993)	(n=704)	(n=959)	**(n=1663)**
HRQL	0.85	0.83	**0.84**
YHL (25)	42	45	**42**
YHL (65)	13	15	**13**
Colorado (1993)	(n=751)	(n=1044)	**(n=1795)**
HRQL	0.85	0.82	**0.84**
YHL (25)	43	45	**43**
YHL (65)	13	14	**13**
Indiana (1994)	(n=986)	(n=1343)	**(n=2329)**
HRQL	0.83	0.81	**0.82**
YHL (25)	40	43	**41**
YHL (65)	11	13	**11**
Kansas (1994)	(n=612)	(n=811)	**(n=1423)**
HRQL	0.85	0.83	**0.84**
YHL (25)	43	46	**43**
YHL (65)	13	15	**13**
Kentucky (1994)	(n=885)	(n=1495)	**(n=2380)**
HRQL	0.79	0.79	**0.79**
YHL (25)	38	42	**39**
YHL (65)	11	13	**11**
Louisiana (1995)	(n=642)	(n=1000)	**(n=1642)**
HRQL	0.84	0.79	**0.82**
YHL (25)	39	41	**39**
YHL (65)	11	12	**11**
Michigan (1994)	(n=985)	(n=1414)	**(n=2399)**
HRQL	0.84	0.82	**0.83**
YHL (25)	41	44	**41**
YHL(65)	12	14	**12**
Missouri (1993)	(n=307)	(n=443)	**(n=750)**
HRQL	0.81	0.80	**0.81**
YHL (25)	40	43	**40**
YHL (65)	11	13	**11**
Montana (1995)	(n=500)	(n=693)	**(n=1193)**
HRQL	0.84	0.85	**0.85**
YHL (25)	42	47	**44**
YHL (65)	13	16	**14**
Nebraska (1995)	(n=729)	(n=1071)	**(n=1800)**
HRQL	0.84	0.84	**0.84**
YHL (25)	43	46	**43**
YHL (65)	12	14	**12**
New Hampshire (1995)	(n=634)	(n=861)	**(n=1495)**
HRQL	0.86	0.84	**0.85**
YHL (25)	43	46	**44**
YHL (65)	13	15	**13**
New York (1995)	(n=996)	(n=1459)	**(n=2455)**
HRQL	0.87	0.83	**0.85**
YHL (25)	42	44	**42**
YHL (65)	13	14	**13**
Oregon (1993)	(n=1354)	(n=1599)	**(n=2953)**
HRQL	0.84	0.83	**0.83**
YHL (25)	42	45	**43**
YHL (65)	12	15	**13**
Virginia (1994)	(n=769)	(n=999)	**(n=1768)**
HRQL	0.86	0.83	**0.84**
YHL (25)	42	44	**42**
YHL (65)	12	13	**12**
Wyoming (1994)	(n=511)	(n=746)	**(n=1257)**
HRQL	0.85	0.83	**0.84**
YHL (25)	43	45	**43**
YHL (65)	13	14	**13**

* Confidence intervals for estimated HRQL were 0.01–0.02.
† Most recent year for which data are available.

Years of Healthy Life — Continued

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Editorial Note: One of the national health objectives for 2000 is to increase the expectation of healthy life at age 65 years from 12 to 14 years (objective 17.1c) (*1*). The findings in this report indicate that, among the 16 states assessed, only one (Montana) had achieved that level during 1993–1995. State and local public health programs need local data to evaluate and guide their prevention efforts, especially because of jurisdiction-specific differences in health, demographic, and socioeconomic conditions. In addition, many states independently establish health objectives similar to the national objectives. The analysis described in this report demonstrates the feasibility of developing state-specific estimates for HRQL and expected YHL and indicates state-specific variations in these indicators.

The methods used in this analysis are subject to at least two limitations. First, in addition to survey data on health and disabilities, the methodology requires lifetable data specific for the populations covered. The use of age-specific rates requires that many computations be based on small numbers of observation, thereby limiting the ability to calculate estimates for population subgroups. Potential alternative approaches would not depend on age-specific data (e.g., multivariate individual-level analysis of the determinants of HRQL or components). Second, the same nationally based correction for the institutionalized population was used for all states and subgroups; however, rates for institutionalization and health status of the institutionalized vary among states and subgroups. Despite these limitations, the state estimates are in the same range as the national estimates of YHL (*2*). Consistency of estimates between years for those states that collected the data for >1 year (Kansas, Nebraska, and New York) and the association between HRQL and mortality levels also support the quality of the estimates.

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Notice to Readers

Recommended Childhood Immunization Schedule — United States, 1998

Since publication of the recommended childhood immunization schedule in January 1997 (*1*), CDC's Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP) have changed recommended ages for administration of measles-mumps-rubella vaccine (MMR) and poliovirus vaccines. In addition, these organizations have clarified recommendations for administration of MMR, varicella vaccine, and hepatitis B vaccine during the routine visit to health-care providers for adolescents aged 11–12 years (*2*); the interchangeability of the three licensed *Haemophilus influenzae* type b (Hib) vaccines for primary and booster vaccination; and the timing for the third dose of hepatitis B vaccine. This report presents the recommended childhood immunization schedule for 1998 (Figure 1) and explains the changes that have occurred since publication of the last schedule. Detailed recommendations about the use of vaccines are available from the manufacturers' package inserts, the *1997 Red Book* (*3*), or ACIP statements on specific vaccines.

Poliovirus Vaccines

In January 1997, the Food and Drug Administration (FDA) approved an amendment to the package labeling for the inactivated poliovirus vaccine (IPV) currently licensed in the United States, allowing the third dose of this IPV in an all-IPV schedule to be administered as early as age 6 months. Data from clinical trials have demonstrated that IPV may be effectively administered to infants at age 6 months following receipt of IPV at ages 2 and 4 months (*4*). To reflect this change, the ACIP, AAP, and AAFP have changed the recommended age for administration of the third dose of IPV in an all-IPV schedule to 6–18 months. The recommended ages for administration of poliovirus vaccine in either an all-oral poliovirus vaccine (OPV) schedule or an all-IPV schedule are now the same: 2, 4, 6–18 months, and 4–6 years.

ACIP recommends a sequential poliovirus vaccination schedule consisting of two doses of IPV administered at ages 2 and 4 months, followed by two doses of OPV, with the first dose of OPV administered at age 12–18 months. This schedule may reduce the risk for vaccine-associated paralytic poliomyelitis among immunodeficient infants by allowing more time for diagnosis of immunodeficiency disorders that would contraindicate administration of OPV (*5*). The AAP and AAFP give no preference for any of the three acceptable schedules and recommend that, for children who received IPV at ages 2 and 4 months, the third dose of polio vaccine (either IPV or OPV) be administered at age 6–18 months.

MMR

The recommended age for the second dose of MMR is now 4–6 years. Additional details, including the rationale for change, will be discussed in the revised ACIP recommendations for MMR (*6*).

Notices to Readers — Continued

Routine Visit to Health-Care Providers for Adolescents Aged 11–12 Years

The routine visit to health-care providers for adolescents aged 11–12 years remains an important time to ensure receipt of two doses of MMR beginning at or after age 12 months and one dose of varicella vaccine, and that the hepatitis B vaccine series has been initiated or completed. A shaded oval (Figure 1) is used to distinguish this assessment from the need to routinely administer the diphtheria and tetanus toxoids (Td) booster to all children at this age. Additional changes have been made in the wording in the footnote to clarify this difference.

Hib Vaccines

Three Hib vaccines are licensed for infant vaccination: 1) oligosaccharide conjugate Hib vaccine (HbOC) (HibTITER® [Wyeth-Lederle Laboratories, Pearl River, New York]*), 2) polyribosylribitol phosphate-tetanus toxoid conjugate (PRP-T) (ActHIB® and Omni-HIB®, manufactured by Pasteur Mérieux Connaught, France [Lyon, France] and distributed, respectively, by Pasteur Mérieux Connaught, USA [Swiftwater, Pennsylvania] and SmithKline Beecham Pharmaceuticals [Philadelphia, Pennsylvania]), and 3) *Haemophilus* b conjugate vaccine (meningococcal protein conjugate) (PRP-OMP) (PedvaxHIB® [Merck, Inc., West Point, Pennsylvania]). These products are now considered interchangeable for primary as well as booster vaccination. Excellent immune responses have been achieved when vaccines from different manufacturers have been interchanged in the primary series (*7–9*). If PRP-OMP is administered in a series with one of the other two products licensed for infants, the recommended number of doses to complete the series is determined by the other product (and not by PRP-OMP). For example, if PRP-OMP is administered for the first dose at age 2 months, and another vaccine is administered at age 4 months, a third dose of any of the three licensed Hib vaccines is recommended at age 6 months to complete the primary series.

Hepatitis B Vaccine

For children born to hepatitis B surface antigen-negative mothers, the third dose of hepatitis B vaccine should be administered at least 2 months after the second dose but not before age 6 months. Wording to this effect has been added to clarify the recommendations for hepatitis B vaccine administration.

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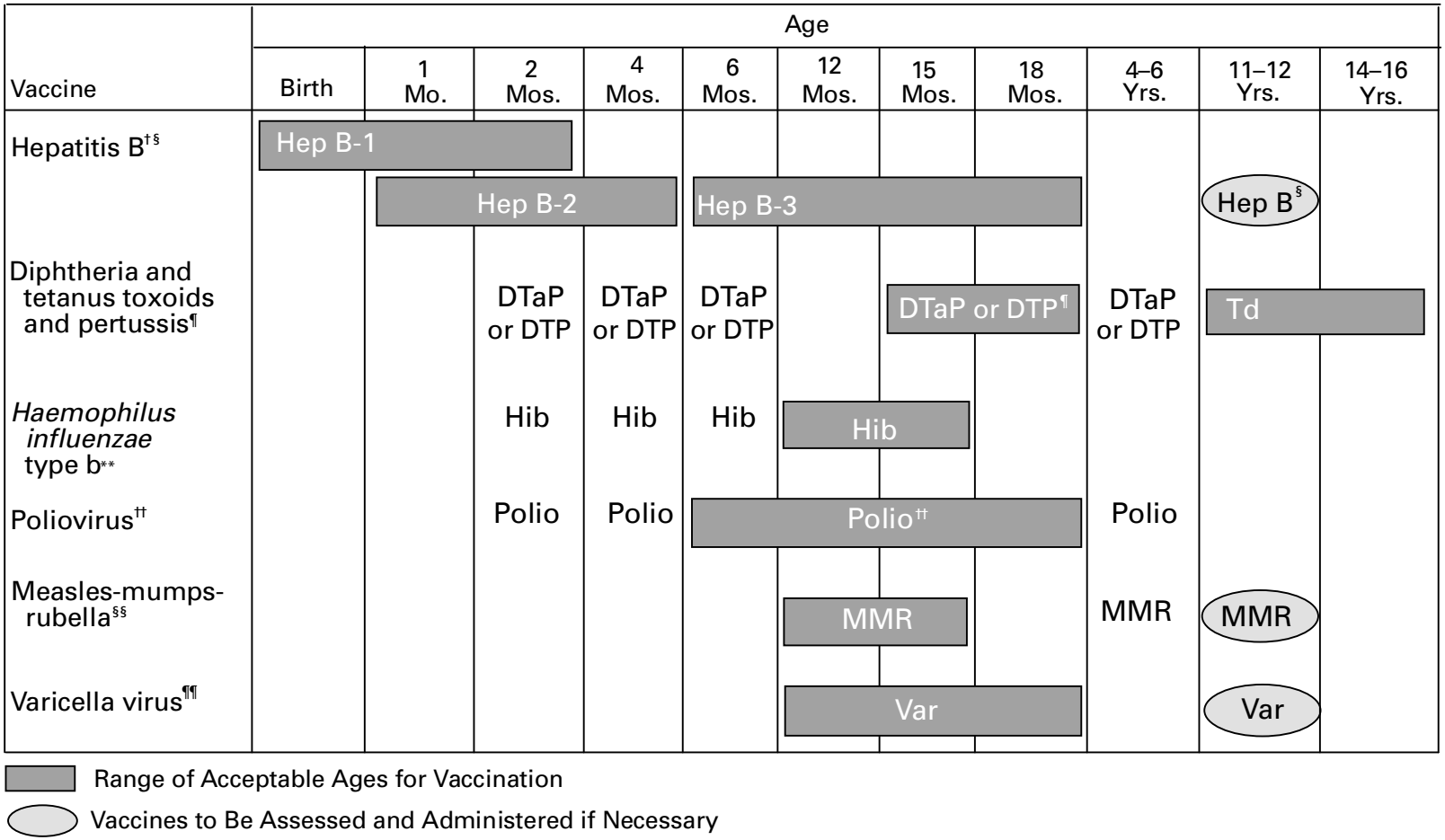
*Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.

FIGURE 1. Recommended childhood immunization schedule* — United States, January–December 1998



* This schedule indicates the recommended age for routine administration of currently licensed childhood vaccines; vaccines are listed under the ages for which they are routinely recommended. Cathch-up immunization should be done during any visit when feasible. Some combination vaccines are available and may be used whenever administration of all components of the vaccine is indicated. Providers should consult the manufacturers' package inserts for detailed recommendations.

† **Infants born to hepatitis B surface antigen (HBsAg)-negative mothers** should receive 2.5 μg of Merck vaccine (Recombivax HB®) or 10 μg of SmithKline Beecham (SB) vaccine (Engerix-B®). The second dose should be administered at least 1 month after the first dose. The third dose should be administered at least 2 months after the second but not before 6 months of age. **Infants born to HBsAg-positive mothers** should receive 0.5 mL hepatitis B immune globulin (HBIG) within 12 hours of birth, and either 5 μg of Merck vaccine (Recombivax HB®) or 10 μg of SB vaccine (Engerix-B®) at a separate site. The second dose is recommended at age 1–2 months and the third dose at age 6 months. **Infants born to mothers whose HBsAg status is unknown** should receive either 5 μg of Merck vaccine (Recombivax HB®) or 10 μg of SB vaccine (Engerix-B®) within 12 hours of birth. The second dose of vaccine is recommended at age 1 month and the third dose at age 6 months. Blood should be drawn at the time of delivery to determine the mother's HBsAg status; if it is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The dosage and timing of subsequent vaccine doses should be based on the mother's HBsAg status.

§ Children and adolescents who have not been vaccinated against hepatitis B in infancy may begin the series during any visit. Those who have not previously received three doses of hepatitis B vaccine should initiate or complete the series during the routine visit to a health-care provider at age 11–12 years, and unvaccinated older adolescents should be vaccinated whenever possible. The second dose should be administered at least 1 month after the first dose, and the third dose should be administered at least 4 months after the first dose and at least 2 months after the second dose.

¶ Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) is the preferred vaccine for all doses in the vaccination series, including completion of the series in children who have received one or more doses of whole-cell diphtheria and tetanus toxoids and pertussis vaccine (DTP). Whole-cell DTP is an acceptable alternative to DTaP. The fourth dose (DTP or DTaP) may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and if the child is unlikely to return at age 15–18 months. Tetanus and diphtheria toxoids, adsorbed, for adult use (Td), is recommended at age 11–12 years if at least 5 years have elapsed since the last dose of DTP, DTaP, or diphtheria and tetanus toxoids, adsorbed, for pediatric use (DT). Subsequent routine Td boosters are recommended every 10 years.

** Three *H. influenzae* type b (Hib) conjugate vaccines are licensed for infant use. If *Haemophilus* b conjugate vaccine (meningococcal protein conjugate) (PRP-OMP) (PedvaxHIB® [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required.

†† Two poliovirus vaccines are currently licensed and distributed in the United States: inactivated poliovirus vaccine (IPV) and oral poliovirus vaccine (OPV). The following schedules are all acceptable to the ACIP, AAP, and AAFP. Parents and providers may choose among these options: 1) two doses of IPV followed by two doses of OPV; 2) four doses of IPV; or 3) four doses of OPV. ACIP recommends two doses of IPV at ages 2 and 4 months followed by a dose of OPV at age 12–18 months and at age 4–6 years. IPV is the only poliovirus vaccine recommended for immunocompromised persons and their household contacts.

§§ The second dose of measles-mumps-rubella vaccine (MMR) is recommended routinely at age 4–6 years but may be administered during any visit, provided at least 1 month has elapsed since receipt of the first dose and that both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule no later than the routine visit to a health-care provider at age 11–12 years.

¶¶ Susceptible children may receive varicella vaccine (Var) at any visit after the first birthday, and those who lack a reliable history of chickenpox should be vaccinated during the routine visit to a health-care provider at age 11–12 years. Susceptible children aged ≥13 years should receive two doses at least 1 month apart.

Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.

Source: Advisory Committee on Immunization Practices (ACIP), American Academy of Pediatrics (AAP), and American Academy of Family Physicians (AAFP).

Notices to Readers — Continued

6. CDC. Measles, mumps, and rubella vaccine use and strategies for measles, rubella, and congenital rubella syndrome elimination and mumps control: recommendations of the Advisory Committee for Immunization Practices (ACIP). MMWR 1998;47(in press).
7. Anderson EL, Decker MD, Englund JA, et al. Interchangeability of conjugated *Haemophilus influenzae* type b vaccines in infants. JAMA 1995;273:849–53.
8. Bewley KM, Schwab JG, Ballanco GA, Daum RS. Interchangeability of *Haemophilus influenzae* type b vaccines in the primary series: evaluation of a two-dose mixed regimen. Pediatrics 1996;98:898–904.
9. Greenberg DP, Lieberman JM, Marcy SM, et al. Enhanced antibody responses in infants given different sequences of heterogenous *Haemophilus influenzae* type b conjugate vaccines. J Pediatr 1995;126:206–11.

Notice to Readers

Availability of New Rabies Vaccine for Human Use

On October 20, 1997, the Food and Drug Administration licensed a new rabies vaccine for both pre-exposure and postexposure prophylactic use in humans. This purified chick embryo cell culture (PCEC) vaccine (RabAvert™)* is manufactured by Chiron Behring GmbH and Company. The addition of PCEC to the current products available for pre-exposure and postexposure prophylactic use in humans allows for greater flexibility in treatment choices for the vaccination candidate who develops a sensitivity to one of the other available vaccines. Although derived from chick embryo cells, antibodies to chick cell proteins were not detected in recipients of the vaccine (*1*).

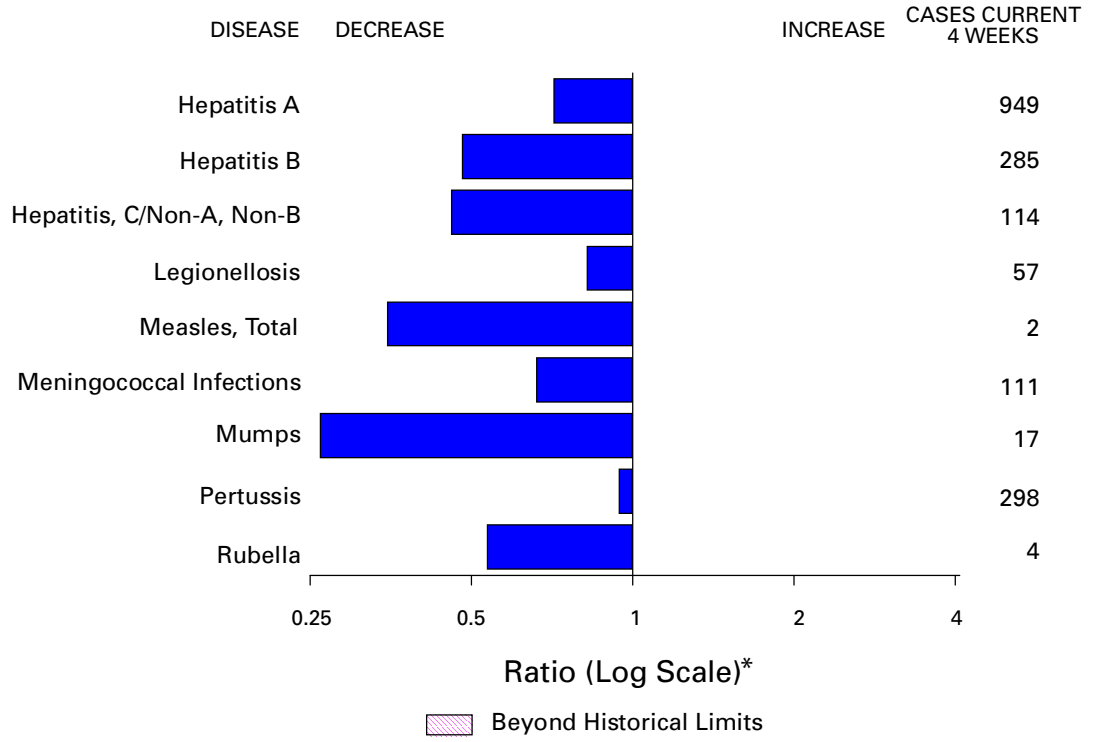
Before introduction of the PCEC vaccine, two other products were licensed for use as rabies vaccines in the United States: human diploid cell vaccine (HDCV) and rabies vaccine adsorbed (RVA). HDCV uses the Pitman Moore strain of fixed rabies virus propagated in infected human diploid cells, and RVA uses a Kissling strain of rabies virus adapted to a diploid cell line of fetal rhesus lung (*2,3*).

The PCEC vaccine has been shown to be safe and immunogenic when the current Advisory Committee on Immunization Practices guidelines are employed (*4,5*). These guidelines are as follows: pre-exposure vaccination for persons not previously vaccinated consists of three 1.0-mL doses delivered intramuscularly in the deltoid region for adults and in the anterolateral zone of the thigh for young children on days 0, 7, and 21 or 28 (day 0 indicates the start of treatment); postexposure vaccination with PCEC in persons not previously vaccinated consists of five 1.0-mL doses delivered intramuscularly in the same regions as for pre-exposure vaccination on days 0, 3, 7, 14, and 28, plus one dose of human rabies immune globulin (HRIG) at 20 IU per kg of body weight on day 0. As much as possible of the full dose of HRIG should be thoroughly infiltrated into and around the wound(s). Any remaining volume should be administered intramuscularly at a site distant from the vaccine inoculation. Postexposure prophylaxis for those persons who have been previously vaccinated should consist of two 1.0-mL doses delivered intramuscularly, in the same regions as previously stated for adults and children, on days 0 and 3. HRIG should not be administered to previously vaccinated persons (*4*).

(Continued on page 19)

*Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending January 10, 1998, 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 January 10, 1998 (1st Week)

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	-
Brucellosis	-	Poliomyelitis, paralytic	-
Cholera	-	Psittacosis	-
Congenital rubella syndrome	-	Rabies, human	-
Cryptosporidiosis*	14	Rocky Mountain spotted fever (RMSF)	-
Diphtheria	-	Streptococcal disease, invasive Group A	25
Encephalitis: California*	-	Streptococcal toxic-shock syndrome*	1
eastern equine*	-	Syphilis, congenital¶	-
St. Louis*	-	Tetanus	1
western equine*	-	Toxic-shock syndrome	1
Hansen Disease	1	Trichinosis	-
Hantavirus pulmonary syndrome*†	-	Typhoid fever	4
Hemolytic uremic syndrome, post-diarrheal*	-	Yellow fever	-
HIV infection, pediatric*§	-		

-: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–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update December 23, 1997.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending January 10, 1998, and January 4, 1997 (1st Week)

Reporting Area	AIDS		Chlamydia		*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB	
					NETSS†	PHLIS§				
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1998	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
UNITED STATES	-	333	4,089	4,316	5	-	2,764	3,014	17	23
NEW ENGLAND	-	12	275	244	-	-	82	87	-	-
Maine	-	-	-	U	-	-	-	-	-	-
N.H.	-	-	5	4	-	-	2	1	-	-
Vt.	-	6	7	2	-	-	-	-	-	-
Mass.	-	-	233	151	-	-	75	45	-	-
R.I.	-	6	19	5	-	-	3	2	-	-
Conn.	-	-	11	82	-	-	2	39	-	-
MID. ATLANTIC	-	177	983	603	-	-	536	328	-	-
Upstate N.Y.	-	-	N	N	-	-	-	-	-	-
N.Y. City	-	-	643	445	-	-	309	220	-	-
N.J.	-	1	-	56	-	-	-	97	-	-
Pa.	-	176	340	102	N	-	227	11	-	-
E.N. CENTRAL	-	1	262	842	1	-	162	780	9	10
Ohio	-	-	-	278	1	-	-	166	1	3
Ind.	-	-	200	99	-	-	100	98	-	-
Ill.	-	1	62	175	-	-	57	110	-	2
Mich.	-	-	-	63	-	-	-	313	8	5
Wis.	-	-	-	227	N	-	5	93	-	-
W.N. CENTRAL	-	24	22	330	-	-	5	182	-	1
Minn.	-	-	-	58	-	-	-	15	-	-
Iowa	-	18	-	-	-	-	-	-	-	-
Mo.	-	-	-	219	-	-	-	148	-	1
N. Dak.	-	-	-	2	-	-	-	1	-	-
S. Dak.	-	-	22	11	-	-	5	2	-	-
Nebr.	-	6	-	22	-	-	-	11	-	-
Kans.	-	-	-	18	-	-	-	5	-	-
S. ATLANTIC	-	69	1,046	1,001	2	-	815	762	1	-
Del.	-	-	-	-	-	-	-	20	-	-
Md.	-	-	179	1	2	-	53	86	-	-
D.C.	-	1	N	N	-	-	109	73	-	-
Va.	-	47	28	1	N	-	-	-	-	-
W. Va.	-	-	68	39	N	-	13	25	-	-
N.C.	-	-	305	539	-	-	296	388	1	-
S.C.	-	21	247	30	-	-	227	24	-	-
Ga.	-	-	88	245	-	-	14	7	-	-
Fla.	-	-	131	146	-	-	103	139	-	-
E.S. CENTRAL	-	-	300	241	-	-	429	329	1	-
Ky.	-	-	-	38	-	-	-	28	-	-
Tenn.	-	-	18	29	-	-	42	20	1	-
Ala.	-	-	282	148	-	-	387	214	-	-
Miss.	-	-	-	26	-	-	-	67	-	-
W.S. CENTRAL	-	11	433	212	-	-	407	279	-	-
Ark.	-	-	25	32	-	-	52	76	-	-
La.	-	-	231	133	-	-	250	165	-	-
Okla.	-	11	177	47	-	-	105	38	-	-
Tex.	-	-	-	-	-	-	-	-	-	-
MOUNTAIN	-	1	290	262	1	-	194	103	2	2
Mont.	-	-	6	-	-	-	-	-	-	-
Idaho	-	-	11	-	-	-	-	-	-	-
Wyo.	-	-	9	8	-	-	1	-	1	-
Colo.	-	-	-	-	-	-	96	19	-	1
N. Mex.	-	-	87	80	1	-	22	17	1	1
Ariz.	-	1	132	127	N	-	70	44	-	-
Utah	-	-	45	-	-	-	5	-	-	-
Nev.	-	-	-	47	-	-	-	23	-	-
PACIFIC	-	38	478	581	1	-	134	164	4	10
Wash.	-	37	-	15	-	-	-	3	-	-
Oreg.	-	-	234	4	-	-	32	-	-	-
Calif.	-	1	233	539	1	-	97	150	4	9
Alaska	-	-	11	22	-	-	5	11	-	-
Hawaii	-	-	-	1	N	-	-	-	-	1
Guam	-	-	-	8	N	-	-	1	-	-
P.R.	-	1	U	U	-	U	-	5	-	-
V.I.	-	-	N	N	N	U	-	-	-	-
Amer. Samoa	-	-	-	-	N	U	-	-	-	-
C.N.M.I.	-	-	N	N	N	U	-	1	-	-

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–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update December 23, 1997.

†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 January 10, 1998, and January 4, 1997 (1st Week)

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998
UNITED STATES	15	4	32	38	5	21	59	116	5	83	86
NEW ENGLAND	-	-	-	23	-	-	1	1	-	1	21
Maine	-	-	-	-	-	-	-	-	U	-	-
N.H.	-	-	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	-
Mass.	-	-	-	3	-	-	1	1	-	-	11
R.I.	-	-	-	-	-	-	-	-	-	-	3
Conn.	-	-	-	20	-	-	-	-	U	1	7
MID. ATLANTIC	-	-	22	11	1	1	-	5	-	1	38
Upstate N.Y.	-	-	-	-	-	-	-	-	U	-	19
N.Y. City	-	-	-	1	-	-	-	1	U	1	U
N.J.	-	-	-	4	-	1	-	4	U	-	-
Pa.	-	-	22	6	1	-	-	-	U	-	19
E.N. CENTRAL	11	4	4	2	2	2	6	6	3	32	-
Ohio	7	2	4	1	1	-	-	2	U	21	-
Ind.	-	-	-	-	-	1	5	-	U	-	-
Ill.	-	-	-	1	-	1	1	1	3	11	-
Mich.	4	2	-	-	1	-	-	-	U	-	-
Wis.	-	-	U	U	-	-	-	3	U	-	-
W.N. CENTRAL	-	-	-	-	-	-	-	1	-	-	3
Minn.	-	-	-	-	-	-	-	1	U	-	-
Iowa	-	-	-	-	-	-	-	-	U	-	3
Mo.	-	-	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	U	-	-
S. ATLANTIC	3	-	3	1	1	-	33	47	1	9	17
Del.	-	-	-	1	-	-	-	-	U	-	-
Md.	3	-	3	-	1	-	3	23	-	1	6
D.C.	-	-	-	-	-	-	-	-	U	4	-
Va.	-	-	-	-	-	-	4	-	-	-	3
W. Va.	N	N	-	-	-	-	-	-	1	-	1
N.C.	-	-	-	-	-	-	2	10	-	-	-
S.C.	-	-	-	-	-	-	16	-	U	-	1
Ga.	-	-	-	-	-	-	-	12	U	-	5
Fla.	-	-	-	-	-	-	8	2	U	4	1
E.S. CENTRAL	-	-	3	-	-	-	8	27	-	6	-
Ky.	-	-	-	-	-	-	-	2	-	-	-
Tenn.	-	-	3	-	-	-	2	-	U	1	-
Ala.	-	-	-	-	-	-	6	11	U	5	-
Miss.	-	-	-	-	-	-	-	14	-	-	-
W.S. CENTRAL	-	-	-	-	-	-	9	18	-	6	5
Ark.	-	-	-	-	-	-	2	5	-	-	-
La.	-	-	-	-	-	-	7	11	-	-	-
Okla.	-	-	-	-	-	-	-	2	U	-	5
Tex.	-	-	-	-	-	-	-	-	U	6	-
MOUNTAIN	1	-	-	-	1	-	1	6	-	1	2
Mont.	-	-	-	-	-	-	-	-	-	-	1
Idaho	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	1
Colo.	1	-	-	-	-	-	-	-	U	1	-
N. Mex.	-	-	-	-	1	-	-	-	U	-	-
Ariz.	-	-	-	-	-	-	-	5	-	-	-
Utah	-	-	-	-	-	-	1	-	-	-	-
Nev.	-	-	-	-	-	-	-	1	U	-	-
PACIFIC	-	-	-	1	-	18	1	5	1	27	-
Wash.	-	-	-	-	-	-	-	-	U	2	-
Oreg.	-	-	-	-	-	1	1	-	U	2	-
Calif.	-	-	-	1	-	17	-	5	1	17	-
Alaska	-	-	-	-	-	-	-	-	-	3	-
Hawaii	-	-	-	-	-	-	-	-	-	3	-
Guam	-	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	3	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-

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

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 10, 1998, and January 4, 1997 (1st Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported†		Total	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998	Cum. 1998	Cum. 1997
UNITED STATES	12	14	161	180	56	76	-	-	-	-	-	-
NEW ENGLAND	-	2	1	6	-	1	-	-	-	-	-	-
Maine	-	-	-	-	-	-	U	-	U	-	-	-
N.H.	-	-	-	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	1	-	-	-	-	-	-	-	-
Mass.	-	2	1	3	-	1	-	-	-	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	-
Conn.	-	-	-	2	-	-	-	-	-	-	-	-
MID. ATLANTIC	-	2	2	19	3	12	-	-	-	-	-	-
Upstate N.Y.	-	-	1	-	2	-	-	-	-	-	-	-
N.Y. City	-	-	-	10	-	8	-	-	-	-	-	-
N.J.	-	1	-	-	-	1	U	-	U	-	-	-
Pa.	-	1	1	9	1	3	-	-	-	-	-	-
E.N. CENTRAL	1	4	49	30	14	17	-	-	-	-	-	-
Ohio	1	2	15	4	3	-	-	-	-	-	-	-
Ind.	-	-	-	4	-	2	-	-	-	-	-	-
Ill.	-	2	-	9	-	6	-	-	-	-	-	-
Mich.	-	-	34	8	11	8	-	-	-	-	-	-
Wis.	-	-	-	5	-	1	-	-	-	-	-	-
W.N. CENTRAL	-	-	9	10	-	2	-	-	-	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	9	3	-	-	-	-	-	-	-	-
Mo.	-	-	-	6	-	1	U	-	U	-	-	-
N. Dak.	-	-	-	-	-	-	U	-	U	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	1	-	-	-	-	-	-
Kans.	-	-	-	1	-	-	U	-	U	-	-	-
S. ATLANTIC	4	2	8	2	4	5	-	-	-	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-
Md.	4	-	6	-	4	-	-	-	-	-	-	-
D.C.	-	-	-	-	-	1	-	-	-	-	-	-
Va.	-	-	-	-	-	-	-	-	-	-	-	-
W. Va.	-	-	-	-	-	-	-	-	-	-	-	-
N.C.	-	2	1	2	-	4	-	-	-	-	-	-
S.C.	-	-	-	-	-	-	-	-	-	-	-	-
Ga.	-	-	1	-	-	-	-	-	-	-	-	-
Fla.	-	-	-	-	-	-	-	-	-	-	-	-
E.S. CENTRAL	-	-	5	-	5	-	-	-	-	-	-	-
Ky.	-	-	-	-	-	-	-	-	-	-	-	-
Tenn.	-	-	5	-	4	-	-	-	-	-	-	-
Ala.	-	-	-	-	1	-	-	-	-	-	-	-
Miss.	-	-	-	-	-	-	U	-	U	-	-	-
W.S. CENTRAL	-	-	2	1	2	-	-	-	-	-	-	-
Ark.	-	-	1	1	2	-	-	-	-	-	-	-
La.	-	-	-	-	-	-	-	-	-	-	-	-
Okla.	-	-	1	-	-	-	-	-	-	-	-	-
Tex.	-	-	-	-	-	-	U	-	U	-	-	-
MOUNTAIN	4	-	42	17	13	10	-	-	-	-	-	-
Mont.	-	-	2	-	-	-	-	-	-	-	-	-
Idaho	-	-	1	3	1	-	-	-	-	-	-	-
Wyo.	-	-	-	1	-	-	-	-	-	-	-	-
Colo.	1	-	7	7	-	2	-	-	-	-	-	-
N. Mex.	-	-	6	2	8	7	-	-	-	-	-	-
Ariz.	3	-	26	4	4	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Nev.	-	-	-	-	-	1	U	-	U	-	-	-
PACIFIC	3	4	43	95	15	29	-	-	-	-	-	-
Wash.	-	-	-	-	-	-	U	-	U	-	-	-
Oreg.	-	1	1	14	-	4	-	-	-	-	-	-
Calif.	3	3	42	80	15	25	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	1	-	-	U	-	U	-	-	-
Guam	-	-	-	-	-	1	U	-	U	-	-	-
P.R.	-	-	-	1	-	2	U	-	U	-	-	-
V.I.	-	-	-	-	-	-	U	-	U	-	-	-
Amer. Samoa	-	-	-	-	-	-	U	-	U	-	-	-
C.N.M.I.	-	-	-	-	-	-	U	-	U	-	-	-

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

*Of 2 cases among children aged <5 years, serotype was reported for 1 and of those, 0 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 January 10, 1998, and January 4, 1997 (1st Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997
UNITED STATES	24	42	2	2	1	41	41	100	-	-	-
NEW ENGLAND	4	4	-	-	-	1	1	24	-	-	-
Maine	-	-	U	-	-	U	-	3	U	-	-
N.H.	-	-	-	-	-	-	-	2	-	-	-
Vt.	-	-	-	-	-	-	-	9	-	-	-
Mass.	2	4	-	-	-	1	1	10	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-
Conn.	2	-	-	-	-	-	-	-	-	-	-
MID. ATLANTIC	-	4	-	-	1	-	-	-	-	-	-
Upstate N.Y.	-	-	-	-	-	-	-	-	-	-	-
N.Y. City	-	-	-	-	-	-	-	-	-	-	-
N.J.	-	1	U	-	1	U	-	-	U	-	-
Pa.	-	3	-	-	-	-	-	-	-	-	-
E.N. CENTRAL	3	8	-	-	-	5	5	5	-	-	-
Ohio	3	3	-	-	-	5	5	2	-	-	-
Ind.	-	-	-	-	-	-	-	-	-	-	-
Ill.	-	3	-	-	-	-	-	-	-	-	-
Mich.	-	1	-	-	-	-	-	1	-	-	-
Wis.	-	1	-	-	-	-	-	2	-	-	-
W.N. CENTRAL	-	6	-	-	-	-	-	-	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	1	-	-	-	-	-	-	-	-	-
Mo.	-	5	U	-	-	U	-	-	U	-	-
N. Dak.	-	-	U	-	-	U	-	-	U	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	-	U	-	-	U	-	-	U	-	-
S. ATLANTIC	9	5	1	1	-	2	2	-	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-
Md.	2	-	1	1	-	2	2	-	-	-	-
D.C.	-	1	-	-	-	-	-	-	-	-	-
Va.	-	-	-	-	-	-	-	-	-	-	-
W. Va.	-	-	-	-	-	-	-	-	-	-	-
N.C.	2	-	-	-	-	-	-	-	-	-	-
S.C.	2	4	-	-	-	-	-	-	-	-	-
Ga.	3	-	-	-	-	-	-	-	-	-	-
Fla.	-	-	-	-	-	-	-	-	-	-	-
E.S. CENTRAL	1	3	-	-	-	-	-	-	-	-	-
Ky.	-	-	-	-	-	-	-	-	-	-	-
Tenn.	1	-	-	-	-	-	-	-	-	-	-
Ala.	-	3	-	-	-	-	-	-	-	-	-
Miss.	-	-	U	-	-	U	-	-	U	-	-
W.S. CENTRAL	1	-	-	-	-	-	-	-	-	-	-
Ark.	-	-	-	-	-	-	-	-	-	-	-
La.	-	-	-	-	-	-	-	-	-	-	-
Okla.	1	-	-	-	-	-	-	-	-	-	-
Tex.	-	-	U	-	-	U	-	-	U	-	-
MOUNTAIN	4	-	1	1	-	26	26	64	-	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	17	17	61	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-
Colo.	3	-	-	-	-	1	1	-	-	-	-
N. Mex.	-	-	N	N	N	8	8	-	-	-	-
Ariz.	1	-	1	1	-	-	-	3	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-
Nev.	-	-	U	-	-	U	-	-	U	-	-
PACIFIC	2	12	-	-	-	7	7	7	-	-	-
Wash.	-	-	U	-	-	U	-	-	U	-	-
Oreg.	-	5	N	N	N	-	-	-	-	-	-
Calif.	2	7	-	-	-	7	7	7	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	U	-	-	U	-	-	U	-	-
Guam	-	-	U	-	-	U	-	-	U	-	-
P.R.	-	-	U	-	-	U	-	-	U	-	-
V.I.	-	-	U	-	-	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

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

TABLE IV. Deaths in 122 U.S. cities,* week ending January 10, 1998 (1st Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	700	513	122	33	20	12	71
Boston, Mass.	199	137	43	6	8	5	23
Bridgeport, Conn.	57	41	12	-	2	2	-
Cambridge, Mass.	28	20	4	4	-	-	3
Fall River, Mass.	31	29	1	1	-	-	-
Hartford, Conn.	62	43	9	7	3	-	3
Lowell, Mass.	32	27	5	-	-	-	4
Lynn, Mass.	10	7	-	2	1	-	1
New Bedford, Mass.	22	19	2	1	-	-	1
New Haven, Conn.	58	37	11	5	3	2	6
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	7	5	1	1	-	-	-
Springfield, Mass.	55	39	8	4	2	2	3
Waterbury, Conn.	53	42	11	-	-	-	9
Worcester, Mass.	86	67	15	2	1	1	18
MID. ATLANTIC	2,618	1,817	488	208	58	47	160
Albany, N.Y.	76	56	15	3	1	1	4
Allentown, Pa.	20	19	1	-	-	-	3
Buffalo, N.Y.	U	U	U	U	U	U	U
Camden, N.J.	48	32	7	5	1	3	9
Elizabeth, N.J.	27	22	3	1	-	1	-
Erie, Pa.	48	38	9	-	1	-	1
Jersey City, N.J.	55	32	15	7	1	-	2
New York City, N.Y.	1,305	901	253	113	27	11	65
Newark, N.J.	71	38	18	9	1	5	1
Paterson, N.J.	27	16	6	3	1	1	2
Philadelphia, Pa.	400	252	75	43	17	13	28
Pittsburgh, Pa.§	90	65	10	4	3	8	6
Reading, Pa.	43	34	5	2	2	-	4
Rochester, N.Y.	154	115	30	4	1	4	11
Schenectady, N.Y.	41	35	6	-	-	-	1
Scranton, Pa.	49	43	3	2	1	-	3
Syracuse, N.Y.	108	79	24	5	-	-	13
Trenton, N.J.	32	22	4	5	1	-	5
Utica, N.Y.	24	18	4	2	-	-	2
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,658	1,861	504	161	61	70	189
Akron, Ohio	72	49	15	5	-	3	-
Canton, Ohio	61	52	7	1	-	1	11
Chicago, Ill.	351	229	78	30	5	8	37
Cincinnati, Ohio	137	88	34	6	4	5	17
Cleveland, Ohio	175	120	30	12	5	8	5
Columbus, Ohio	251	174	52	11	6	8	30
Dayton, Ohio	183	133	38	6	4	2	17
Detroit, Mich.	307	190	63	24	12	18	7
Evansville, Ind.	77	66	7	2	1	1	8
Fort Wayne, Ind.	94	67	19	4	2	2	5
Gary, Ind.	21	9	4	5	2	1	-
Grand Rapids, Mich.	77	57	12	5	1	2	10
Indianapolis, Ind.	250	163	51	22	8	6	-
Lansing, Mich.	59	45	11	3	-	-	9
Milwaukee, Wis.	165	122	27	13	2	1	9
Peoria, Ill.	50	39	7	-	3	1	3
Rockford, Ill.	64	51	11	1	-	1	5
South Bend, Ind.	62	53	7	-	1	1	2
Toledo, Ohio	130	98	22	5	4	1	9
Youngstown, Ohio	72	56	9	6	1	-	5
W.N. CENTRAL	889	668	127	47	12	10	52
Des Moines, Iowa	110	87	15	5	2	1	7
Duluth, Minn.	29	23	4	2	-	-	-
Kansas City, Kans.	7	6	-	-	-	1	-
Kansas City, Mo.	130	78	13	7	6	1	3
Lincoln, Nebr.	40	33	5	2	-	-	1
Minneapolis, Minn.	284	219	42	15	4	4	27
Omaha, Nebr.	107	83	19	2	-	3	7
St. Louis, Mo.	81	65	11	5	-	-	-
St. Paul, Minn.	90	65	16	9	-	-	7
Wichita, Kans.	11	9	2	-	-	-	-

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,378	911	272	130	47	17	83
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	264	174	44	33	10	2	23
Charlotte, N.C.	167	115	39	7	5	1	13
Jacksonville, Fla.	176	113	37	15	7	4	5
Miami, Fla.	85	50	17	13	5	-	-
Norfolk, Va.	79	57	11	4	4	3	3
Richmond, Va.	92	53	25	10	3	1	4
Savannah, Ga.	70	48	15	6	1	-	12
St. Petersburg, Fla.	78	62	10	4	1	1	2
Tampa, Fla.	244	171	45	18	6	4	16
Washington, D.C.	106	61	29	10	5	1	5
Wilmington, Del.	17	7	-	10	-	-	-
E.S. CENTRAL	862	625	156	57	16	7	77
Birmingham, Ala.	246	179	44	13	6	3	19
Chattanooga, Tenn.	92	78	8	6	-	-	8
Knoxville, Tenn.	69	48	16	4	1	-	15
Lexington, Ky.	85	63	17	4	-	1	9
Memphis, Tenn.	92	60	19	9	4	-	7
Mobile, Ala.	27	21	5	-	-	1	1
Montgomery, Ala.	57	34	14	7	1	1	12
Nashville, Tenn.	194	142	33	14	4	1	6
W.S. CENTRAL	1,873	1,256	369	143	50	55	159
Austin, Tex.	104	71	16	8	4	5	15
Baton Rouge, La.	77	47	12	6	7	5	4
Corpus Christi, Tex.	80	56	14	7	2	1	6
Dallas, Tex.	247	145	70	20	6	6	6
El Paso, Tex.	88	70	15	1	2	-	11
Ft. Worth, Tex.	160	102	27	14	7	10	5
Houston, Tex.	422	289	86	31	9	7	49
Little Rock, Ark.	81	49	18	10	-	4	1
New Orleans, La.	105	59	29	12	2	3	-
San Antonio, Tex.	280	192	49	28	5	6	28
Shreveport, La.	70	50	13	2	1	4	7
Tulsa, Okla.	159	126	20	4	5	4	27
MOUNTAIN	1,210	855	216	75	38	25	122
Albuquerque, N.M.	160	121	25	8	4	2	11
Boise, Idaho	47	37	7	2	1	-	2
Colo. Springs, Colo.	47	35	5	4	1	2	2
Denver, Colo.	98	60	23	9	3	3	15
Las Vegas, Nev.	210	151	34	16	6	2	15
Ogden, Utah	41	36	4	1	-	-	9
Phoenix, Ariz.	227	138	55	15	9	10	24
Pueblo, Colo.	36	33	3	-	-	-	6
Salt Lake City, Utah	161	116	25	7	9	4	26
Tucson, Ariz.	183	128	35	13	5	2	12
PACIFIC	1,328	1,001	200	69	22	33	178
Berkeley, Calif.	20	13	5	1	-	1	3
Fresno, Calif.	U	U	U	U	U	U	U
Glendale, Calif.	U	U	U	U	U	U	U
Honolulu, Hawaii	89	75	6	3	3	2	5
Long Beach, Calif.	129	106	12	9	2	-	23
Los Angeles, Calif.	U	U	U	U	U	U	U
Pasadena, Calif.	57	50	5	1	-	1	9
Portland, Oreg.	U	U	U	U	U	U	U
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	243	174	39	16	6	6	44
San Francisco, Calif.	153	99	36	12	3	3	18
San Jose, Calif.	244	182	40	12	2	7	36
Santa Cruz, Calif.	53	45	5	2	1	-	14
Seattle, Wash.	146	110	20	7	2	7	5
Spokane, Wash.	64	47	10	3	2	2	8
Tacoma, Wash.	130	100	22	3	1	4	13
TOTAL	13,516¶	9,507	2,454	923	324	276	1,091

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 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 this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

Notices to Readers — Continued

On the basis of information provided by the manufacturer (*6*) RabAvert™ is a sterile freeze-dried vaccine obtained by growing the fixed-virus strain Flury low egg passage (LEP) in primary cultures of chicken fibroblasts. The tissue culture fluid is harvested and filtered to remove cell debris. The virus is inactivated with b-propiolactone, then further purified and concentrated by zonal centrifugation. The vaccine is lyophilized after addition of a stabilizer solution in 1.0-mL amounts, which supplies at least 2.5 IU of rabies antigen. No preservative is contained in the vaccine, and the vaccine should be used immediately after reconstitution. The vaccine is designed for intramuscular use only.

The manufacturer also reported the occurrence of a substantial amnestic antibody response with no reports of IgE-mediated hypersensitivity when PCEC was used as a booster, regardless of the vaccine used for primary vaccination. As with the other available products (HDCV and RVA), local reactions such as swelling, induration, and reddening have been associated with administration of PCEC. Because the product contains trace amounts of animal by-products, antibiotics, and human serum albumin, systemic allergic reactions are possible and have been reported.

Reported by: Viral and Rickettsial Zoonoses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

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Notice to Readers

Changes to Figure I

Beginning with this issue, Figure I, Selected notifiable disease reports, comparison of provisional 4-week totals ending January 10, 1998, with historical data—United States, will no longer include reports of malaria and animal rabies. Cumulative reports of provisional malaria and animal rabies cases for the current reporting year and cumulative reports of malaria from the compatible period during the previous year will continue to be recorded, by state, in Table II, Provisional cases of selected notifiable diseases, United States.

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