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Histoplasmosis — Kentucky, 1995

Histoplasmosis is an infection resulting from inhalation of spores from the dimorphic fungus *Histoplasma capsulatum*; the condition primarily affects the lungs. During August 1995, the Department for Health Services, Kentucky Cabinet for Human Resources (KDHS), and local public health officials investigated two unrelated outbreaks of acute histoplasmosis in eastern Kentucky. This report summarizes preliminary findings of the investigations of these outbreaks.

Outbreak 1

On June 27, 1995, a crew of five workers began partial demolition of an abandoned city hall building in a community in Kentucky. At the time of demolition, a colony of bats had been observed in the vicinity of the building, and an approximately 2-foot–deep pile of debris covered with bat guano had accumulated in the building. During the demolition, none of the workers wore personal protective equipment (PPE) (i.e., respirators, eye protection, gloves, or protective clothing). Within 3 weeks, all five workers required treatment for acute respiratory illnesses, and three had been hospitalized. Lung biopsies were obtained from the three hospitalized patients; Giemsa stained tissue from the lung biopsy of one of the patients suggested the presence of *H. capsulatum*.

From the demolition crew, local physicians, medical records, personnel from local hospitals and clinics, and community members, KDHS investigators gathered information about persons who possibly had been exposed to *H. capsulatum* during the demolition. A total of 55 persons (including the demolition crew) were identified who had worked in or near the building or lived in the area during the demolition. Each was questioned about a history of symptoms (including fever ≥101 F [≥38.3 C], chills, night sweats, cough, headache, fatigue, and myalgia) during July 1–August 3. Immunodiffusion and complement fixation tests to detect antibodies to *H. capsulatum* were performed by CDC on serum from these 55 persons. A case of acute *Histoplasma* infection was defined as a positive serologic test (the presence of M or H band on immunodiffusion or 1:32 or higher titer by complement fixation), or the presence of at least three of the clinical features during July 1–August 3 in a person working in or near or living near the building.

Overall, 19 of the 55 persons had a serologic test or clinical features that met the case definition. Of these, 12 persons had participated in the demolition: five had

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worked as the crew, one truck driver had hauled the debris to the dump site, four workers from the city workshop had helped the truck driver haul and dump the debris, and two had washed the building. Three persons had visited the building during the demolition, and four others had lived or worked within 500 yards of the building.

Outbreak 2

KDHS is investigating a second outbreak of histoplasmosis in a different community located 80 miles north of the first city. During March 17–April 5, 1995, the attic of a building was repaired; bird and bat guano had accumulated in the attic. Within 3 weeks after completion of the repairs, 13 employees who worked in the building required treatment for acute respiratory illnesses; of these, two had been hospitalized. On June 26, a lung biopsy was obtained from one of the two hospitalized patients; Giemsa stained tissue from the lung biopsy suggested the presence of *H. capsulatum*. Serologic testing was performed for 16 employees; based on preliminary findings, 11 (including 10 of those who had received treatment) had acute *Histoplasma* infection confirmed serologically.

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Editorial Note: The outbreaks of acute histoplasmosis in Kentucky most likely were caused by inhalation of spores of *H. capsulatum* dispersed from contaminated bird and bat guano. *H. capsulatum* grows well in soil enriched with bird or bat guano (*1*), and histoplasmosis is endemic in states in the Mississippi and Ohio river valleys, including Kentucky, Illinois, Indiana, Missouri, Ohio, and Tennessee (*2*). In southern Kentucky, middle Tennessee, and surrounding areas, histoplasmin skin testing has been positive in up to 95% of the population (*3*). Although partial immunity to histoplasmosis can occur following infection with *H. capsulatum*, susceptibility to the infection remains, especially when the level of exposure to spores is high. The outbreaks in Kentucky are consistent with previous outbreaks of acute histoplasmosis that have been associated with disturbance of bird and bat guano during cleaning, construction, and recreational (e.g., cave exploration) activities (*1,4,5*).

The clinical spectrum of infection with *H. capsulatum* includes asymptomatic infection (most cases); mild, self-limited influenza-like illness; acute or chronic pulmonary infection; and disseminated disease. Disseminated disease is more likely to occur in the very young, the elderly, and immunocompromised persons (e.g., persons being treated for cancer with chemotherapy or persons with human immunodeficiency virus infection) and can be life-threatening. The incubation period ranges from 5 to 18 days. Acute histoplasmosis usually can be diagnosed by serologic tests (immunodiffusion and complement fixation) and sometimes by positive sputum culture or lung biopsy culture. Chest radiography can be useful in diagnosing histoplasmosis when interstitial infiltrates and/or hilar adenopathy are present; however, histoplasmosis can be difficult to distinguish from other pulmonary mycoses and from mycobacterial infections of the lung.

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When any material contaminated with bird or bat guano is to be disturbed in an area with endemic histoplasmosis, precautions should be taken to control dust aerosolization and to protect workers and persons in surrounding areas from exposure through inhalation (*6*). Water should be sprayed at low velocity on contaminated material to reduce the likelihood of aerosolization. During the removal of potentially contaminated material, PPE is necessary to protect workers from exposure to *H. capsulatum* (*6*); however, the type and level of PPE will vary based on the risk for exposure. Material that is to be removed and disposable PPE used during removal should be collected and sealed in heavy-duty plastic bags and disposed of in a landfill. Formaldehyde solution (3%–5%) has been reported to be effective in disinfecting soil contaminated with *H. capsulatum* (*7*); however, exposure to formaldehyde should be controlled to the lowest feasible limit (*8*). Additional information about prevention and control of histoplasmosis can be obtained from CDC's Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, Mailstop A-13, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (404) 639-3158.

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Tuberculosis Among Foreign-Born Persons Who Had Recently Arrived in the United States — Hawaii, 1992–1993, and Los Angeles County, 1993

During 1986–1994, the number of tuberculosis (TB) cases reported annually among foreign-born persons in the United States increased 55% (from 4925 to 7627), and the proportion of all cases accounted for by persons who were foreign-born increased from 22% to 32%—increases that reflect, in part, effects of recent immigration (*1*). The largest numbers of foreign-born persons with TB originated from Mexico, Philippines, and Vietnam; persons from these countries currently account for the largest numbers of recent immigrants to the United States (*2*). This report summarizes a review of foreign-born persons in whom TB was diagnosed in Hawaii during 1992–1993 and in Los Angeles County during 1993 and assesses the impact of screening on the identifi-

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cation of TB among foreign-born persons residing in the United States for ≤1 year at the time of diagnosis.

Immigrants and refugees are the only groups of foreign-born persons required to undergo screening for TB before obtaining a visa to enter the United States. The screening consists of a chest radiograph for persons aged ≥15 years. If the radiograph is compatible with active TB, sputum smear examinations are conducted on 3 consecutive days to detect acid-fast bacilli (AFB). Based on these results, applicants with findings compatible with current or past TB infection are classified as class A, TB infectious; class B1, TB clinically active; class B2, TB not clinically active; or class B3, TB old or healed (Table 1). Persons with a class A status are required to undergo anti-TB therapy until they are AFB-smear–negative before being allowed to apply for a waiver to enter the country; no travel restrictions are placed on persons with a class B status.

Information about the classification of immigrants and refugees is sent by the Immigration and Naturalization Service (INS) to CDC, which notifies the state or local health departments of the arrival of each person with an A, B1, or B2 status, and informs the immigrants and refugees that they should report promptly to their health department. Since the introduction of new guidelines for the medical examination of immigrants and refugees in 1991 (*3*), the contribution of the examination process to the identification of TB among recently arrived foreign-born persons has not been evaluated. Hawaii and Los Angeles County were selected for this analysis because most of their reported TB cases are among foreign-born persons.

TB registries in Hawaii (1990 population: 1,104,668) and Los Angeles County (1990 population: 8,292,057) were examined to identify all foreign-born persons in whom TB had been diagnosed within 1 year of arrival through comparison of the dates of diagnosis and arrival in the United States. Case records were matched against CDC's Tracking System of Immigrants and Refugees with Suspected TB database to determine both the percentage of foreign-born persons with TB that had been identified as B1 and B2 before arrival in the United States and the percentage of those classified as B1 and B2 in whom active TB was diagnosed after arrival.

TABLE 1. Classification for tuberculosis (TB) screening abroad of immigrants and refugees to the United States

Chest radiograph	Sputum smear	Classification
Abnormal, suggestive of active pulmonary TB	Positive for acid-fast bacilli	TB infectious (A)
Abnormal, suggestive of active pulmonary TB	Negative for acid-fast bacilli	TB, clinically active, not infectious (B1*)
Abnormal, suggestive of pulmonary TB, not clinically active	Not required	TB, not clinically active (B2)
Abnormal, only because of a calcified hilar lymph node, a calcified primary complex, or a calcified granuloma	Not required	Consistent with TB, old or healed (B3)
Abnormal, not consistent with TB	Not required	Other chest condition (B)
Normal	Not required	Normal

*Persons with radiographic or other evidence of extrapulmonary TB, clinically active, also are classified as B1.

Tuberculosis — Continued

In Hawaii during 1992–1993, a total of 429 (82%) TB cases were diagnosed in foreign-born persons, of whom 261 (61%) had resided in the United States for ≤1 year (Table 2). Most of these cases (211 [81%]) were in persons from Philippines, including 101 who were World War II veterans who entered the United States under a temporary provision of the Immigration Act of 1990, which exempted them from medical examination while applying for U.S. citizenship during 1992–1995. Based on inclusion of these veterans, 78 (30%) TB cases in foreign-born persons were classified as B1, and 17 (7%) as B2; the screening process did not identify 166 (64%) cases. Based on the exclusion of these veterans, 78 (49%) of the remaining 160 cases were classified as B1 and 17 (11%) as B2; the screening process did not identify 65 (41%) cases (Table 3).

In Los Angeles County during 1993, a total of 1228 (64%) TB cases were diagnosed among foreign-born persons, of whom 261 (21%) had resided in the United States

TABLE 2. Number and percentage of tuberculosis cases diagnosed among foreign-born persons who had resided in the United States ≤1 year, by area of origin — Hawaii, 1992–1993, and Los Angeles County, 1993

	Hawaii (n=261)		Los Angeles (n=261)	
Area of origin	**No.**	**(%)**	**No.**	**(%)**
Asia				
Philippines	211	(80.8)	71	(27.2)
Vietnam	16	(6.1)	36	(13.8)
Other Asian	27	(10.3)	48	(18.4)
Mexico and Central America				
Mexico	1	(0.4)	79	(30.3)
Central America	0		9	(3.4)
Other	6	(2.3)	18	(6.9)

TABLE 3. Number and percentage of tuberculosis (TB) cases among foreign-born persons who had resided in the United States ≤1 year, by country or geographic area of origin and screening category* — Hawaii, 1992–1993, and Los Angeles County, 1993

	Hawaii						Los Angeles County					
	B1		B2		Other		B1		B2		Other	
Area of origin	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Philippines							44	(48)	12	(17)	25	(35)
Nonveterans	69	(63)	10	(9)	31	(28)						
World War II veterans					101	(100)						
Vietnam	7	(44)	1	(6)	8	(50)	20	(55)	1	(3)	15	(42)
Other Asian countries	2	(7)	6	(22)	19	(70)	7	(15)	14	(29)	27	(56)
Mexico and Central America	0		0		1	(100)	2	(2)	1	(1)	85	(97)
All other countries	0		0		6	(100)	1	(6)	2	(11)	15	(83)
Total	**78**	**(30)**	**17**	**(7)**	**166**	**(64)**	**64**	**(25)**	**30**	**(11)**	**167**	**(64)**
Total excluding World War II veterans	**78**	**(49)**	**17**	**(11)**	**65**	**(41)**	**64**	**(25)**	**30**	**(11)**	**167**	**(64)**

*B1=an immigrant or refugee with clinically active TB but sputum-smear–negative for acid-fast bacilli; B2=an immigrant or refugee with nonclinically active TB; Other=any foreign-born person in whom TB was diagnosed that was not classified as B1 or B2.

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≤1 year. Of these, 79 (30%) originated from Mexico, 71 (27%) from Philippines, 36 (14%) from Vietnam, and 48 (18%) from other countries in Asia (Table 2). Sixty-four (25%) persons previously had been classified as B1 and 30 (11%) as B2; the screening process did not identify 167 (64%) cases. Most of the cases from Philippines and Vietnam (65% and 58%, respectively) had been identified through screening before emigration; in comparison, 3% of cases from Mexico and other countries in Central America had been identified by previous screening (Table 3). The number of World War II veterans included in the Los Angeles County cases could not be determined; however, no more than 13 persons with TB could meet the criteria for inclusion in the category based on nationality, age, and year of arrival in the United States.

The prevalence of confirmed TB within 1 year after arrival in the United States among persons classified abroad as B1 was 14% in Hawaii and 11% in Los Angeles County, and among those classified as B2, 2% and 3%, respectively.

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Editorial Note: The findings in this report document two important differences in the epidemiology of TB among recently arrived foreign-born persons in Hawaii and Los Angeles County. First, in Hawaii, 61% of foreign-born persons in whom TB was diagnosed had resided in the United States for ≤1 year, compared with 21% in Los Angeles County. Second, although the proportion of persons in whom TB was diagnosed shortly after arrival and who had not been detected through screening was similar in both areas, the characteristics of these groups were different. In Hawaii, approximately 60% of the previously undetected cases occurred in World War II veterans from Philippines who were exempted from medical examination (*4*). In comparison, in Los Angeles County, approximately half of the undetected cases occurred among persons from Mexico and Central America, whose immigration status could not be determined during this investigation. These differences underscore the need for TB-control programs to conduct reviews of the epidemiology of TB among foreign-born persons to enable improved case detection and prevention efforts.

The findings in this report also underscore the importance of mandatory screening in the timely diagnosis and treatment of TB among those persons who emigrated to the United States from Philippines and Vietnam. Most persons who had emigrated from these two countries and who had TB diagnosed within 1 year of arrival had been identified previously through the mandatory immigrant and refugee screening system; among persons who were not identified, some may have developed TB after entering the country. In contrast, the system contributed only minimally to the early identification of TB among persons from Mexico and Central America. Potential explanations for the relative ineffectiveness of mandatory screening among these persons include 1) a lower screening sensitivity in these countries to detect active TB, 2) inadequate or incomplete dissemination of information from the ports of entry most commonly used by these populations, and 3) a higher proportion of persons from Mexico and Central America who entered the United States under visa categories not requiring medical examination or who entered illegally. In Hawaii, where it was possible to assess immigration status for new arrivals, <10% of the cases diagnosed within

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the first year were among persons in other visa categories or who were in the United States illegally; similar assessments could not be performed in Los Angeles County.

The findings in this report also document the high prevalence of active TB among persons classified as B1 and B2. In addition to confirmed TB, a high proportion of those classified as B1 and B2 have abnormal chest radiographs and positive skin tests and may benefit from preventive chemotherapy (*5*). These persons should receive prompt and active follow-up after their arrival in the United States.

An important strategy for preventing and treating TB among foreign-born persons is ensuring that most persons who intend to become residents of the United States and have active TB are detected before entering the country. The findings in this report suggest the need for some improvements in the screening process abroad and some operational modifications. CDC, in collaboration with state and local health departments, is evaluating the different stages of the screening and tracking process to make recommendations for future strategies. The evaluation includes assessments—similar to those in Hawaii and Los Angeles County—in other areas reporting large proportions of their TB cases among foreign-born persons, a review of data transmission from ports of entry, and a reevaluation of the current screening criteria and supervision at screening sites.

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Assessment of the Incidence of Rape — North Carolina, 1989–1993

Rape has a substantial impact on the health of victims, including a broad spectrum of physical, psychologic, and social sequelae (*1–3*). The development of appropriate and effective rape-prevention programs is assisted by consistent collection of information about and by accurate estimation of the incidence of rape. In North Carolina, as in many other states, the only source of statewide and county-specific population-based data on rape incidence is the Uniform Crime Reporting Program (UCR), coordinated by the Federal Bureau of Investigation (FBI); however, these data may underestimate the actual incidence of rape (*4,5*) because they include only assaults that have been reported to police and that conform to the UCR definition of forcible rape*. To assess the usefulness of rape crisis centers (RCCs) as an additional potential source of data for determining the incidence of rape, in 1994 the Injury Control Section, North Carolina Department of Environment, Health, and Natural Resources

* Defined as the carnal knowledge of a woman forcibly and against her will. Assaults or attempts to commit rape by force or threat of force are included; statutory rape (without force) and other sex offenses are excluded.

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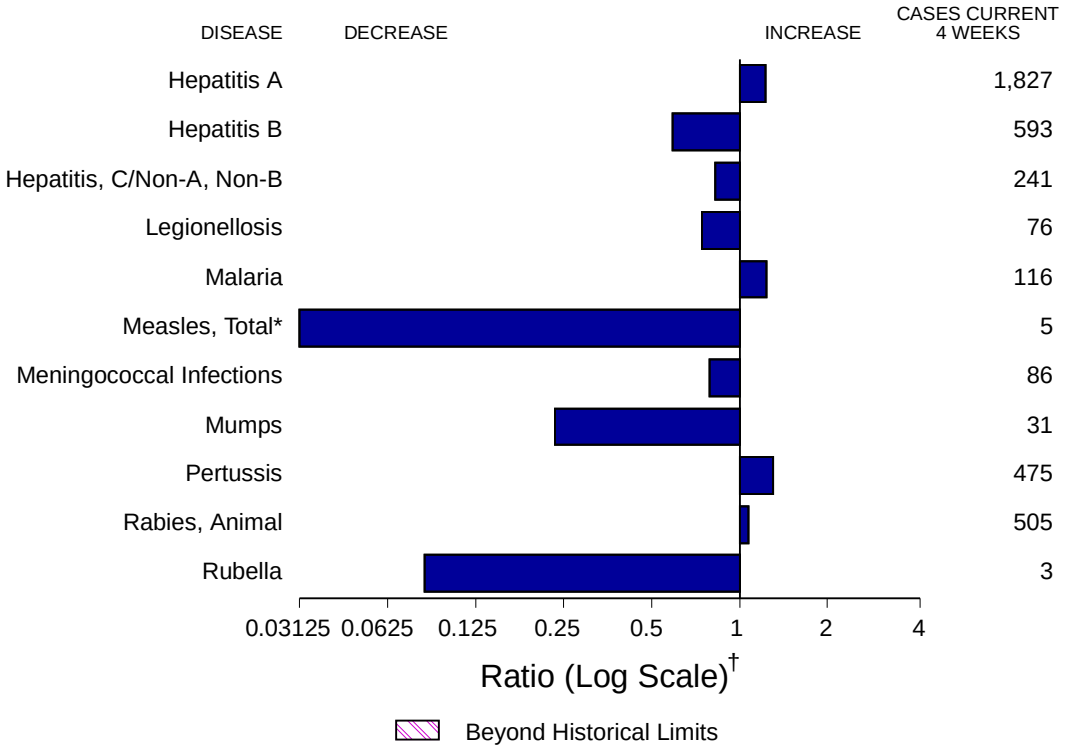
FIGURE I. Notifiable disease reports, comparison of 4-week totals ending September 23, 1995, with historical data — United States



*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline.
†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 — cases of specified notifiable diseases, United States, cumulative, week ending September 23, 1995 (38th Week)

	Cum. 1995		Cum. 1995
Anthrax	-	Psittacosis	49
Brucellosis	65	Rabies, human	1
Cholera	13	Rocky Mountain Spotted Fever	424
Congenital rubella syndrome	4	Syphilis, congenital, age < 1 year†	280
Diphtheria	-	Tetanus	21
*Haemophilus influenzae**	862	Toxic shock syndrome	133
Hansen Disease	100	Trichinosis	24
Plague	6	Typhoid fever	228
Poliomyelitis, Paralytic	-		

*Of 843 cases of known age, 202 (24%) were reported among children less than 5 years of age.
†Updated quarterly from reports to the Division of STD Prevention, National Center for Prevention Services. This total through second quarter 1995.
-: no reported cases

TABLE II. Cases of selected notifiable diseases, United States, weeks ending September 23, 1995, and September 24, 1994 (38th Week)

Reporting Area	AIDS*	Gonorrhea		Hepatitis (Viral), by type						Legionellosis	
				A		B		C/NA,NB			
	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	47,385	250,795	292,724	19,592	17,470	7,162	8,369	3,102	3,041	901	1,146
NEW ENGLAND	2,412	4,069	5,709	203	215	160	252	88	115	22	52
Maine	74	61	66	22	20	7	11	-	-	5	4
N.H.	72	83	80	8	16	17	18	12	9	1	-
Vt.	23	45	23	5	7	1	6	1	11	-	-
Mass.	1,014	2,103	2,300	82	83	61	148	70	75	13	32
R.I.	184	380	342	25	19	8	6	5	20	3	16
Conn.	1,045	1,397	2,898	61	70	66	63	-	-	N	N
MID. ATLANTIC	12,777	25,014	32,681	1,166	1,239	893	1,088	296	360	139	177
Upstate N.Y.	1,634	3,846	7,440	302	427	284	288	156	172	38	42
N.Y. City	6,547	8,598	12,524	566	464	279	243	1	1	3	5
N.J.	2,983	3,226	3,904	139	226	189	283	106	157	21	34
Pa.	1,613	9,344	8,813	159	122	141	274	33	30	77	96
E.N. CENTRAL	3,613	54,696	58,843	2,082	1,720	698	857	204	254	244	327
Ohio	733	16,157	15,806	1,328	627	84	125	8	17	123	155
Ind.	383	6,038	6,366	128	282	174	152	5	8	57	35
Ill.	1,525	15,400	18,042	217	430	94	226	33	69	13	29
Mich.	721	12,905	12,979	275	207	306	280	158	160	24	59
Wis.	251	4,196	5,650	134	174	40	74	-	-	27	49
W.N. CENTRAL	1,091	14,343	16,401	1,376	879	449	481	95	67	87	78
Minn.	243	2,070	2,435	144	168	44	46	2	14	4	2
Iowa	55	1,151	1,068	50	44	32	24	11	8	17	28
Mo.	476	8,180	9,044	991	445	313	357	56	18	44	25
N. Dak.	5	20	30	23	5	4	-	7	1	4	4
S. Dak.	11	128	148	39	30	2	2	1	-	1	1
Nebr.	80	697	1,002	34	103	22	24	6	10	10	13
Kans.	221	2,097	2,674	95	84	32	28	12	16	7	5
S. ATLANTIC	12,200	73,928	78,041	916	899	1,029	1,531	239	328	162	279
Del.	220	1,620	1,398	7	21	2	12	1	1	2	31
Md.	1,635	7,471	13,675	159	129	193	250	3	17	26	64
D.C.	738	3,267	5,355	18	17	15	36	-	-	4	6
Va.	965	7,946	9,827	157	125	86	92	13	20	15	6
W. Va.	77	498	580	17	11	40	29	41	23	3	3
N.C.	712	17,720	20,075	85	100	224	212	45	50	30	19
S.C.	671	9,125	9,676	36	31	37	25	17	7	29	10
Ga.	1,628	11,257	U	55	26	63	515	15	170	23	97
Fla.	5,554	15,024	17,455	382	439	369	360	104	40	30	43
E.S. CENTRAL	1,551	30,540	34,216	1,117	459	618	878	747	696	41	70
Ky.	197	3,565	3,667	32	122	51	66	21	23	8	8
Tenn.	638	9,825	10,919	894	201	487	752	724	658	24	36
Ala.	411	12,460	11,742	65	76	80	60	2	15	6	11
Miss.	305	4,690	7,888	126	60	-	-	-	-	3	15
W.S. CENTRAL	4,178	23,071	35,832	2,998	2,288	1,231	934	500	234	12	35
Ark.	186	2,350	5,018	343	150	36	22	4	7	1	6
La.	715	8,220	8,774	93	120	152	128	130	128	2	12
Okla.	196	1,496	3,651	661	224	376	102	323	45	3	11
Tex.	3,081	11,005	18,389	1,901	1,794	667	682	43	54	6	6
MOUNTAIN	1,466	6,308	7,323	2,933	3,416	566	492	332	339	87	73
Mont.	16	51	66	94	18	19	18	11	10	4	14
Idaho	37	92	65	238	260	61	65	40	64	2	1
Wyo.	10	41	58	87	23	16	20	134	125	7	4
Colo.	491	2,147	2,514	400	362	89	77	53	57	33	15
N. Mex.	123	734	732	614	836	217	156	37	42	4	3
Ariz.	392	2,334	2,428	841	1,353	86	52	34	15	9	9
Utah	98	131	188	541	384	51	60	9	13	13	6
Nev.	299	778	1,272	118	180	27	44	14	13	15	21
PACIFIC	8,097	18,826	23,678	6,801	6,355	1,518	1,856	601	648	107	55
Wash.	667	1,957	2,164	593	826	137	173	152	191	20	10
Oreg.	285	212	748	1,456	742	62	111	29	30	-	-
Calif.	6,910	15,706	19,542	4,597	4,577	1,297	1,536	385	422	82	43
Alaska	53	520	679	34	170	9	12	1	-	-	-
Hawaii	182	431	545	121	40	13	24	34	5	5	2
Guam	-	51	97	2	22	1	4	-	-	1	1
P.R.	1,851	426	371	81	47	452	259	177	130	-	-
V.I.	27	6	22	-	3	2	7	-	1	-	-
Amer. Samoa	-	19	24	6	8	-	-	-	-	-	-
C.N.M.I.	-	23	41	15	6	7	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, National Center for Prevention Services, last update August 31, 1995.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 23, 1995, and September 24, 1994 (38th Week)

Reporting Area	Lyme Disease		Malaria		Measles (Rubeola)						Meningococcal Infections		Mumps	
					Indigenous		Imported*		Total					
	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	1995	Cum. 1995	1995	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	5,979	8,808	866	781	-	241	1	21	262	856	2,228	2,046	593	1,062
NEW ENGLAND	1,540	2,141	37	56	-	6	-	1	7	27	102	93	10	17
Maine	16	17	5	4	-	-	-	-	-	5	8	19	4	3
N.H.	19	20	1	3	-	-	-	-	-	1	19	8	1	4
Vt.	8	13	1	3	-	-	-	-	-	3	6	2	-	-
Mass.	129	137	12	27	-	1	-	1	2	7	37	41	2	2
R.I.	272	312	4	6	-	5	-	-	5	7	-	-	1	2
Conn.	1,096	1,642	14	13	-	-	-	-	-	4	32	23	2	6
MID. ATLANTIC	3,565	5,179	232	156	-	6	-	4	10	212	263	217	85	93
Upstate N.Y.	1,874	3,260	51	42	-	1	-	-	1	17	80	70	24	27
N.Y. City	153	12	117	56	-	2	-	3	5	14	35	26	13	7
N.J.	713	1,057	47	35	-	3	-	1	4	173	75	48	6	13
Pa.	825	850	17	23	-	-	-	-	-	8	73	73	42	46
E.N. CENTRAL	64	459	82	83	-	7	-	3	10	102	296	300	102	174
Ohio	42	32	9	12	-	1	-	-	1	17	91	86	32	42
Ind.	14	15	14	11	-	-	-	-	-	1	41	40	3	7
Ill.	3	23	32	39	-	-	-	2	2	56	71	98	31	83
Mich.	5	5	15	18	-	4	-	1	5	25	56	45	36	33
Wis.	-	384	12	3	-	2	-	-	2	3	37	31	-	9
W.N. CENTRAL	179	203	18	33	-	2	-	-	2	170	148	133	38	55
Minn.	117	106	3	11	-	-	-	-	-	-	24	12	2	4
Iowa	9	13	1	4	-	-	-	-	-	7	26	18	9	13
Mo.	34	73	6	11	-	1	-	-	1	160	60	64	21	33
N. Dak.	-	-	1	1	-	-	-	-	-	-	1	1	1	4
S. Dak.	-	-	2	-	-	-	-	-	-	-	5	8	-	-
Nebr.	1	3	3	4	-	-	-	-	-	2	12	10	4	1
Kans.	18	8	2	2	-	1	-	-	1	1	20	20	1	-
S. ATLANTIC	422	623	182	154	-	10	-	1	11	59	402	300	87	152
Del.	7	91	1	3	-	-	-	-	-	-	6	5	-	-
Md.	267	200	49	53	-	-	-	1	1	4	28	26	20	43
D.C.	1	6	15	12	-	-	-	-	-	-	3	4	-	-
Va.	43	113	40	21	-	-	-	-	-	2	50	54	19	35
W. Va.	21	15	2	-	-	-	-	-	-	37	8	12	-	3
N.C.	44	69	15	9	-	-	-	-	-	3	64	42	16	35
S.C.	16	7	1	4	-	-	-	-	-	-	52	19	9	7
Ga.	12	109	22	27	-	2	-	-	2	3	80	65	8	8
Fla.	11	13	37	25	-	8	-	-	8	10	111	73	15	21
E.S. CENTRAL	39	37	19	29	-	-	-	-	-	28	141	147	13	18
Ky.	7	21	1	10	-	-	-	-	-	-	46	33	-	-
Tenn.	20	10	7	9	-	-	-	-	-	28	37	27	-	6
Ala.	7	6	8	9	-	-	-	-	-	-	31	57	4	5
Miss.	5	-	3	1	-	-	-	-	-	-	27	30	9	7
W.S. CENTRAL	82	95	39	36	-	21	1	3	24	16	277	246	36	190
Ark.	5	8	3	3	-	2	-	-	2	1	22	38	3	5
La.	3	1	4	6	-	17	-	1	18	1	39	31	9	22
Okla.	36	52	1	4	-	-	-	-	-	-	26	24	-	23
Tex.	38	34	31	23	-	2	1	2	4	14	190	153	24	140
MOUNTAIN	7	12	46	25	-	67	-	1	68	163	158	140	23	129
Mont.	-	-	3	-	-	-	-	-	-	-	2	6	1	-
Idaho	-	3	1	2	-	-	-	-	-	-	7	15	2	7
Wyo.	3	3	-	1	-	-	-	-	-	-	7	6	-	2
Colo.	-	1	22	11	-	26	-	-	26	19	42	27	1	3
N. Mex.	1	3	4	3	-	30	-	1	31	-	31	13	N	N
Ariz.	-	-	7	2	-	10	-	-	10	1	48	48	2	91
Utah	1	1	5	4	-	-	-	-	-	134	14	18	11	14
Nev.	2	1	4	2	-	1	-	-	1	9	7	7	6	12
PACIFIC	81	59	211	209	-	122	-	8	130	79	441	470	199	234
Wash.	10	1	16	23	-	16	-	4	20	3	73	73	10	14
Oreg.	4	6	9	14	-	1	-	-	1	2	70	103	N	N
Calif.	67	52	174	159	-	105	-	3	108	61	287	287	171	201
Alaska	-	-	2	1	-	-	-	-	-	9	7	2	13	3
Hawaii	-	-	10	12	-	-	-	1	1	4	4	5	5	16
Guam	-	-	-	-	U	-	U	-	-	228	3	-	3	6
P.R.	-	-	1	4	-	11	-	-	11	11	23	6	2	2
V.I.	-	-	-	-	U	-	U	-	-	-	-	-	2	4
Amer. Samoa	-	-	-	-	U	-	U	-	-	-	-	-	-	2
C.N.M.I.	-	-	1	1	U	-	U	-	-	29	-	-	-	2

*For imported measles, cases include only those resulting from importation from other countries.
N: Not notifiable U: Unavailable -: no reported cases

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 23, 1995, and September 24, 1994 (38th Week)

Reporting Area	Pertussis			Rubella			Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	1995	Cum. 1995	Cum. 1994	1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	109	2,742	2,760	2	115	207	10,880	15,616	13,973	15,914	5,161	5,614
NEW ENGLAND	17	351	296	-	34	128	129	168	371	363	1,155	1,377
Maine	1	26	12	-	1	-	2	4	12	21	21	-
N.H.	2	27	65	-	1	-	1	4	15	13	117	116
Vt.	3	57	37	-	-	-	-	-	3	6	139	104
Mass.	11	227	154	-	7	124	46	72	204	184	352	519
R.I.	-	2	5	-	-	2	3	12	37	35	254	40
Conn.	-	12	23	-	25	2	77	76	100	104	272	598
MID. ATLANTIC	17	230	450	-	11	6	618	1,041	2,879	3,237	967	1,488
Upstate N.Y.	8	117	184	-	4	5	43	131	346	407	364	1,102
N.Y. City	-	21	83	-	7	-	287	464	1,527	1,890	-	-
N.J.	-	5	12	-	-	1	129	170	550	558	266	208
Pa.	9	87	171	-	-	-	159	276	456	382	337	178
E.N. CENTRAL	7	260	412	-	4	9	1,898	2,334	1,401	1,508	65	50
Ohio	5	108	106	-	-	-	644	905	199	247	10	4
Ind.	-	18	47	-	-	-	201	186	173	134	12	12
Ill.	1	63	87	-	1	1	712	788	685	761	3	16
Mich.	1	59	43	-	3	8	210	211	290	322	33	10
Wis.	-	12	129	-	-	-	131	244	54	44	7	8
W.N. CENTRAL	9	185	129	-	-	2	581	915	434	413	246	165
Minn.	8	88	51	-	-	-	34	37	100	95	18	14
Iowa	-	7	9	-	-	-	37	46	48	43	96	67
Mo.	-	41	33	-	-	2	475	779	164	183	19	18
N. Dak.	-	8	4	-	-	-	-	1	3	7	23	10
S. Dak.	1	11	14	-	-	-	-	1	19	20	49	28
Nebr.	-	8	8	-	-	-	9	11	20	16	5	-
Kans.	-	22	10	-	-	-	26	40	80	49	36	28
S. ATLANTIC	8	244	255	1	26	15	2,797	4,008	2,392	2,860	1,603	1,493
Del.	1	10	2	-	-	-	10	21	12	31	74	44
Md.	1	23	58	-	-	-	137	221	241	232	265	412
D.C.	-	5	7	-	-	-	81	167	77	94	11	2
Va.	-	15	29	-	-	-	458	599	167	248	309	298
W. Va.	-	-	4	-	-	-	9	8	56	60	92	59
N.C.	-	84	58	-	1	-	838	1,245	321	355	365	127
S.C.	-	20	12	-	1	-	446	579	226	272	98	139
Ga.	2	24	24	-	1	2	538	606	323	525	204	287
Fla.	4	63	61	1	23	13	280	562	969	1,043	185	125
E.S. CENTRAL	2	252	119	-	-	-	2,827	2,841	1,076	1,074	216	149
Ky.	-	11	58	-	-	-	152	152	216	235	22	17
Tenn.	-	203	18	-	-	-	633	777	294	347	72	34
Ala.	1	35	31	-	-	-	496	518	305	306	115	94
Miss.	1	3	12	N	N	N	1,546	1,394	261	186	7	4
W.S. CENTRAL	11	220	109	-	7	12	1,416	3,414	1,743	2,071	527	514
Ark.	-	28	22	-	-	-	82	374	113	198	21	24
La.	1	13	10	-	-	-	764	1,318	6	11	25	55
Okla.	4	14	22	-	-	4	54	114	146	191	31	28
Tex.	6	165	55	-	7	8	516	1,608	1,478	1,671	450	407
MOUNTAIN	5	408	376	1	5	5	197	205	451	411	134	121
Mont.	-	3	6	-	-	-	4	2	10	9	39	14
Idaho	-	80	44	-	-	-	-	1	11	11	1	3
Wyo.	-	1	-	1	1	-	4	-	2	7	22	17
Colo.	-	68	184	-	-	-	95	107	37	49	9	11
N. Mex.	4	83	20	-	-	-	32	18	60	43	5	6
Ariz.	-	149	97	-	3	-	30	39	228	161	39	50
Utah	1	19	23	-	1	4	4	10	24	38	13	12
Nev.	-	5	2	-	-	1	28	28	79	93	6	8
PACIFIC	33	592	614	-	28	30	417	690	3,226	3,977	248	257
Wash.	32	206	86	-	2	-	11	28	181	197	5	15
Oreg.	-	26	86	-	1	4	6	29	25	90	-	9
Calif.	-	319	427	-	22	22	399	627	2,848	3,454	239	201
Alaska	-	-	-	-	-	-	1	3	53	51	4	32
Hawaii	1	41	15	-	3	4	-	3	119	185	-	-
Guam	U	-	2	U	-	1	3	3	33	62	-	-
P.R.	-	12	2	-	-	-	221	235	123	150	44	66
V.I.	U	-	-	U	-	-	2	24	-	-	-	-
Amer. Samoa	U	-	1	U	-	-	-	1	3	4	-	-
C.N.M.I.	U	-	-	U	-	-	4	1	13	25	-	-

U: Unavailable -: no reported cases

TABLE III. Deaths in 121 U.S. cities,* week ending September 23, 1995 (38th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	489	317	87	61	11	9	28
Boston, Mass.	141	85	28	19	3	6	4
Bridgeport, Conn.	21	15	2	4	-	-	-
Cambridge, Mass.	25	20	2	2	-	-	4
Fall River, Mass.	19	14	4	-	1	-	1
Hartford, Conn.	51	32	4	11	4	-	2
Lowell, Mass.	14	7	3	4	-	-	1
Lynn, Mass.	13	6	2	1	1	-	1
New Bedford, Mass.	30	21	3	6	-	-	2
New Haven, Conn.	46	23	14	6	2	1	3
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	4	4	-	-	-	-	-
Springfield, Mass.	45	27	13	4	-	1	5
Waterbury, Conn.	25	17	6	2	-	-	1
Worcester, Mass.	55	46	6	2	-	1	4
MID. ATLANTIC	2,543	1,622	499	303	58	55	127
Albany, N.Y.	37	29	6	2	-	-	-
Allentown, Pa.	18	13	4	1	-	-	1
Buffalo, N.Y.	100	74	12	7	5	2	5
Camden, N.J.	26	19	4	2	-	1	1
Elizabeth, N.J.	32	21	7	4	-	-	-
Erie, Pa.§	40	29	8	3	-	-	3
Jersey City, N.J.	42	20	15	2	4	1	-
New York City, N.Y.	1,224	756	248	173	25	22	36
Newark, N.J.	55	19	15	15	3	3	6
Paterson, N.J.	23	10	5	2	1	-	1
Philadelphia, Pa.	500	309	111	54	16	9	36
Pittsburgh, Pa.§	90	55	17	11	3	4	9
Reading, Pa.	21	16	5	-	-	-	3
Rochester, N.Y.	123	93	19	8	-	3	13
Schenectady, N.Y.	17	11	4	2	-	-	2
Scranton, Pa.§	26	25	1	-	-	-	1
Syracuse, N.Y.	105	76	10	9	1	9	5
Trenton, N.J.	42	30	6	5	-	1	5
Utica, N.Y.	22	17	2	3	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,090	1,362	404	186	69	64	125
Akron, Ohio	43	27	14	1	-	1	-
Canton, Ohio	34	24	5	2	2	1	1
Chicago, Ill.	454	250	112	43	25	23	36
Cincinnati, Ohio	110	80	10	10	4	6	11
Cleveland, Ohio	137	89	26	16	2	4	2
Columbus, Ohio	178	131	22	17	3	5	14
Dayton, Ohio	147	115	21	6	4	1	6
Detroit, Mich.	213	122	51	26	6	4	8
Evansville, Ind.	35	26	3	4	1	1	1
Fort Wayne, Ind.	66	51	9	5	-	1	-
Gary, Ind.	21	12	4	3	2	-	-
Grand Rapids, Mich.	64	45	13	3	2	1	5
Indianapolis, Ind.	190	113	46	21	5	5	14
Madison, Wis.	79	49	13	10	2	5	8
Milwaukee, Wis.	108	77	20	6	3	2	6
Peoria, Ill.	31	22	6	1	1	1	6
Rockford, Ill.	38	21	8	7	1	1	3
South Bend, Ind.	50	35	11	1	3	-	2
Toledo, Ohio	92	73	10	4	3	2	2
Youngstown, Ohio	U	U	U	U	U	U	U
W.N. CENTRAL	764	536	122	55	16	18	41
Des Moines, Iowa	59	43	9	5	-	2	3
Duluth, Minn.	28	19	5	3	-	1	2
Kansas City, Kans.	16	12	2	1	1	-	-
Kansas City, Mo.	101	56	16	5	5	2	5
Lincoln, Nebr.	30	23	3	2	1	1	3
Minneapolis, Minn.	217	151	35	20	5	6	12
Omaha, Nebr.	87	75	10	1	-	1	8
St. Louis, Mo.	123	85	21	11	3	3	2
St. Paul, Minn.	53	38	12	2	-	1	5
Wichita, Kans.	50	34	9	5	1	1	1
S. ATLANTIC	1,210	732	222	182	44	29	53
Atlanta, Ga.	167	79	40	33	11	4	3
Baltimore, Md.	196	118	31	36	6	5	16
Charlotte, N.C.	106	74	20	9	1	2	-
Jacksonville, Fla.	125	86	23	13	2	1	7
Miami, Fla.	130	88	17	19	4	1	4
Norfolk, Va.	58	35	9	10	1	3	2
Richmond, Va.	61	42	9	7	1	2	-
Savannah, Ga.	U	U	U	U	U	U	U
St. Petersburg, Fla.	53	36	9	7	-	1	3
Tampa, Fla.	136	94	23	11	4	4	12
Washington, D.C.	171	78	41	37	9	6	6
Wilmington, Del.	7	2	-	-	5	-	-
E.S. CENTRAL	765	484	169	79	21	11	40
Birmingham, Ala.	122	78	25	9	8	1	8
Chattanooga, Tenn.	54	36	12	4	1	1	-
Knoxville, Tenn.	63	47	9	6	-	1	3
Lexington, Ky.	46	31	7	3	2	3	5
Memphis, Tenn.	185	103	52	25	4	1	10
Mobile, Ala.	76	43	18	11	4	-	2
Montgomery, Ala.	51	33	11	4	2	1	-
Nashville, Tenn.	168	113	35	17	-	3	12
W.S. CENTRAL	1,253	797	243	116	62	34	49
Austin, Tex.	58	34	12	10	-	2	5
Baton Rouge, La.	70	38	12	11	4	5	-
Corpus Christi, Tex.	73	53	8	4	4	4	2
Dallas, Tex.	184	97	45	23	14	5	2
El Paso, Tex.	76	47	17	8	4	-	7
Ft. Worth, Tex.	104	53	26	13	12	-	5
Houston, Tex.	76	52	14	3	3	3	9
Little Rock, Ark.	74	51	10	7	3	3	4
New Orleans, La.	138	84	29	17	5	3	-
San Antonio, Tex.	191	138	33	7	9	4	9
Shreveport, La.	93	63	16	9	3	2	2
Tulsa, Okla.	116	87	21	4	1	3	4
MOUNTAIN	874	566	165	100	26	16	46
Albuquerque, N.M.	68	40	21	4	3	-	4
Colo. Springs, Colo.	50	38	5	6	1	-	2
Denver, Colo.	97	67	14	12	2	2	6
Las Vegas, Nev.	180	104	43	25	6	1	8
Ogden, Utah	29	25	3	1	-	-	2
Phoenix, Ariz.	186	115	32	26	4	9	16
Pueblo, Colo.	34	23	9	2	-	-	-
Salt Lake City, Utah	94	59	17	11	6	1	2
Tucson, Ariz.	136	95	21	13	4	3	6
PACIFIC	1,911	1,282	335	184	65	37	130
Berkeley, Calif.	17	14	2	1	-	-	2
Fresno, Calif.	79	54	11	8	1	4	3
Glendale, Calif.	33	26	3	3	1	-	1
Honolulu, Hawaii	66	51	9	5	-	1	-
Long Beach, Calif.	95	65	19	6	3	2	12
Los Angeles, Calif.	537	342	99	59	29	2	20
Pasadena, Calif.	38	27	7	-	-	4	2
Portland, Oreg.	117	81	22	5	4	5	1
Sacramento, Calif.	169	117	28	11	9	4	18
San Diego, Calif.	156	99	26	19	5	6	33
San Francisco, Calif.	146	86	34	21	3	2	13
San Jose, Calif.	162	117	22	17	2	4	18
Santa Cruz, Calif.	30	26	3	1	-	-	2
Seattle, Wash.	126	77	28	16	3	2	2
Spokane, Wash.	40	30	4	2	3	1	1
Tacoma, Wash.	100	70	18	10	2	-	2
TOTAL	11,899¶	7,698	2,246	1,266	372	273	639

*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.
U: Unavailable -: no reported cases

Rape — Continued

(NC-DEHNR), surveyed RCCs in North Carolina, then compared estimates of the annual incidence based on RCC and UCR data for selected counties during 1989–1993. This report summarizes the results of the survey and comparative analysis.

A questionnaire developed by NC-DEHNR was mailed to each of the 52 RCCs operating in the state during 1994; each RCC served a single county or a group of adjoining counties. RCCs that did not respond to the initial mailing received an additional mailing and one telephone call. Of the 52 RCCs, 35 (67%) responded: 18 provided information about rape victims served in all 5 years of the study period and 13 for 1–4 years; three did not maintain client records with sufficient information for any of the years; and one did not begin serving clients until 1994 and was excluded. Responding and nonresponding RCCs had similar geographic distributions across the state, and similar proportions of both groups were located in predominantly rural counties.

Although the survey requested information about clients whose assaults met the UCR definition of forcible rape, approximately 70% (range: 19 [61%] of 31 RCCs in 1993 to 16 [76%] of 21 RCCs in 1990) of the RCCs were unable to distinguish UCR-defined rapes from other types of assaults. For these RCCs, NC-DEHNR used information provided by the North Carolina Council for Women (NCCW) for 1993 to estimate the proportions of clients whose assaults met the UCR definition of rape. NCCW provides partial funding to all RCCs in North Carolina and collects data from each RCC about the proportion of clients who experienced sexual assault, attempted rape, or marital rape (the combination of these three categories most closely matches the UCR definition of forcible rape). County-specific information about rapes during 1989–1993 was obtained from annual summaries of UCR data prepared by the State Bureau of Investigation. For comparisons of UCR- and RCC-based rape rates, county-specific UCR data were included only for counties served by participating RCCs. Women of any age were included in data from both RCCs and the UCR.

By year, UCR-based rates were 8%–14% higher than RCC-based rates for 1989 and 1990, while during 1991–1993, annual RCC-based rates were 15%–48% higher than UCR-based rates (Table 1). Analysis restricted to only the 18 RCCs that provided data for each of the 5 years was consistent with this pattern. Analysis restricted to only those RCCs that provided information about assaults meeting the UCR definition of forcible rape indicated that the corresponding RCC-based rates for 1989–1993 were 23%–136% higher than the corresponding UCR-based rates.

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Editorial Note: The findings in this report indicate the inconsistency of rape estimates in North Carolina between sources and over time. Similar discrepancies exist among various sources of national estimates of rape incidence, including the FBI's nationwide UCR (*6*) used in this report, the National Women's Study (*7*), and the National Crime Victimization Survey (*8*). Each of these sources employs different methods for defining rape and collecting information and yields different estimates of the magnitude of the problem (Table 2). The lack of a standard definition and the different methods for estimating the incidence of rape have constrained both the public health surveillance of this problem and comparisons across data sets. In particular, the determination of

Rape — Continued

TABLE 1. Number and rate* of reported rapes† based on rape crisis center (RCC) data and on the Federal Bureau of Investigation's Uniform Crime Reporting Program (UCR) data — North Carolina, 1989–1993

	RCC			UCR	
Year	No. providing data§	No. rapes	Rate	No. rapes	Rate
1989	18	529	64.3	571	69.4
1990	21	907	79.5	1032	90.5
1991	23	1322	106.4	1150	92.5
1992	26	1850	127.4	1247	85.8
1993	31	1954	115.7	1352	80.0

*Per 100,000 women.
†Defined as the carnal knowledge of a woman forcibly and against her will. Assaults or attempts to commit rape by force or threat of force are included; statutory rape (without force) and other sex offenses are excluded.
§Of 52 RCCs operating during 1994, 35 (67%) responded: 18 provided information about rape victims served in all 5 years of the study period and 13 for 1–4 years; three did not maintain client records with sufficient information for any of the years; and one did not begin serving clients until 1994 and was excluded.

age-specific and sex-specific counts and rates would enable more valid comparisons over time and between population groups.

To consider issues related to the improvement of surveillance for rape, CDC recently convened separate meetings of experts about rape (state health department representatives, researchers, and rape-victim advocates) and state sexual assault prevention coordinators. These groups recommended

- developing consistent definitions of rape—varying interpretations and use of terms such as rape, completed rape, attempted rape, sexual assault, and child sexual abuse impede understanding and prevention of the problem.
- determining the best sources for surveillance data for rape—although potentially useful sources include records from hospitals, emergency departments, RCCs, other health and human service providers, the justice system, police departments, and population surveys, linkage of such sources would enable more precise estimation of the incidence of rape; confidentiality must be an essential component of any such surveillance system.
- modifying and developing surveillance systems to capture at least the type of incident (e.g., rape or sexual assault), relationship between victim and perpetrator, sex of victim, and age of victim both at the time of the report and at the time of the incident (many victims report only after prolonged periods).

The findings of this analysis in North Carolina and of the comparison of national data sources document the effects of different data sources on estimates of the incidence of reported rape and suggest approaches for improving surveillance. In conjunction with advocates for rape victims and other groups, CDC is assisting in the development of standard public health definitions of rape and sexual assault that, when adopted, will enable comparability across data sources. Surveillance as an initial process in the public health approach will enable more accurate documentation of the magnitude of the problem and assist efforts to further identify the long-term physical and mental health consequences associated with rape.

TABLE 2. Descriptive features and data about rape from the National Women's Study (NWS), the National Crime Victimization Survey (NCVS), the NCVS-Revised, and the Uniform Crime Reporting Program (UCR) — United States

Data source	Year(s)	Study type	Definition of rape	Estimated no. rapes during 12 months	Annual rape rate*
NWS	Fall 1989–Fall 1990	Longitudinal phone survey of national household probability sample of women	Sexual penetration with force, threat of harm, or nonconsent	683,000 completed	710 women aged ≥18 years (*9*)
NCVS	1990	Ongoing series of phone and in-person interviews with a national probability sample of households	Carnal knowledge with use or threat of force, or attempts	130,260 completed and attempted rapes†	60 persons aged ≥12 years§
NCVS-Revised¶	1992–1993	Same as NCVS	Physical force or psychologic coercion to engage in sexual intercourse	172,400 completed rapes	160 women aged ≥12 years**
			No definition of attempted rape is given	141,200 attempted rapes	130 women aged ≥12 years**
UCR	1990	Ongoing surveillance system based on data reported to state and local law enforcement agencies	Carnal knowledge of a woman with force and against her will, includes attempts and threats of force	102,555 completed and attempted rapes	80 women of any age

* Per 100,000.
† The NCVS presents these data combining rapes involving female and male victims of rape.
§ Rate for women: 100 per 100,000; rate for men: 20 per 100,000 but may be unstable because of too few cases.
¶ In the original NCVS, respondents were not specifically asked about rape experiences. After a series of questions about threats of beatings and threats of harm with knives, guns, and other weapons, respondents were asked, "Did anyone try to attack you in some other way?". The NCVS-Revised uses more direct rape screening questions, includes prompts about types of potential rapists (e.g., strangers, casual acquaintances, and persons known well), and collects information on an array of sexual assaults in addition to rape (*10*).
** The early report on the NCVS-Revised presents data only about rapes involving female victims although data also were collected about male victims.

Rape — Continued

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Knowledge and Use of Folic Acid by Women of Childbearing Age — United States, 1995

Each year in the United States approximately 2500 infants are born with spina bifida and anencephaly (*1*), and an estimated 1500 fetuses affected by these birth defects are aborted. Recent studies indicate that the B vitamin folic acid can reduce the risk for spina bifida and anencephaly by at least 50% when consumed daily before conception and during early pregnancy. In September 1992, the Public Health Service (PHS) recommended that all women of childbearing age who are capable of becoming pregnant consume 0.4 mg of folic acid daily (*1*). Folic acid can be obtained from multivitamins or other supplements containing folic acid and some breakfast cereals. This report summarizes the results of a survey conducted during January–February 1995 regarding knowledge and practices of women of childbearing age in the United States about consumption of folic acid from supplements and breakfast cereals.

During January–February 1995, The Gallup Organization conducted for the March of Dimes Birth Defects Foundation a proportionate, stratified random-digit–dialed telephone survey of a national sample of 2010 women aged 18–45 years. The response rate was 50%. Respondents were asked, "Have you ever heard or read anything about folic acid?" Respondents also were asked, "From what you know, is there anything a woman can do to reduce her risk of having a baby with birth defects?" and "To the best of your knowledge, can consuming vitamins during pregnancy reduce the risk of birth defects?" For this analysis, estimates were statistically weighted to reflect the total population of women aged 18–45 years in the continental United States residing

Folic Acid — Continued

in households with telephones. The margin of error for estimates based on the total sample size within 95% confidence intervals is 2%.

Overall, 52% of women reported ever hearing of or reading about folic acid. Of these, 9% answered that folic acid helps to prevent birth defects and 6% that folic acid helps reduce the risk for spina bifida; 45% were unable to recall what they had heard or read. Fifteen percent of respondents reported having knowledge of the PHS recommendation regarding the use of folic acid; 4% reported that the recommendation was for prevention of birth defects and 1%, for prevention of spina bifida.

A total of 88% of respondents reported that a woman can help reduce the risk for having an infant with birth defects. The most common responses about how to reduce risk were avoiding alcohol and drugs (73%), and not smoking (63%); 1% reported that folic acid could reduce risk. Overall, 56% reported that consumption of vitamins during pregnancy can reduce the risk for having an infant with birth defects, and 78% reported that women should take multivitamins before pregnancy. The most frequently mentioned supplements respondents believed to be especially important to women of childbearing age and to pregnant women were iron (27%), calcium (26%), multivitamins (20%), vitamin C (14%), and folic acid (6%).

Overall, 25% of nonpregnant women of childbearing age reported taking a daily vitamin supplement containing folic acid. Of women who had been pregnant during the 2 years preceding the survey, 20% reported taking the vitamins before pregnancy. Among women who did not take vitamin or mineral supplements daily, the most frequently cited reasons for not taking them were "Don't feel I need them," (22%); "Forget to take them," (18%); and "Get balanced nutrition from foods," (12%).

Overall, 77% of women surveyed reported eating at least one serving of breakfast cereal each week; 14% reported eating at least seven servings per week. The average number of servings per week was three. Most cereals eaten contained 0.1 mg folic acid per serving, and few (6%) respondents who included cereals in their diets reported eating a cereal that contains 0.4 mg folic acid per serving.

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Editorial Note: A convenient method for a woman to achieve the PHS recommendation for the use of folic acid to reduce the risk for spina bifida and anencephaly is to take daily a vitamin supplement that contains 0.4 mg folic acid or eat a breakfast cereal containing 0.4 mg folic acid per serving. The findings in this report indicate that only 25% of nonpregnant women in the United States regularly consumed a vitamin supplement containing 0.4 mg folic acid, and only a small proportion ate a breakfast cereal containing 0.4 mg folic acid per serving. A previous report indicated that among women in South Carolina who had given birth during October 1992–September 1994, only 12% had used folic acid-containing vitamin supplements during the periconceptional period (*2*). In addition to consumption of folic acid-containing supplements or breakfast cereals, women can increase their consumption of folates by choosing foods consistent with the U.S. Dietary Guidelines for Americans and the U.S. dietary pyramid (e.g., orange juice and green leafy vegetables) (*1*).

An important limitation of this telephone survey was the low response rate (50%). In particular, knowledge and behavior patterns of nonparticipants may have been different from those of participants. Because participating women were more highly

Folic Acid — Continued

educated than the total U.S. population, the prevalence of use of vitamin supplements may have been higher among these women than U.S. women in general because vitamin usage increases with education (*3*). Additional surveys of a more representative sample of women of childbearing age in the United States will be necessary to obtain more precise estimates of the use of vitamin supplements among such women. Nonetheless, the findings in this report and the South Carolina study (*2*) suggest the need to increase knowledge of the importance of consuming folic acid among women of childbearing age and to heighten awareness among women about the potential benefits of taking folic acid on a daily basis.

Strategies for educating women about folic acid include reporting the issues in the news media, widely distributing informational materials (e.g., in physicians' offices, clinics, schools, and health clubs), and encouraging health-care providers to emphasize consistently the importance of daily consumption of folic acid when speaking to women of childbearing age. The most effective and efficient methods for increasing knowledge of the benefits of increased folic acid consumption and for changing behavior to increase use should be determined by additional research and demonstration projects. In addition, because folic acid consumption also could be increased by the addition of folic acid to staple foods, the Food and Drug Administration has proposed requiring the addition of folic acid to a variety of enriched cereal grain products (*4*).

The March of Dimes Birth Defects Foundation is using data from this survey as an integral part of its new "Think Ahead" public education campaign to promote preparation for pregnancy. Additional information about folic acid consumption patterns among women is available from R.B. Johnston, Jr., M.D., March of Dimes Birth Defects Foundation, 1275 Mamarneck Ave., White Plains, NY 10605.

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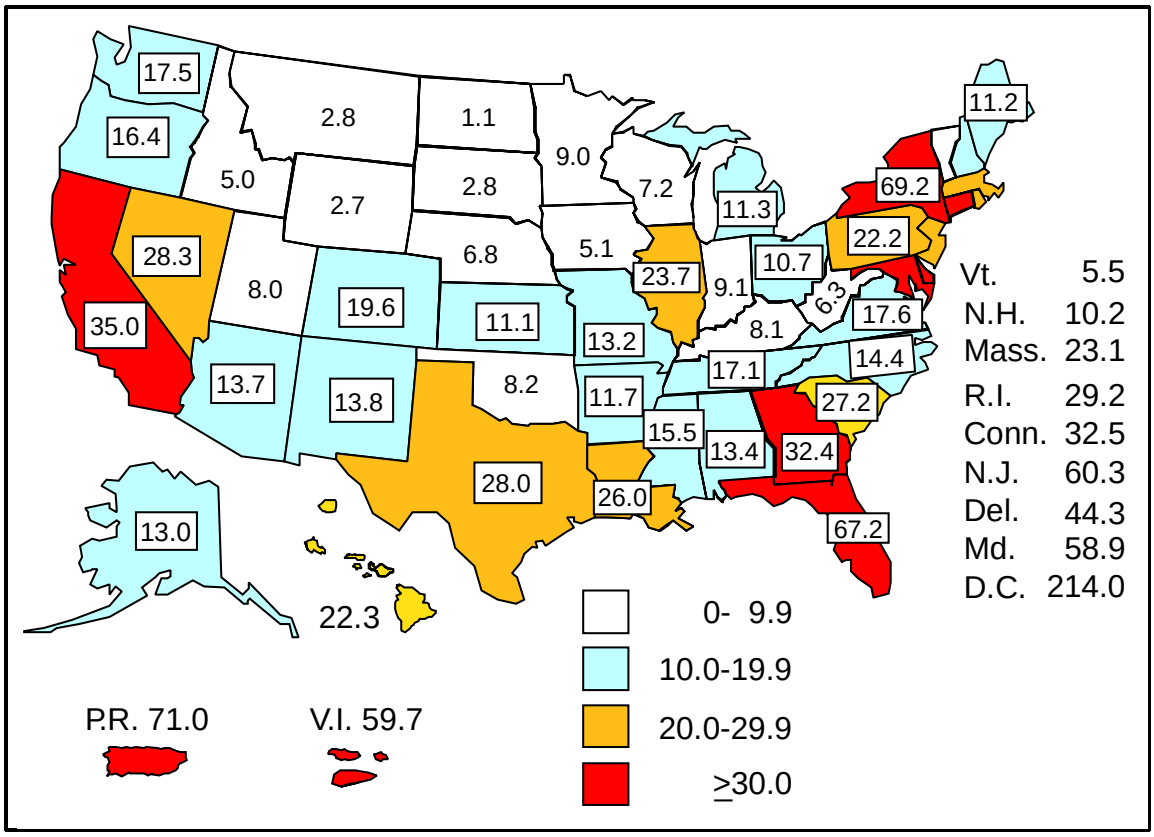
AIDS Map

The following map provides information about the reported number of acquired immunodeficiency syndrome (AIDS) cases per 100,000 population, by person's state of residence from July 1994 through June 1995. More detailed information on AIDS cases is provided in the *HIV/AIDS Surveillance Report*, single copies of which are available free from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231 or (301) 217-0023. Internet users can obtain an electronic copy of the report by accessing gopher.niaid.nih.gov.

AIDS cases per 100,000 population — United States, July 1994–June 1995



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