CDC
CENTERS FOR DISEASE CONTROL

September 18, 1992 / Vol. 41 / No. 37

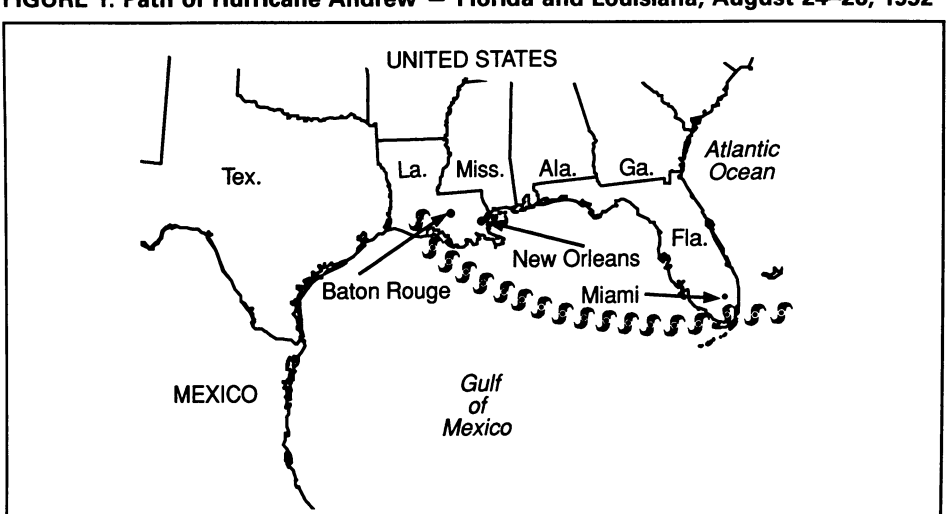
MMWR
MORBIDITY AND MORTALITY WEEKLY REPORT

Rapid Health Needs Assessment Following Hurricane Andrew — Florida and Louisiana, 1992

Following the impact phase of Hurricane Andrew in Florida (August 24) and Louisiana (August 26) (Figure 1), the primary objectives of the public health response have been to address the health and medical needs of residents in the storm-damaged areas and to provide data for relief interventions and decision-making. This report presents the combined findings from rapid health needs assessment surveys conducted by state health departments with CDC assistance 3–10 days postimpact.

Population-based epidemiologic surveys were conducted in the areas of Florida and Louisiana most severely damaged by the hurricane using a method originally developed to assess vaccination coverage in developing countries (*1*). Detailed maps and census information of the area were used to determine the sampling frame. Using grids of the populated areas, 30 groups of homes were randomly selected. Persons from seven households in each group were interviewed using a standardized

FIGURE 1. Path of Hurricane Andrew — Florida and Louisiana, August 24–26, 1992



Health Needs Assessment — Continued

questionnaire that included questions on number and age of residents; descriptions of illnesses and injuries; type of shelter; water supply; and availability of food, telephones, electricity, medical care, and prescription medications. Follow-up surveys of newly selected groups were conducted to determine changes in health and medical needs and availability of services.

Homestead and Florida City, Florida

On August 27, 3 days after impact of the category four (on a scale of five) hurricane, a survey of 211 households representing 1005 persons was conducted within the adjacent communities of Homestead and Florida City. This survey was repeated on September 3. With a team of 10–12 interviewers in three vehicles, the surveys were completed within 5 hours of arrival on site. No interviews were refused.

The findings of the initial survey indicated the need to restore electrical service and communications (Table 1). Sanitary facilities had been largely preserved in occupied households, and sufficient water was available to operate toilets in most households. All electrical power was supplied by portable generators, and telephone service was primarily through cellular telephone networks.

The findings of the second survey showed significant improvements in the availability of food, water, and electricity (in the form of home generators) ($p<0.05$, two-tailed test). The number of households reporting functioning toilets increased from 67% to 89%. Injuries and the need for medical services and prescription medications increased slightly; many who needed medical services were already receiving them. In both surveys, 83% of the households had access to transportation.

St. Mary Parish, Louisiana

On August 29, 3 days after Hurricane Andrew (as a category three hurricane) struck Louisiana, a disaster epidemiologic assessment team of six persons in four vehicles began a survey of St. Mary Parish, the Louisiana county hardest hit by the hurricane, using the same methods as in Florida. Because of the size of the area surveyed, the 211 interviews representing 684 persons (one third in rural areas) were conducted during a 24-hour period; no interviews were refused. A second survey was conducted on September 3.

Transportation, running water, telephones, and food were available to most of the population 3 days after the hurricane, but electricity was not generally available until after the first survey (Table 2). Few households reported hurricane-related injuries,

TABLE 1. Percentage of households with acute needs 3 and 10 days postimpact from Hurricane Andrew — Homestead and Florida City, Florida, 1992

Household characteristic	3 days postimpact August 27 (n=204)	10 days postimpact September 3 (n=211)
Requiring medical services	8%	11%
Unable to obtain prescription medication	13%	16%
Households with injured person(s)	7%	8%
Inadequate food	17%	6%*
No running water	29%	10%*
No electricity	91%	77%*
No telephone service	86%	82%

*Statistically significant change from August 27 survey ($p<0.05$, two-tailed test).

Health Needs Assessment — Continued

but the number of households reporting injuries (most of which were minor) increased slightly between the surveys. The percentage of households reporting they would have difficulty obtaining medical service if needed or had difficulty obtaining prescription medications decreased significantly ($p<0.05$, two-tailed test).

At the time of the second survey, all households had adequate supplies of food; however, 27% of the households were dependent on disaster-relief food or food stamps, and 32% were dependent on disaster-relief potable water.

Reported by: Dade County Public Health Unit; Univ of Miami School of Medicine; WG Hlady, MD, RS Hopkins, MD, State Epidemiologist, C Mahan, MD, State Health Officer, Florida Dept of Health and Rehabilitative Svcs. Tulane Univ School of Public Health and Tropical Medicine, New Orleans; L McFarland, DrPH, State Epidemiologist, LJ Hebert, MD, State Health Officer, Louisiana Dept of Health and Hospitals. American Red Cross Disaster Health Svcs. National Hurricane Center, National Weather Svc, National Oceanic and Atmospheric Administration, Coral Gables, Florida. Disaster Assessment and Epidemiology Section, Health Studies Br, and Surveillance and Programs Br, Div of Environmental Hazards and Health Effects; Emergency Response Coordination Group, Office of the Director, National Center for Environmental Health; Div of Field Epidemiology, Epidemiology Program Office, CDC.

Editorial Note: Approximately every 5 years, a category four or five hurricane makes landfall in the United States (*2*). Hurricane Andrew was one of the most devastating in 25 years. As of September 14, 42 deaths in Florida and 13 deaths in Louisiana have been associated with Hurricane Andrew; more than 30,000 houses, mobile homes, and apartment buildings were destroyed, and approximately 60,000 had major damage (J. Lee, American Red Cross, personal communication, 1992). An estimated 350,000 persons were left homeless, and damages are estimated at $30 billion. Although hurricane-warning systems in the United States are well developed, the population density in hurricane-vulnerable areas has increased substantially during the past 20 years (*3*).

Rapid epidemiologic assessment of the affected population has been recommended as the most important initial step in guiding the emergency response (*4,5*). The assessments in Florida and Louisiana were the first use of this sampling technique and health-oriented questionnaire for emergency decision-making purposes following a natural disaster. In the immediate aftermath of Hurricane Andrew,

TABLE 2. Percentage of households with acute needs 3–4 and 8 days postimpact from Hurricane Andrew — St. Mary Parish, Louisiana, 1992

Household characteristic	3–4 days postimpact August 30–31 (n=211)	8 days postimpact September 3 (n=214)
Requiring medical services	19%	6%*
Unable to obtain prescription medication	16%	6%*
Households with injured person(s)	3%	4%
Inadequate food	5%	NA†
No running water	6%	NA
No electricity	76%	13%*
No telephone service	16%	9%*

*Statistically significant change from August 30–31 survey ($p<0.05$, two-tailed test).
†NA = not assessed.

Health Needs Assessment — Continued

communications with the affected areas were severed, roadways were blocked by debris, neighborhoods were unrecognizable, and street signs had been blown away. These conditions hampered initial relief efforts, especially because many local officials had lost their homes or were inaccessible, and outside staff unfamiliar with the area were called in to respond. No accurate information on the acute medical needs of the population was available. The rapid needs assessment surveys were conducted as soon as heavily damaged areas could be traversed.

The results of these surveys were transmitted to state health authorities within 4 hours of completion of these emergency surveys, providing rapid and accurate information to health and emergency-management authorities, and were used to set priorities for response actions in both Florida and Louisiana. For example, decisions regarding the type of health-care personnel needed in the disaster areas were based on data obtained in the assessment, and an active surveillance system for infectious disease was started following the surveys. Additional benefits of the survey included assurance to residents that their needs were being recognized; control of rumors of epidemics; dissemination of information regarding available medical-treatment and supply-distribution sites; and preventive health messages were provided by the interviewers on the importance of handwashing, water treatment, proper handling and storage of food, mosquito control, and injury prevention.

The rapid needs assessment survey allowed disaster managers and other decision-makers to obtain an objective measure of the response and the recovery process. Rapid epidemiologic assessment is essential to assure that decisions on the allocation of resources are based on the best available information.

References

1. Henderson RH, Sundaresan T. Cluster sampling to assess immunization coverage: a review of experience with a simplified sampling method. Bull WHO 1982;60:253–60.
2. Herbert P, Taylor G, Case R. Hurricane experience levels of coastal county population—Texas to Maine. Miami: US Department of Commerce, National Oceanographic and Atmospheric Administration, 1984; technical memorandum NWS NHC 25.
3. French JG. Hurricanes. In: Gregg MB, ed. The public health consequences of disasters, 1989. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1989:33–7.
4. Guha-Sapir D. Rapid assessment of health needs in mass emergencies: review of current concepts and methods. World Health Stat Q 1991;44:171–81.
5. Glass RI, Noji EK. Epidemiologic surveillance following disasters. In: Halperin W, Baker EL. Public health surveillance. New York: Von Nostrand Reinhold, 1992:195–205.

Early Childhood Vaccination In Two Rural Counties — Nebraska, 1991–1992

The national vaccination objectives for the year 2000 include increasing coverage for the recommended primary vaccination series* among children aged <2 years to at least 90% and to vaccinate at least 95% of school-aged children (*1*). Although baseline data for these two goals have been obtained in numerous urban settings (*2*),

*Recommended series includes four doses of diphtheria and tetanus toxoids and pertussis vaccine (DTP); three doses of oral polio vaccine (OPV); one dose of measles-mumps-rubella vaccine (MMR); three or four doses of *Haemophilus influenzae* type b conjugate vaccine, depending on type of vaccine used; and three doses of hepatitis B vaccine.

Early Childhood Vaccination — Continued

similar baseline data from rural populations are limited. To determine the vaccination status of children in rural Nebraska, where 51% (812,000) of Nebraska's residents live, the Nebraska Department of Health, in collaboration with Hastings College, conducted a retrospective study of school-aged children in grades kindergarten through six in two rural counties during the 1991–92 school year. This report summarizes the study findings.

These data reflect the vaccination status of children born in 1980–1986. Information abstracted from school records included county of residence, school, grade, date of birth, and dates of receipt of diphtheria and tetanus toxoids and pertussis vaccine (DTP), oral polio vaccine (OPV), and measles-mumps-rubella vaccine (MMR) required for school entry. All students exempted from vaccination under the state's statutory waiver clause and all students whose records lacked a date of birth were excluded from the analysis. The Nebraska school vaccination law (school law) requires three DTP, three OPV, and one MMR vaccination before a child enters school.

Age at vaccination was defined as the interval between date of birth and date of receipt for each of four doses of DTP, three doses of OPV, and one dose of MMR. Being up-to-date (UTD) was defined as having received three doses of DTP and two doses of OPV (3:2) by the first birthday, and as having received four doses of DTP, three doses of OPV, and one dose of MMR (4:3:1) by the second birthday.

Records for 3897 children were abstracted from all 23 schools in the two counties. Eighty-four (2%) records were excluded from analysis: 13 (0.3%) lacked dates of birth, 47 (1%) were for children who were exempt, and 24 (0.6%) had irreconcilable errors for dates of vaccination.

Of the remaining 3813 children, 3358 (88%), 3723 (98%), and 3766 (99%) received at least one dose of DTP or OPV by ages 3, 12, and 24 months, respectively. UTD rates at the first birthday (3:2), the second birthday (4:3:1), and on entry to school were 85%, 64%, and 99%, respectively (Table 1). The UTD rates for the complete series at 12 and 24 months were not significantly associated with the child's county of residence, school attended, grade, or year of birth.

Because of the declining UTD rates between 12 months and 24 months of age, vaccination patterns in the interval between 12 and 24 months of age were analyzed for all children UTD at age 12 months. Of the 3257 children UTD at age 12 months, 2365 (73%) were UTD at age 24 months. Of the remaining 892 children UTD at 12 months, 77% received one or two of the three required vaccinations and 23% received no vaccinations, therefore, failing to receive all vaccines needed to be UTD by age 24 months (Table 2).

A delay beyond 3 months of age in receiving the first dose of DTP or OPV was associated with not being UTD at both 12 (3:2 series) months and 24 (4:3:1 series) months of age. Among children who did not receive DTP or OPV by age 3 months, 242 (53%) of 455 were not UTD at age 12 months, compared with 314 (9%) of 3358 children who received DTP or OPV before age 3 months (relative risk [RR] = 5.7). Similarly, for children who did not receive DTP or OPV by age 3 months, 297 (65%) of 455 were not UTD at age 24 months, compared with 1076 (32%) of 3358 for children who received DTP or OPV before age 3 months (RR = 2.0).

Reported by: E Behrens, PhD, Hastings College, Hastings; J Libby, MA, G Borden, Div of Disease Control, T Safranek, MD, State Epidemiologist, Nebraska Dept of Health. Div of Immunization, National Center for Prevention Svcs; Div of Field Epidemiology, Epidemiology Program Office, CDC.

Early Childhood Vaccination — Continued

Editorial Note: These findings indicate that 64% of rural Nebraska schoolchildren were UTD for vaccinations at their second birthday, a rate that is substantially higher than that recently observed in school children in urban areas in many cities in the United States (range: 10%–42%) (*2*). Nonetheless, additional efforts will be needed to increase national vaccination levels to 90% of children fully vaccinated by their second birthday.

In rural Nebraska, as well as in previous studies in 11 U.S. cities (*2,3*), delay in obtaining the first dose of either OPV or DTP was an important predictor of failure to be UTD at 12 and 24 months of age. If 90% of the children receiving their first

TABLE 1. Vaccination coverage rates for 3813 children in grades kindergarten through six, by age — two rural counties, Nebraska, 1991–1992

Vaccine/Series	Age (mos) at evaluation	% Up-to-date
Individual antigen		
Oral polio vaccine (OPV) (2 doses)	12	95
Diphtheria and tetanus toxoids and pertussis vaccine (DTP) (3 doses)	12	86
OPV (3 doses)	24	87
DTP (4 doses)	24	68
Measles-mumps-rubella vaccine (MMR) (1 dose)	24	85
Series		
3:2*	12	85
3:3:1†	24	79
4:3:1§	24	64
School law (3:3:1)	Before school entry	99

*Three doses of DTP and two doses of OPV.
†Three doses of DTP, three doses of OPV, and one dose of MMR.
§Four doses of DTP, three doses of OPV, and one dose of MMR.

TABLE 2. Vaccinations received during the second year of life for 892 children in grades kindergarten through six who were up-to-date at age 12 months but not at 24 months — two rural counties, Nebraska, 1991–1992

Vaccinations	No.	(%)
Received 1 or 2 doses when 3 were required		
DTP* and OPV† only	110	(12)
MMR§ and OPV only	62	(7)
MMR and DTP only	11	(1)
OPV only	7	(1)
DTP only	6	(1)
MMR only	490	(55)
Total	**686**	**(77)**
Received no vaccination	**206**	**(23)**

*Diphtheria and tetanus toxoids and pertussis vaccine.
†Oral polio vaccine.
§Measles-mumps-rubella vaccine.

Early Childhood Vaccination — Continued

vaccination after 3 months of age and before 12 months of age had been brought UTD through aggressive follow-up by the vaccination provider, the 3:2 UTD rate at 12 months would have increased from 85% to 94%.

The current recommendation for simultaneous administration of vaccines was not made until 1986 (*4*). Had this recommendation been in effect, 77% of children UTD at 12 months but not at 24 months of age could have been UTD at 24 months. Ensuring simultaneous administration of needed vaccines to at least 90% of the children who, although UTD at age 12 months were not UTD at age 24 months, would increase the coverage levels for being UTD with the 4:3:1 series among this subset of children from 73% to 92%. However, even with improved tracking, follow-up, and the elimination of missed opportunities, coverage for the overall 4:3:1 series would have reached only 87%. Therefore, in rural Nebraska, additional strategies are needed to reach the national year 2000 objective.

Reasons for failure of children to appear on time for their first vaccination have not been well characterized. Regardless of when a child receives the first vaccination, the first visit generates a vaccination-provider record. To reduce the number of children who do not receive any vaccinations before age 3 months in rural Nebraska, a pilot follow-up system is planned in which the mother, after delivery and before hospital discharge, will complete a postcard with the name of the infant's intended vaccination provider. The hospital will then send the postcard to the indicated provider, who in turn will contact the infant's caregiver if the infant has not visited the provider by age 3 months.

Based on the results of this study, vaccine providers in rural Nebraska can make substantial gains in vaccination coverage by 1) focusing additional efforts toward children who receive their first vaccination after age 3 months and 2) simultaneously administering vaccines due between age 12 and 24 months.

References

1. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50213.
2. CDC. Retrospective assessment of vaccination coverage among school-aged children—selected U.S. cities, 1991. MMWR 1992;41:103–7.
3. CDC. Early childhood vaccination levels among urban children—Connecticut, 1990 and 1991. MMWR 1992;40:888–91.
4. CDC. New recommended schedule for active immunization of normal infants and children. MMWR 1986;35:577–9.

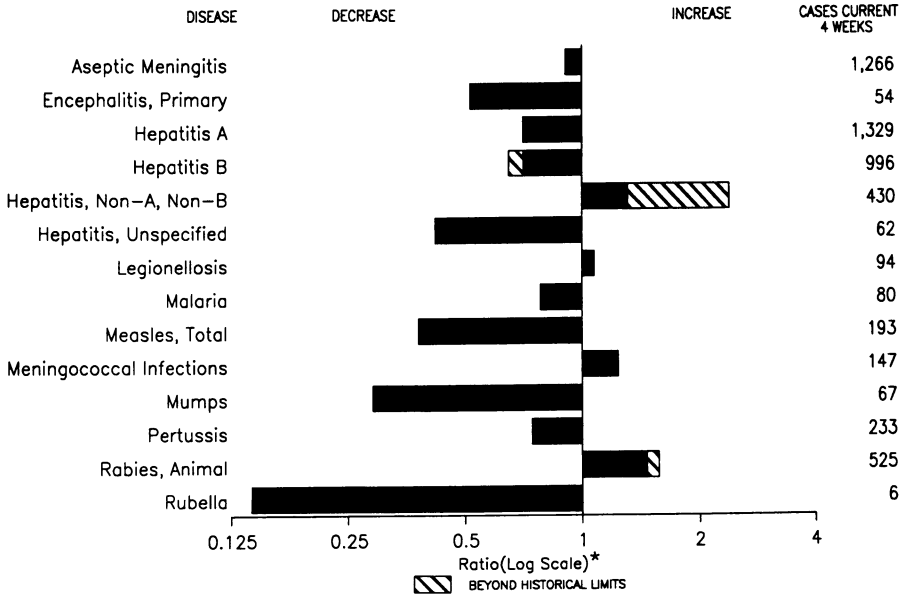
Update: International Task Force for Disease Eradication, 1992

In 1988, the International Task Force for Disease Eradication (ITFDE) was formed to systematically evaluate the potential for global eradicability* of candidate diseases, identify specific barriers to their eradication that might be surmountable, and promote eradication efforts. In its first four meetings during 1988–1991, the ITFDE examined 15 infectious diseases and determined that four—dracunculiasis, poliomyelitis, mumps, and rubella—are good candidates for eradication (*1,2*). In its fifth

(Continued on page 697)

*Eradication is defined as achievement of a status whereby no further cases of a disease occur anywhere, and continued control measures are unnecessary.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending September 12, 1992, 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 — cases of specified notifiable diseases, United States, cumulative, week ending September, 12, 1992 (37th Week)

	Cum. 1992		Cum. 1992
AIDS*	31,455	Measles: imported	107
Anthrax	1	indigenous	1,855
Botulism: Foodborne	13	Plague	7
Infant	40	Poliomyelitis, Paralytic†	-
Other	2	Psittacosis	59
Brucellosis	54	Rabies, human	-
Cholera	95	Syphilis, primary & secondary	23,932
Congenital rubella syndrome	8	Syphilis, congenital, age < 1 year§	697
Diphtheria	4	Tetanus	16
Encephalitis, post-infectious	93	Toxic shock syndrome	173
Gonorrhea	343,104	Trichinosis	20
Haemophilus influenzae (invasive disease)	984	Tuberculosis	15,702
Hansen Disease	120	Tularemia	116
Leptospirosis	21	Typhoid fever	266
Lyme Disease	5,199	Typhus fever, tickborne (RMSF)	342

*Updated monthly; last update September 8, 1992.
†Two cases of suspected poliomyelitis have been reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed and 5 of the 8 suspected cases with onset in 1990 were confirmed; all were vaccine associated.
§Updates for first quarter 1992.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending September 12, 1992, and September 14, 1991 (37th Week)

Reporting Area	AIDS*	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992
UNITED STATES	31,455	6,050	420	93	343,104	421,037	14,136	11,103	5,056	506	910	5,199
NEW ENGLAND	1,017	237	20	-	7,361	10,121	422	412	75	17	46	1,222
Maine	35	23	2	-	57	121	28	19	5	-	2	4
N.H.	32	10	2	-	91	154	28	28	20	1	5	31
Vt.	21	11	3	-	19	40	7	11	9	-	2	5
Mass.	550	107	10	-	2,673	4,465	209	323	35	16	27	149
R.I.	67	86	3	-	512	832	106	18	6	-	10	206
Conn.	312	-	-	-	4,009	4,509	44	13	-	-	-	827
MID. ATLANTIC	8,345	542	18	8	37,468	50,326	1,091	1,416	250	18	248	2,929
Upstate N.Y.	1,060	263	-	-	7,107	8,849	246	347	153	8	94	1,803
N.Y. City	4,884	104	4	1	13,071	19,653	475	282	4	-	5	11
N.J.	1,543	-	-	-	5,394	8,120	164	351	67	-	27	427
Pa.	858	175	14	7	11,896	13,704	206	436	26	10	122	688
E.N. CENTRAL	2,775	867	109	27	64,618	78,640	1,970	1,664	937	28	233	98
Ohio	518	242	32	2	19,292	23,702	301	160	66	4	101	42
Ind.	267	130	10	11	6,187	7,759	607	564	436	10	28	28
Ill.	1,301	185	43	6	21,781	24,215	388	198	60	4	21	6
Mich.	540	296	22	8	14,632	17,376	105	438	320	10	55	22
Wis.	149	14	2	-	2,726	5,588	569	304	55	-	28	-
W.N. CENTRAL	880	318	25	6	15,579	20,712	1,753	456	180	27	55	211
Minn.	161	34	7	-	1,912	2,105	503	52	14	2	5	89
Iowa	66	44	-	3	1,112	1,427	32	25	5	3	14	14
Mo.	446	146	8	-	8,813	12,613	621	309	139	20	19	84
N. Dak.	8	1	2	-	46	56	81	1	3	1	2	1
S. Dak.	7	8	-	1	123	249	192	4	-	-	-	1
Nebr.	40	15	3	2	8	1,268	216	17	7	1	13	9
Kans.	152	70	5	-	3,565	2,994	108	48	12	-	2	13
S. ATLANTIC	7,268	1,044	90	39	104,614	125,023	896	1,857	718	86	129	417
Del.	95	39	6	-	1,253	1,984	36	164	150	1	21	156
Md.	824	125	11	-	10,923	12,909	163	295	29	6	24	100
D.C.	486	20	1	-	4,383	6,750	13	58	258	-	7	2
Va.	433	173	24	11	11,252	12,314	77	139	28	30	12	86
W. Va.	42	18	24	-	643	874	6	41	2	22	-	7
N.C.	482	132	20	-	17,606	25,090	73	310	64	-	24	42
S.C.	257	18	-	-	8,027	10,242	19	40	1	1	16	1
Ga.	928	119	2	-	31,126	29,394	134	222	84	-	6	2
Fla.	3,721	400	2	28	19,401	25,466	375	588	102	26	19	21
E.S. CENTRAL	1,007	326	20	-	34,403	41,156	207	927	1,483	2	49	52
Ky.	152	115	12	-	3,405	4,216	59	64	3	-	21	18
Tenn.	321	67	4	-	10,301	14,598	89	764	1,468	-	22	26
Ala.	357	91	3	-	12,417	12,170	35	95	11	1	6	8
Miss.	177	53	1	-	8,280	10,172	24	4	1	1	-	-
W.S. CENTRAL	2,897	821	43	5	38,637	47,933	1,423	1,394	98	116	19	90
Ark.	151	10	7	-	5,167	5,791	79	55	7	4	-	10
La.	541	45	5	1	10,818	10,769	160	130	46	2	3	5
Okla.	189	-	3	2	3,815	4,946	141	148	26	3	9	22
Tex.	2,016	766	28	2	18,837	26,427	1,043	1,061	19	107	7	53
MOUNTAIN	880	195	21	4	8,596	8,774	2,062	517	192	44	67	11
Mont.	14	4	1	1	75	72	64	26	26	-	9	-
Idaho	22	22	-	-	78	104	56	64	-	1	4	2
Wyo.	2	1	2	-	40	71	8	5	22	-	1	1
Colo.	293	65	7	1	3,092	2,522	578	80	70	20	12	-
N. Mex.	68	15	3	1	655	740	219	149	18	8	2	2
Ariz.	284	57	5	-	2,987	3,222	801	114	21	9	24	-
Utah	54	5	3	1	235	223	270	12	22	6	1	6
Nev.	143	26	-	-	1,434	1,820	66	67	13	-	14	-
PACIFIC	6,386	1,700	74	4	31,828	38,352	4,312	2,460	1,123	168	64	169
Wash.	390	-	1	-	2,542	3,254	546	257	112	7	10	10
Oreg.	166	-	-	-	1,206	1,458	288	204	52	8	-	-
Calif.	5,725	1,626	69	3	27,204	32,482	3,299	1,974	787	145	53	158
Alaska	11	12	4	-	496	596	40	12	2	1	-	-
Hawaii	94	62	-	1	380	562	139	13	170	7	1	1
Guam	-	2	-	-	48	12	5	1	-	6	-	1
P.R.	878	132	1	-	163	423	35	312	148	17	1	-
V.I.	2	-	-	-	72	285	3	6	-	-	-	-
Amer. Samoa	-	-	-	-	31	38	1	1	-	-	-	-
C.N.M.I.	-	-	-	-	61	60	1	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands
*Updated monthly; last update September 8, 1992.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 12, 1992, and September 14, 1991 (37th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1992	1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	Cum. 1992	1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	1992	Cum. 1992	Cum. 1991
UNITED STATES	663	4	1,855	1	107	8,725	1,620	12	1,857	39	1,514	1,802	-	136	1,270
NEW ENGLAND	39	-	51	-	8	72	99	-	14	10	154	231	-	6	4
Maine	1	-	2	-	1	2	8	-	-	1	8	49	-	1	-
N.H.	3	-	15	-	-	-	5	-	3	-	29	17	-	-	1
Vt.	-	-	-	-	-	5	4	-	1	-	6	4	-	-	-
Mass.	21	-	11	-	3	35	41	-	2	6	76	136	-	-	2
R.I.	5	-	23	-	-	2	3	-	-	1	1	-	-	4	-
Conn.	9	-	-	-	4	28	38	-	8	2	34	25	-	1	1
MID. ATLANTIC	169	-	173	-	13	4,592	181	-	116	3	123	180	-	16	565
Upstate N.Y.	26	-	81	-	4	400	86	-	54	-	38	98	-	11	539
N.Y: City	95	-	42	-	8	1,710	16	-	12	-	9	20	-	-	2
N.J.	24	-	45	-	1	1,023	25	-	9	-	16	14	-	2	2
Pa.	24	-	5	-	-	1,459	54	-	41	3	60	48	-	3	22
E.N. CENTRAL	45	-	28	-	14	82	239	-	247	1	142	356	-	8	319
Ohio	8	-	-	-	6	3	60	-	90	-	50	80	-	-	283
Ind.	11	-	20	-	-	3	38	-	8	1	22	65	-	-	3
Ill.	12	-	6	-	4	26	63	-	79	-	19	67	-	8	7
Mich.	11	-	2	-	2	41	58	-	61	-	8	33	-	-	25
Wis.	3	-	-	-	2	9	20	-	9	-	43	111	-	-	1
W.N. CENTRAL	34	-	6	-	8	51	71	-	61	8	149	137	-	7	17
Minn.	15	-	5	-	5	20	10	-	19	-	32	51	-	-	6
Iowa	2	-	-	-	3	16	7	-	10	2	5	15	-	3	6
Mo.	10	-	-	-	-	1	22	-	24	-	61	51	-	-	5
N. Dak.	1	-	-	-	-	-	1	-	2	-	12	3	-	-	-
S. Dak.	1	-	-	-	-	-	1	-	-	4	11	3	-	-	-
Nebr.	1	-	-	-	-	1	14	-	4	-	10	8	-	-	-
Kans.	4	-	1	-	-	13	16	-	2	2	18	6	-	4	-
S. ATLANTIC	131	4	123	1	12	470	337	5	712	-	119	191	-	15	8
Del.	5	-	3	-	-	21	2	1	6	-	6	-	-	-	-
Md.	36	-	9	-	7	174	28	-	62	-	20	47	-	6	1
D.C.	9	-	-	-	-	-	3	-	5	-	1	-	-	1	1
Va.	29	1	11	-	4	29	47	3	49	-	10	18	-	-	-
W. Va.	2	-	-	-	-	-	16	-	22	-	7	9	-	1	-
N.C.	8	-	25	-	-	43	102	-	180	-	22	31	-	-	2
S.C.	-	-	29	-	-	13	21	-	49	-	11	11	-	2	-
Ga.	5	2	2	1§	1	15	45	-	70	-	14	34	-	-	-
Fla.	37	1	44	-	-	175	73	1	269	-	28	41	-	5	4
E.S. CENTRAL	16	-	445	-	18	5	106	1	46	-	24	66	-	1	100
Ky.	1	-	444	-	2	1	30	-	-	-	1	-	-	-	-
Tenn.	11	-	-	-	-	3	33	-	14	-	6	26	-	1	100
Ala.	4	-	-	-	-	1	32	1	11	-	14	36	-	-	-
Miss.	-	-	1	-	16	-	11	-	21	-	3	4	-	-	-
W.S. CENTRAL	22	-	910	-	1	189	119	2	312	2	49	57	-	-	7
Ark.	1	-	-	-	-	5	10	-	6	2	15	6	-	-	1
La.	1	-	-	-	-	-	25	-	20	-	7	13	-	-	-
Okla.	5	-	11	-	-	-	13	1	17	-	27	25	-	-	-
Tex.	15	-	899	-	1	184	71	1	269	-	-	13	-	-	6
MOUNTAIN	23	-	17	-	8	1,168	79	1	111	7	271	184	-	8	19
Mont.	-	-	-	-	-	-	14	-	2	-	4	3	-	-	-
Idaho	1	-	-	-	-	432	8	-	3	-	37	23	-	1	-
Wyo.	-	-	1	-	-	3	2	-	-	-	-	3	-	-	-
Colo.	5	-	13	-	7	6	14	-	17	-	26	96	-	1	2
N. Mex.	4	-	1	-	1	98	8	N	N	7	66	25	-	-	1
Ariz.	8	-	2	-	-	393	19	1	62	-	108	8	-	2	2
Utah	4	-	-	-	-	217	4	-	19	-	28	24	-	2	10
Nev.	1	-	-	-	-	19	10	-	8	-	2	2	-	2	4
PACIFIC	184	-	102	-	25	2,096	389	3	238	8	483	400	-	75	231
Wash.	13	-	-	-	10	61	62	-	9	5	155	100	-	6	8
Oreg.	11	-	4	-	1	80	54	N	N	1	30	58	-	3	3
Calif.	152	-	56	-	3	1,926	259	2	209	2	276	188	-	44	210
Alaska	1	-	8	-	1	4	8	-	1	-	6	12	-	-	1
Hawaii	7	-	34	-	10	25	6	1	19	-	16	42	-	22	9
Guam	1	U	10	U	-	-	-	U	8	U	-	-	U	1	-
P.R.	-	-	339	-	-	94	3	-	1	-	11	46	-	-	1
V.I.	-	-	-	-	-	2	-	1	18	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	24	-	U	-	U	6	-	U	-	-
C.N.M.I.	-	U	1	U	1	-	-	U	-	U	1	-	U	-	-

*For measles only, imported cases include both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 12, 1992, and September 14, 1991 (37th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992
UNITED STATES	23,932	29,890	173	15,702	15,851	116	266	342	5,731
NEW ENGLAND	484	743	11	329	444	1	24	7	566
Maine	2	1	1	19	30	-	-	-	-
N.H.	38	12	6	14	5	-	1	-	5
Vt.	1	1	-	4	4	-	-	-	20
Mass.	238	353	3	158	207	1	15	3	11
R.I.	24	40	1	34	75	-	-	2	-
Conn.	181	336	-	100	123	-	8	2	530
MID. ATLANTIC	3,520	5,153	20	3,640	3,675	-	69	28	1,768
Upstate N.Y.	235	479	8	260	336	-	8	12	976
N.Y. City	1,900	2,572	-	2,263	2,221	-	28	4	10
N.J.	436	893	-	662	603	-	21	4	537
Pa.	949	1,209	12	455	515	-	12	8	245
E.N. CENTRAL	3,602	3,589	44	1,556	1,600	1	34	24	118
Ohio	562	465	14	237	244	-	5	13	11
Ind.	219	130	10	123	155	-	1	5	17
Ill.	1,654	1,690	5	779	839	1	23	2	22
Mich.	693	886	15	357	292	-	3	1	14
Wis.	474	418	-	60	70	-	2	3	54
W.N. CENTRAL	916	545	30	361	368	52	5	23	872
Minn.	61	47	6	99	69	-	2	-	143
Iowa	34	52	5	25	52	-	1	1	142
Mo.	701	363	6	163	161	37	1	17	16
N. Dak.	1	1	2	2	6	-	-	-	120
S. Dak.	-	1	-	19	26	11	-	1	102
Nebr.	1	11	4	16	14	2	1	-	12
Kans.	118	70	7	37	40	2	-	4	337
S. ATLANTIC	6,599	8,821	20	2,924	2,970	4	22	100	1,258
Del.	154	117	3	36	22	-	-	9	146
Md.	471	701	2	242	266	1	5	14	382
D.C.	298	554	-	84	132	-	1	1	14
Va.	483	680	3	256	252	2	2	17	235
W. Va.	14	21	1	72	50	-	1	5	32
N.C.	1,748	1,396	3	384	392	1	-	39	27
S.C.	911	1,104	1	298	305	-	1	6	121
Ga.	1,313	2,187	3	624	587	-	-	6	260
Fla.	1,207	2,061	4	928	964	-	12	3	41
E.S. CENTRAL	2,983	3,279	2	1,016	1,007	5	3	64	142
Ky.	109	69	-	278	247	1	-	6	54
Tenn.	769	1,054	2	284	257	4	-	55	29
Ala.	1,075	1,262	-	285	284	-	-	3	58
Miss.	1,030	894	-	169	219	-	3	-	1
W.S. CENTRAL	4,460	5,287	2	1,845	1,912	27	9	82	549
Ark.	570	478	-	141	166	18	-	12	30
La.	1,807	1,814	-	139	165	-	1	-	6
Okla.	247	138	1	112	122	9	-	70	263
Tex.	1,836	2,857	1	1,453	1,459	-	8	-	250
MOUNTAIN	252	424	15	404	429	21	2	9	129
Mont.	7	6	1	-	6	12	-	3	15
Idaho	1	4	1	17	4	-	1	1	1
Wyo.	3	8	-	-	3	1	-	3	23
Colo.	35	64	5	30	46	4	1	-	17
N. Mex.	29	24	2	60	55	4	-	1	6
Ariz.	129	265	2	192	227	-	-	-	54
Utah	7	6	4	56	39	-	-	1	2
Nev.	41	47	-	49	49	-	-	-	11
PACIFIC	1,116	2,049	29	3,627	3,446	5	98	5	329
Wash.	65	133	-	218	201	2	6	-	-
Oreg.	31	54	1	90	80	-	-	2	2
Calif.	1,008	1,854	28	3,108	2,968	1	87	3	314
Alaska	5	4	-	40	53	2	-	-	13
Hawaii	7	4	-	171	144	-	5	-	-
Guam	2	1	-	34	6	-	3	-	-
P.R.	243	315	-	174	167	-	1	-	31
V.I.	51	80	-	3	2	-	-	-	-
Amer. Samoa	-	-	-	-	2	-	1	-	-
C.N.M.I.	5	3	-	43	10	-	1	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending September 12, 1992 (37th Week)

Reporting Area	All Causes, By Age (Years)						P&I†
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	548	396	88	39	15	10	29
Boston, Mass.	156	104	27	18	3	4	12
Bridgeport, Conn.	30	21	7	2	-	-	-
Cambridge, Mass.	14	10	2	2	-	-	-
Fall River, Mass.	19	16	1	2	-	-	1
Hartford, Conn.	58	47	6	1	1	3	2
Lowell, Mass.	33	23	6	1	1	2	1
Lynn, Mass.	6	4	1	1	-	-	-
New Bedford, Mass.	18	11	7	-	-	-	-
New Haven, Conn.	43	26	8	4	5	-	1
Providence, R.I.	31	23	6	2	-	-	-
Somerville, Mass.	7	7	-	-	-	-	-
Springfield, Mass.	49	36	6	3	3	1	5
Waterbury, Conn.	30	21	6	2	1	-	1
Worcester, Mass.	54	47	5	1	1	-	6
MID. ATLANTIC	2,182	1,379	420	259	65	59	79
Albany, N.Y.	45	31	7	6	-	1	2
Allentown, Pa.	23	14	7	2	-	-	1
Buffalo, N.Y.	102	72	20	6	2	2	3
Camden, N.J.	31	18	4	7	1	1	1
Elizabeth, N.J.	33	21	7	5	-	-	-
Erie, Pa.§	36	30	3	1	2	-	2
Jersey City, N.J.	39	23	8	6	2	-	1
New York City, N.Y.	1,090	678	199	153	34	26	30
Newark, N.J.	64	21	16	19	5	3	1
Paterson, N.J.	18	10	4	4	-	-	-
Philadelphia, Pa.	295	168	72	28	13	14	17
Pittsburgh, Pa.§	86	50	21	4	4	7	6
Reading, Pa.	22	19	3	-	-	-	3
Rochester, N.Y.	107	83	14	8	1	1	5
Schenectady, N.Y.	22	19	2	1	-	-	-
Scranton, Pa.§	20	17	2	-	-	1	1
Syracuse, N.Y.	75	51	18	3	-	3	2
Trenton, N.J.	22	15	3	4	-	-	4
Utica, N.Y.	13	7	5	-	1	-	-
Yonkers, N.Y.	39	32	5	2	-	-	-
E.N. CENTRAL	1,851	1,071	375	222	137	46	68
Akron, Ohio	41	29	7	3	1	1	-
Canton, Ohio	36	30	4	2	-	-	5
Chicago, Ill.	508	209	95	106	94	4	10
Cincinnati, Ohio	95	53	23	12	2	5	5
Cleveland, Ohio	101	56	22	10	5	8	-
Columbus, Ohio	107	70	21	10	1	5	4
Dayton, Ohio	102	73	16	8	2	3	4
Detroit, Mich.	193	95	53	28	8	9	4
Evansville, Ind.	46	35	7	2	2	-	-
Fort Wayne, Ind.	46	32	11	2	1	-	-
Gary, Ind.	16	8	2	2	3	1	1
Grand Rapids, Mich.	47	32	9	4	1	1	7
Indianapolis, Ind.	138	95	30	10	-	3	12
Madison, Wis.	36	24	7	2	3	-	1
Milwaukee, Wis.	88	60	15	8	4	1	4
Peoria, Ill.	51	36	13	2	-	-	3
Rockford, Ill.	32	23	5	1	3	-	1
South Bend, Ind.	40	27	10	1	-	2	1
Toledo, Ohio	74	40	19	7	6	2	5
Youngstown, Ohio	54	44	6	2	1	1	1
W.N. CENTRAL	630	448	108	40	17	17	19
Des Moines, Iowa	38	29	6	2	1	-	3
Duluth, Minn.	17	15	2	-	-	-	1
Kansas City, Kans.	28	18	5	2	1	2	-
Kansas City, Mo.	124	97	14	4	5	4	3
Lincoln, Nebr.	29	18	8	3	-	-	1
Minneapolis, Minn.	89	67	10	8	1	3	1
Omaha, Nebr.	93	60	24	1	4	4	5
St. Louis, Mo.	112	73	23	10	3	3	-
St. Paul, Minn.	52	42	7	3	-	-	4
Wichita, Kans.	48	29	9	7	2	1	1
S. ATLANTIC	1,237	742	261	162	44	26	71
Atlanta, Ga.	141	83	27	24	6	1	8
Baltimore, Md.	240	135	59	31	7	8	22
Charlotte, N.C.	76	50	12	9	4	1	4
Jacksonville, Fla.	127	71	36	16	3	1	4
Miami, Fla.	92	54	22	12	4	-	-
Norfolk, Va.	46	23	11	6	1	5	5
Richmond, Va.	74	55	7	7	2	3	4
Savannah, Ga.	42	25	12	2	2	1	2
St. Petersburg, Fla.	46	36	4	3	2	1	3
Tampa, Fla.	156	96	34	15	7	2	14
Washington, D.C.	177	102	34	32	6	3	5
Wilmington, Del.	20	12	3	5	-	-	-
E.S. CENTRAL	664	421	140	62	21	20	50
Birmingham, Ala.	61	40	13	3	3	2	6
Chattanooga, Tenn.	87	59	19	5	3	1	5
Knoxville, Tenn.	88	51	25	9	2	1	8
Lexington, Ky.	54	37	5	7	3	2	3
Memphis, Tenn.	190	109	47	23	5	6	17
Mobile, Ala.	36	25	7	2	1	1	3
Montgomery, Ala.	44	33	8	2	-	1	1
Nashville, Tenn.	104	67	16	11	4	6	7
W.S. CENTRAL	1,140	713	223	128	51	25	54
Austin, Tex.	62	42	7	8	2	3	5
Baton Rouge, La.	30	17	8	4	1	-	-
Corpus Christi, Tex.	29	23	5	1	-	-	-
Dallas, Tex.	185	113	32	25	13	2	3
El Paso, Tex.	45	27	9	6	2	1	2
Ft. Worth, Tex.	75	48	11	11	1	4	4
Houston, Tex.	269	154	58	31	19	7	24
Little Rock, Ark.	64	41	15	5	1	2	3
New Orleans, La.	120	72	25	15	6	2	-
San Antonio, Tex.	123	84	27	6	3	3	3
Shreveport, La.	63	44	10	7	2	-	5
Tulsa, Okla.	75	48	16	9	1	1	5
MOUNTAIN	703	450	148	65	19	21	57
Albuquerque, N.M.	71	44	17	7	-	3	1
Colo. Springs, Colo.	46	34	6	6	-	-	6
Denver, Colo.	94	57	17	14	1	5	10
Las Vegas, Nev.	112	64	26	12	6	4	5
Ogden, Utah	20	15	4	1	-	-	-
Phoenix, Ariz.	146	85	39	9	6	7	19
Pueblo, Colo.	32	26	4	2	-	-	4
Salt Lake City, Utah	81	56	13	6	5	1	5
Tucson, Ariz.	101	69	22	8	1	1	7
PACIFIC	1,551	969	287	187	59	46	86
Berkeley, Calif.	13	7	3	2	-	1	2
Fresno, Calif.	90	56	18	8	4	4	4
Glendale, Calif.	17	13	3	1	-	-	-
Honolulu, Hawaii	67	48	7	4	4	4	4
Long Beach, Calif.	71	46	16	5	-	4	14
Los Angeles, Calif.	391	227	77	61	21	3	12
Pasadena, Calif.	24	14	5	2	2	1	1
Portland, Oreg.	99	68	19	3	2	7	4
Sacramento, Calif.	136	96	22	12	2	4	12
San Diego, Calif.	110	64	21	16	4	5	7
San Francisco, Calif.	128	53	35	28	7	4	-
San Jose, Calif.	140	88	28	17	6	1	12
Santa Cruz, Calif.	31	26	1	2	1	1	4
Seattle, Wash.	114	65	22	18	6	3	1
Spokane, Wash.	37	33	2	1	-	1	3
Tacoma, Wash.	83	65	8	7	-	3	6
TOTAL	10,506¶	6,589	2,050	1,164	428	270	513

*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

ITFDE — Continued

meeting in March 1992, the ITFDE evaluated the potential eradicability of six other diseases (Table 1). The criteria used by the ITFDE to evaluate these diseases was provided previously (*2*). This report summarizes the results of the fifth meeting.

Taeniasis/Cysticercosis. *Taenia solium* cysticercosis in humans and pigs is potentially eradicable, using interventions (mainly surveillance of pigs in foci of transmission and mass treatment of associated human populations). However, actual eradicability needs to be demonstrated in a sizable geographic area. This disease is endemic in areas of Latin America, Africa, and Asia.

Cholera. Cholera is not now eradicable, but improved control is possible by providing clean water, improved sanitation, and health education to populations at risk.

Chagas disease (American trypanosomiasis). Chagas disease is not eradicable, but better control is possible using insecticides and improvements in housing in some areas, especially where *Triatoma infestans* is the primary vector.

Schistosomiasis. Schistosomiasis is not now eradicable, but better control is possible, especially using mass chemotherapy of school-aged children in areas where the disease is endemic.

Ascariasis and hookworm disease. Neither ascariasis nor hookworm disease or infection is eradicable now, but both diseases could be better controlled using chemotherapy and hygienic interventions, especially among school-aged children.

Reported by: AA Arata, PhD, Vector Biology and Control Project, Arlington, Virginia. DR Hopkins, MD, E Ruiz-Tiben, PhD, Global 2000, Inc, Carter Center of Emory Univ, Atlanta. ZS Pawlowski, MD, Univ School of Medicine, Poznan, Poland. Div of Bacterial and Mycotic Diseases, and Div of Parasitic Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The findings in this report indicate a need for greater recognition of the potential to eradicate cysticercosis caused by *T. solium* infection and for implementation of more control projects. A project is under way in Ghana to better control schistosomiasis, ascariasis, and hookworm disease by mass treatment and hygiene education of school-aged children.

TABLE 1. Disease candidates for worldwide eradication — International Task Force for Disease Eradication, 1992

Disease	Current annual toll worldwide	Chief obstacles to eradication	Conclusion
Taeniasis/ Cysticercosis	50 million cases; 50,000 deaths	Need simpler diagnostics for humans and pigs	Potentially eradicable
Cholera	Unknown	Environmental reservoirs; strain differences	Not now eradicable
Chagas disease	15–20 million infected	Difficult diagnosis and treatment; animal reservoirs	Not eradicable
Schistosomiasis	200 million infected	Reservoir hosts; increased snail-breeding sites	Not now eradicable
Ascariasis	1 billion infected; 20,000 deaths	Eggs viable in soil for years; laborious diagnosis; widespread	Not now eradicable
Hookworm disease	900 million infected; 60,000 deaths	Laborious diagnosis; adult worms may live 5 years; widespread	Not now eradicable

ITFDE — Continued

References
1. CDC. International Task Force for Disease Eradication. MMWR 1990;39:209–12,217.
2. CDC. Update: International Task Force for Disease Eradication, 1990 and 1991. MMWR 1992;41:40–2.

Tobacco, Alcohol, and Other Drug Use Among High School Students — United States, 1991

In the United States, use of tobacco, alcohol, and other drugs is associated with the leading causes of morbidity and mortality (e.g., motor-vehicle crashes, homicide, suicide, and cancer [*1*]), with lower educational achievement, and with school dropout (*2–5*). This report presents self-reported data about the prevalence of tobacco, alcohol, marijuana, and cocaine use among students in grades 9–12 from two school-based components of the Youth Risk Behavior Surveillance System (*6*): 1) state and local Youth Risk Behavior Surveys (YRBSs) conducted by departments of education in 23 states and 10 cities during the spring of 1991 and 2) the national YRBS conducted during the same period.

The 33 state and local sites drew probability samples from well-defined sampling frames of schools and students in grades 9–12. Seventeen sites had adequate school- and student-response rates, which allowed computation of weighted results of known precision; 16 sites had overall response rates below 60% or unavailable documentation, which precluded making estimates of known precision. The national survey used a three-stage sample design to obtain a sample of 12,272 students representative of students in grades 9–12 in the 50 states and the District of Columbia.

For the state and local surveys, school-response rates ranged from 48% to 100%; student-response rates ranged from 44% to 96% (*7*). State and local sample sizes ranged from 369 to 5834 students. Students in most samples were distributed evenly across grades and between sexes. The racial/ethnic characteristics of the samples varied. The school-response rate for the national survey was 75%, and the student-response rate was 90%.

Students were asked whether they had used tobacco, alcohol, marijuana, or any form of cocaine during their lifetime and during the 30 days preceding the survey. Students also were asked whether they had used chewing tobacco or snuff during the 30 days preceding the survey, whether they had had five or more drinks of alcohol on one occasion during the 30 days preceding the survey (i.e., episodic heavy drinking), and whether they had taken steroid pills or steroid shots without a doctor's prescription during their lifetime.

Among the state and local surveys, cigarette smoking varied considerably (Table 1): 49%–82% of students (median: 71%) reported having tried cigarette smoking during their lifetime; 6%–31% of students (median: 24%) reported smoking at least one cigarette during the 30 days preceding the survey; and 2%–17% of students (median: 12%) reported frequent cigarette use* during the 30 days preceding the survey. Rates of lifetime, current, and frequent cigarette use were similar for male and female students in almost all sites.

*Smoking on 20 or more of the 30 days preceding the survey.

TABLE 1. Percentage of high school students who used tobacco, by sex — United States and selected U.S. sites, Youth Risk Behavior Surveys, 1991

Site	Lifetime cigarette use*			Current cigarette use†			Frequent cigarette use§			Smokeless tobacco use¶		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
WEIGHTED DATA												
National survey	70	71	**70**	27	28	**28**	12	13	**13**	1	19	**10**
State surveys												
Alabama	70	79	**74**	24	32	**28**	11	16	**13**	2	31	**16**
Georgia	66	72	**69**	22	26	**24**	10	12	**11**	2	22	**12**
Idaho	56	65	**61**	22	24	**23**	12	14	**13**	3	24	**14**
Nebraska	70	75	**72**	28	30	**29**	15	15	**15**	2	26	**14**
New Mexico	82	81	**82**	30	30	**30**	13	14	**13**	4	27	**16**
New York**	72	70	**71**	32	28	**30**	18	17	**17**	2	19	**11**
Puerto Rico††	46	54	**50**	13	18	**16**	3	5	**4**	0	5	**2**
South Carolina	72	76	**74**	25	26	**26**	13	13	**13**	2	20	**11**
South Dakota	68	71	**69**	32	30	**31**	17	16	**16**	10	29	**20**
Utah	43	55	**49**	16	18	**17**	8	8	**8**	2	12	**7**
Local surveys												
Chicago	72	73	**72**	13	20	**16**	4	7	**6**	2	5	**3**
Dallas	70	76	**73**	11	16	**14**	4	4	**4**	1	7	**4**
Ft. Lauderdale	65	65	**65**	18	13	**16**	10	6	**8**	1	9	**4**
Jersey City	73	70	**72**	17	16	**16**	4	4	**4**	1	6	**3**
Miami	66	66	**66**	12	17	**15**	4	8	**6**	1	6	**3**
Philadelphia	82	70	**76**	22	17	**20**	11	8	**10**	2	6	**4**
San Diego	64	71	**68**	18	18	**18**	7	7	**7**	1	7	**4**
UNWEIGHTED DATA												
State surveys												
Colorado**	73	74	**74**	28	27	**27**	13	14	**14**	6	32	**19**
District of Columbia††	70	60	**65**	5	7	**6**	2	2	**2**	2	5	**4**
Hawaii	70	70	**70**	27	25	**26**	12	13	**13**	2	14	**8**
Iowa	NA§§	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**
Montana	68	71	**69**	24	24	**24**	13	12	**12**	7	33	**20**
New Hampshire	71	71	**71**	28	27	**27**	16	15	**15**	4	22	**13**
New Jersey**	67	61	**64**	NA	NA	**NA**	NA	NA	**NA**	2	14	**7**
Oregon	63	65	**64**	22	22	**22**	9	10	**9**	5	28	**16**
Pennsylvania**	69	73	**71**	28	28	**28**	16	15	**15**	2	29	**16**
Tennessee	72	75	**74**	30	30	**30**	16	16	**16**	1	34	**17**
Virgin Islands††	NA	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**
Wisconsin	72	73	**73**	30	32	**31**	16	17	**16**	3	19	**11**
Wyoming	70	74	**72**	27	28	**28**	15	17	**16**	5	31	**19**
Local surveys												
Boston	68	68	**68**	15	16	**15**	6	9	**7**	1	5	**3**
New York City	76	68	**72**	26	16	**21**	12	6	**9**	1	5	**3**
San Francisco	61	63	**62**	14	15	**14**	7	6	**6**	2	6	**4**

*Ever tried cigarette smoking, even one or two puffs.
†Smoked cigarettes on 1 or more of the 30 days preceding the survey.
§Smoked cigarettes on 20 or more of the 30 days preceding the survey.
¶Used chewing tobacco or snuff on 1 or more of the 30 days preceding the survey.
**Surveys did not include students from the largest city.
††Categorized as a state for funding purposes.
§§Not available; survey did not include these questions.

Tobacco, Alcohol, and Other Drug Use — Continued

Use of smokeless tobacco also varied among sites: 2%–20% of students (median: 11%) reported using smokeless tobacco during the 30 days preceding the survey. Rates of smokeless tobacco use were higher for male than female students in all sites.

Among the state and local surveys, rates of alcohol consumption showed similar variation (Table 2): 50%–87% of students (median: 77%) reported having consumed alcohol during their lifetime; 24%–60% of students (median: 46%) reported that they had consumed alcohol at least once during the 30 days preceding the survey. Episodic heavy drinking among students varied from 12% to 43% (median: 27%). Rates of lifetime and current alcohol consumption were similar for male and female students within most sites; however, in every site, male students reported higher rates of episodic heavy drinking than female students.

Lifetime and current use of marijuana (Table 3) varied considerably among the state and local surveys: 8%–41% of students (median: 26%) reported lifetime use of marijuana, and 4%–18% of students (median: 11%) reported having used marijuana

TABLE 2. Percentage of high school students who consumed alcohol, by sex — United States and selected U.S. sites, Youth Risk Behavior Surveys, 1991

Site	Lifetime alcohol use*			Current alcohol use†			Episodic heavy drinking§		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
WEIGHTED DATA									
National survey	81	82	**82**	49	53	**51**	26	36	**31**
State Surveys									
Alabama	75	82	**78**	40	53	**47**	23	38	**30**
Georgia	74	80	**77**	44	50	**47**	22	31	**27**
Idaho	67	72	**69**	41	43	**42**	28	31	**30**
Nebraska	82	84	**83**	51	55	**53**	34	40	**37**
New Mexico	85	87	**86**	57	62	**60**	39	46	**43**
New York¶	84	84	**84**	58	57	**57**	32	40	**36**
Puerto Rico**	57	72	**64**	33	44	**38**	12	25	**18**
South Carolina	77	79	**78**	43	51	**47**	21	33	**27**
South Dakota	83	84	**84**	58	58	**58**	40	42	**41**
Utah	48	53	**50**	25	28	**27**	14	19	**17**
Local surveys									
Chicago	75	75	**75**	40	44	**42**	14	24	**19**
Dallas	77	80	**79**	40	49	**44**	18	28	**23**
Ft. Lauderdale	79	80	**79**	47	49	**48**	17	28	**22**
Jersey City	75	80	**77**	44	52	**48**	15	25	**20**
Miami	74	79	**77**	41	45	**43**	14	20	**17**
Philadelphia	76	78	**77**	41	48	**44**	16	25	**20**
San Diego	70	78	**74**	43	47	**45**	23	28	**26**
UNWEIGHTED DATA									
State surveys									
Colorado¶	88	87	**87**	56	61	**59**	35	47	**41**
District of Columbia**	71	69	**70**	35	38	**36**	12	17	**14**
Hawaii	73	73	**73**	39	42	**41**	20	27	**24**
Iowa	NA††	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**
Montana	84	86	**85**	53	54	**54**	38	39	**38**
New Hampshire	85	84	**84**	56	56	**56**	31	37	**34**
New Jersey¶	NA	NA	**NA**	52	52	**52**	NA	NA	**NA**
Oregon	79	79	**79**	46	46	**46**	30	32	**31**
Pennsylvania¶	81	83	**82**	47	53	**50**	22	35	**29**
Tennessee	75	77	**76**	42	47	**45**	26	33	**29**
Virgin Islands**	NA	NA	**NA**	20	27	**24**	NA	NA	**NA**
Wisconsin	86	83	**85**	57	55	**56**	32	37	**35**
Wyoming	82	83	**83**	50	52	**51**	33	39	**36**
Local surveys									
Boston	65	72	**68**	35	41	**38**	14	22	**18**
New York City	71	73	**72**	40	45	**42**	17	25	**21**
San Francisco	61	60	**60**	28	30	**29**	10	14	**12**

*Ever used alcohol.
†Consumed at least one drink of alcohol during the 30 days preceding the survey.
§Consumed five or more drinks of alcohol on at least one occasion during the 30 days preceding the survey.
¶Surveys did not include students from the largest city.
**Categorized as a state for funding purposes.
††Not available; survey did not include these questions.

TABLE 3. Percentage of high school students who used marijuana, cocaine, or steroids, by sex — United States and selected U.S. sites, Youth Risk Behavior Surveys, 1991

Site	Lifetime marijuana use*			Current marijuana use†			Lifetime cocaine use§			Current cocaine use¶			Lifetime steroid use**		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
WEIGHTED DATA															
National survey	30	33	**31**	12	17	**15**	4	7	**6**	1	2	**2**	1	4	**3**
State surveys															
Alabama	21	29	**25**	7	12	**10**	3	5	**4**	1	2	**2**	2	7	**4**
Georgia	20	28	**24**	9	13	**11**	2	4	**3**	1	1	**1**	1	4	**3**
Idaho	22	28	**25**	9	12	**10**	6	7	**7**	2	3	**2**	2	5	**4**
Nebraska	20	25	**22**	9	12	**10**	3	6	**5**	1	2	**2**	1	4	**2**
New Mexico	38	43	**41**	15	20	**18**	6	11	**9**	2	4	**3**	2	6	**4**
New York††	30	34	**32**	15	18	**16**	5	6	**5**	2	2	**2**	2	5	**3**
Puerto Rico§§	4	12	**8**	1	6	**4**	2	6	**4**	1	4	**2**	1	5	**3**
South Carolina	23	30	**27**	9	15	**12**	4	6	**5**	1	4	**2**	1	6	**4**
South Dakota	21	22	**22**	10	9	**10**	4	7	**5**	1	2	**2**	2	6	**4**
Utah	17	21	**19**	7	10	**9**	4	6	**5**	1	3	**2**	1	5	**3**
Local surveys															
Chicago	22	32	**27**	8	15	**12**	2	7	**4**	1	4	**2**	2	6	**4**
Dallas	24	35	**29**	8	13	**11**	5	7	**6**	1	2	**2**	2	5	**4**
Ft. Lauderdale	26	29	**27**	12	16	**14**	3	3	**3**	0	1	**1**	1	5	**3**
Jersey City	13	24	**18**	7	11	**9**	2	8	**4**	1	3	**2**	3	6	**4**
Miami	17	26	**22**	6	13	**10**	4	7	**6**	1	4	**2**	1	6	**4**
Philadelphia	35	40	**37**	14	19	**16**	4	6	**5**	1	2	**2**	4	6	**5**
San Diego	30	41	**36**	14	22	**18**	9	7	**8**	2	3	**3**	1	3	**2**
UNWEIGHTED DATA															
State surveys															
Colorado††	31	35	**33**	12	16	**14**	5	8	**6**	1	2	**2**	2	6	**4**
District of Columbia§§	9	15	**12**	4	8	**6**	1	3	**2**	1	2	**2**	1	7	**5**
Hawaii	32	39	**36**	14	21	**17**	9	10	**9**	2	5	**4**	2	7	**5**
Iowa	NA¶¶	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**	NA	NA	**NA**	2	9	**5**
Montana	26	26	**26**	10	12	**11**	7	5	**6**	3	3	**3**	2	5	**4**
New Hampshire	34	36	**35**	17	18	**17**	5	8	**6**	2	4	**3**	2	6	**4**
New Jersey††	NA	NA	**NA**	11	14	**12**	NA	NA	**NA**	2	5	**3**	2	5	**3**
Oregon	29	35	**32**	11	15	**13**	5	8	**7**	1	3	**2**	2	6	**4**
Pennsylvania††	21	28	**25**	8	13	**11**	4	7	**6**	2	4	**3**	2	6	**4**
Tennessee	28	31	**30**	13	15	**14**	4	8	**6**	1	4	**2**	1	7	**4**
Virgin Islands§§	NA	NA	**NA**	2	8	**5**	NA	NA	**NA**	1	2	**1**	2	5	**3**
Wisconsin	22	26	**24**	10	14	**12**	3	7	**5**	1	2	**2**	2	6	**4**
Wyoming	25	32	**29**	10	16	**13**	6	8	**7**	2	3	**3**	2	5	**3**
Local surveys															
Boston	23	27	**25**	10	13	**11**	2	5	**4**	1	3	**2**	2	5	**3**
New York City	22	22	**22**	10	10	**10**	4	4	**4**	1	1	**1**	2	4	**3**
San Francisco	27	26	**26**	13	14	**14**	5	9	**7**	1	4	**2**	1	6	**3**

*Ever used marijuana.
†Used marijuana during the 30 days preceding the survey.
§Ever used cocaine.
¶Used cocaine during the 30 days preceding the survey.
**Ever used steroids.
††Surveys did not include students from the largest city.
§§Categorized as a state for funding purposes.
¶¶Not available; survey did not include these questions.

Tobacco, Alcohol, and Other Drug Use — Continued

at least once during the 30 days preceding the survey. In almost all sites, rates of marijuana use were higher for male than female students. Lifetime and current use of cocaine and lifetime use of steroids also varied among sites: 2%–9% of students (median: 5%) reported lifetime use of cocaine, 1%–4% of students (median: 2%) reported current use of cocaine, and 2%–5% of students (median: 4%) reported lifetime use of steroids.

For all behaviors, the national prevalence estimates were similar to the median prevalence estimates from the state and local surveys (Tables 1–3).

Reported by: J Moore, EdD, Alabama State Dept of Education. J Campana, MA, San Diego Unified School District; M Lam, MSW, San Francisco Unified School District. D Sandau-Christopher, State of Colorado Dept of Education. J Sadler, MPH, District of Columbia Public Schools. D Scalise, MS, School Board of Broward County; N Gay, MSW, School Board of Dade County, Florida. R Stalvey, MS, Georgia Dept of Education. J Schroeder, Hawaii Dept of Education. J Pelton, PhD, Idaho Dept of Education. B Johnson Biehr, MS, Chicago Public Schools. J Harris, MEd, Iowa Dept of Education. N Strunk, MS, Boston Public Schools. R Chiotti, Montana Office of Public Instruction. J Owens-Nausler, PhD, Nebraska Dept of Education. B Grenert, MEd, New Hampshire State Dept of Education. D Chioda, MS, Jersey City Board of Education; D Cole, MEd, New Jersey State Dept of Education. K Meurer, MS, New Mexico State Dept of Education. G Abelson, CSW, New York City Board of Education; A Sheffield, MPH, New York State Education Dept. P Ruzicka, PhD, Oregon Dept of Education. C Balsley, EdD, School District of Philadelphia; M Sutter, PhD, Pennsylvania Dept of Education. M del Pilar Cherneco, MPH, Puerto Rico Dept of Education. J Fraser, EdD, South Carolina State Dept of Education. M Carr, MS, South Dakota Dept of Education and Cultural Affairs. E Word, MA, Tennessee State Dept of Education. P Simpson, PhD, Dallas Independent School District. L Lacy, MS, Utah State Office of Education. S Tye, PhD, Government of the Virgin Islands Dept of Education. B Nehls-Lowe, MPH, Wisconsin Dept of Public Instruction. B Anderson, Wyoming Dept of Education. Div of Epidemiology and Prevention Research; National Institute on Drug Abuse; Alcohol, Drug Abuse, and Mental Health Administration. Office on Smoking and Health, and Div of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: Tobacco, alcohol, and other drug use among youth causes serious public health problems in cities and states throughout the nation. Because the quality of the samples varied among the state and local surveys, data across sites may not be comparable. Nonetheless, these results can be useful in planning and evaluating broad national, state, and local interventions and monitoring progress toward achieving national education goals and national health objectives.

National education goal 6 (*8*) aims to have every school in America free of drugs and violence and offer a disciplined environment conducive to learning by the year 2000. The results presented in this report will be used in the second progress report on the status of the national education goals to be released September 30; results from similar surveys conducted during 1990 were used in the first progress report on the status of the national education goals (*8,9*).

National health objectives 3.5, 3.9, 4.5, 4.6, 4.7, 4.8, and 4.11 are to reduce the use of tobacco, alcohol, and other drugs among youth (*1*). The results presented in this report measure progress toward achieving these objectives in participating cities and states.

For example, objective 3.9 is to reduce smokeless tobacco use by males aged 12–24 years to a prevalence of no more than 4%. In 19 of the 33 sites, the prevalence of smokeless tobacco use among male students is three or more times higher than this national health objective. Objective 4.6 states that among youth aged 12–17 years the prevalence of alcohol use during the previous 30 days should be no more than 12.6%, of marijuana no more than 3.2%, and of cocaine no more than 0.6%. In all but one site, the current prevalence of alcohol use is at least two times higher than this

Tobacco, Alcohol, and Other Drug Use — Continued

national health objective; in all but three sites, the current prevalence of marijuana use is at least three times higher; and in all but four sites, the current prevalence of cocaine use is at least two times higher. Objective 4.7 is to reduce to no more than 28% the proportion of high school seniors engaging in recent occasions of episodic heavy drinking. Rates of episodic heavy drinking among students in grades 9–12 are higher than this national health objective in 14 of the 33 sites. Objective 4.11 is to reduce to no more than 3% the proportion of male high school seniors who use anabolic steroids. Rates of anabolic steroid use among male students in grades 9–12 are higher than this national health objective in all but one site.

To meet the national health objectives, efforts to help youth reduce the use of tobacco, alcohol, and other drugs will need to increase among federal, state, and local education, health, and drug-control agencies, and among families, the media, legislators, community organizations, and youth.

References

1. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.
2. Jessor R, Jessor S. Problem behavior and psychosocial development: a longitudinal study. New York: Academic Press, 1977.
3. Kolbe LJ, Green L, Foreyt J, et al. Appropriate functions of health education in schools: improving health and cognitive performance. In: Krasnegor NA, Arasteh JD, Cataldo MF, eds. Child health behavior: a behavioral pediatrics perspective. New York: Wiley and Sons, 1986.
4. Dryfoos J. Adolescents at risk: prevalence and prevention. New York: Oxford University Press, 1990.
5. Mensch BS, Kandel DB. Dropping out of high school and drug involvement. Sociology of Education 1981;61:95–113.
6. Kolbe LJ. An epidemiological surveillance system to monitor the prevalence of youth behaviors that most affect health. Health Education 1990;21:44–8.
7. CDC. Participation in school physical education and selected dietary patterns among high school students—United States, 1991. MMWR 1992;41:597–601,607.
8. National Education Goals Panel. The national education goals report. Washington, DC: National Education Goals Panel, 1991.
9. CDC. Current tobacco, alcohol, marijuana, and cocaine use among high school students—United States, 1990. MMWR 1991;40:659–63.

Notice to Readers

National Fishing Industry Safety and Health Workshop

CDC's National Institute for Occupational Safety and Health (NIOSH) will sponsor the National Fishing Industry Safety and Health (FISH) Workshop October 9–11, 1992, in Anchorage, Alaska. The FISH workshop will provide fishing industry employers and workers, scientists, and government representatives an overview of national and local efforts to understand the risks involved in commercial fishing and to develop safety solutions to reduce the personal losses and severe economic burdens characteristic of this industry. The workshop's goals are to increase awareness about fishing safety, build cooperation, share information and experiences, and encourage action to prevent injury and disease that result from working in this industry.

There is no registration fee. Additional information and the workshop program are available from Alaska Activity, Division of Safety Research, NIOSH, telephone (907) 271-2382.

The *Morbidity and Mortality Weekly Report* (*MMWR*) Series is prepared by the Centers for Disease Control and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

The data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Inquiries about the *MMWR* Series, including material to be considered for publication, should be directed to: Editor, *MMWR* Series, Mailstop C-08, Centers for Disease Control, Atlanta, GA 30333; telephone (404) 332-4555.

☆U.S. Government Printing Office: 1992-631-123/67030 Region IV

HHS Publication No. (CDC) 92-8017