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MORBIDITY AND MORTALITY WEEKLY REPORT

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Current Trends

Minors' Access to Cigarette Vending Machines — Texas

The sale of tobacco products to persons aged <18 years has been prohibited by law in Texas since September 1989*. This law requires cigarette vending machine owners to post signs on their machines stating the illegality of tobacco product sales to persons aged <18 years and that merchants convicted for selling tobacco products to underaged persons be fined a maximum of \$500. In August 1991, Arlington, Texas, enacted legislation requiring installation of electronic locking devices on all cigarette vending machines. These devices render the vending machine inoperable until the store owner electronically unlocks the machine on customer request. To assess minors' access to cigarettes through vending machines, in October 1993 the Texas Department of Health conducted a study in Arlington and five neighboring communities. This report summarizes the study findings.

In September 1993, the health department obtained a list of business establishments with cigarette vending machines owned by the largest cigarette vending company in the Arlington area. A total of 116 establishments were identified in the study area; 59 (51%) machines were in establishments considered easily accessible to minors (i.e., restaurants, gas stations, motel lobbies, food stores, and recreational facilities). Data were collected for 42 of the 59 sites.

Four investigative teams consisted of one adult paired with one minor (aged 15–17 years). One purchase attempt was made at each of the 42 establishments. During each purchase attempt, the adult entered the establishment first and asked for street directions. The adult then observed while the minor entered and attempted to purchase cigarettes from the vending machine. Minors were instructed to answer, if asked, that the cigarettes were for themselves.

While attempting to purchase cigarettes from vending machines, no minors were challenged by business owners. Of the 42 attempts, 41 were successful. Of the 41 sites where purchase attempts were successful, 24 (59%) were located within $\frac{1}{2}$ mile of a school. Most (35 [83%] of 42) purchase attempts occurred in restaurants; however, cigarettes were bought at every type of establishment where purchases were at-

^{*}Texas Health and Safety Code, Title 2, Sections 161.081–161.082.

Cigarette Machines — Continued

tempted. Warning signs prohibiting cigarettes sales to minors were posted on vending machines in 32 (76%) establishments.

Of the 16 vending machines located in business establisments in the city of Arlington, one was equipped with an electronic locking device. The single unsuccessful purchase attempt occurred at this electronically locked machine.

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Editorial Note: The findings in this report indicate that, despite laws prohibiting cigarette sales to persons aged <18 years, minors readily purchased cigarettes from vending machines in Arlington and five neighboring communities. Although the only failed purchase attempt in this study resulted from a vending machine equipped with a remote-controlled locking device, compliance with legislation requiring these devices has been minimal (1). The finding that only one of 16 vending machines in Arlington was equipped with the device is similar to findings of studies about locking device usage in other areas (1).

The findings in this report are subject to at least two limitations. First, data in this report were obtained for only one vending machine company in the Arlington area because the Texas Department of the Treasury does not require vending machine companies to specify the locations of their machines. Second, because of time constraints during the study, data were not collected for 17 establishments considered easily accessible to minors; however, sites included in the analysis probably do not differ from sites that were not included.

Approximately 82% of adult smokers report that they first tried a cigarette by age 18 years, and 53% were daily smokers by that age (2). The initiation rate for smoking increases rapidly after age 11 years (3); in Texas, a 1989 survey of 4400 high school students found that 55% of 12-year-olds had already tried cigarette smoking (4). Because vending machine sales are not monitored actively by adults, cigarette vending machines can be an important source for younger adolescents (i.e., aged 12–15 years), who are more likely than older adolescents (i.e., aged 16–18 years) to be refused an over-the-counter cigarette sale (5). Studies indicate that younger adolescent smokers are more likely to buy cigarettes from vending machines than older adolescent smokers (6,7).

Unregulated cigarette vending machines may facilitate initiation of smoking among younger adolescents; therefore, more effective regulation of these sales may be an important preventive measure. Prevention of adolescent smoking may be enhanced by the recently enacted Synar Amendment to the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) Reorganization Act.[†] The Synar Amendment requires that states demonstrate effective prohibition of the sale of tobacco products (including cigarettes from vending machines) to persons aged <18 years as a condition of receiving full ADAMHA block grants. As a result of this study, the Arlington City Council enacted legislation prohibiting cigarette vending machines in all business establishments that admit persons aged <18 years.

[†]Public Law 102-321, §1926.

Cigarette Machines — Continued

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Epidemiologic Notes and Reports

Interstate Measles Transmission from a Ski Resort — Colorado, 1994

During April 1–May 25, 1994, a chain of measles transmission began in Brecken-ridge, Colorado, and extended into nine additional states; a total of 247 measles cases were reported, representing 36% of all U.S. measles cases reported to the National Notifiable Diseases Surveillance System (excluding those reported from U.S. territories) through July 2 (week 26). The source of exposure was unknown but is believed to have been an out-of-state tourist who probably visited Breckenridge during March because 1) no measles cases had previously been reported in Colorado during 1994, and 2) the only common exposure appeared to have been at a ski resort visited by many out-of-state travelers. Persons associated with spread of measles from Breckenridge were predominately school- and college-aged. This report summarizes the investigation of this chain of interstate measles transmission.

A total of 15 measles cases with rash onset during April 4–21 occurred in Breckenridge. Persons with measles ranged in age from 16 years to 46 years (median: 27.6 years). All cases met the CDC measles clinical case definition (1); 12 were sero-logically confirmed. All 15 ill persons either lived in Summit County (Breckenridge) or three neighboring counties (Arapahoe, Chaffee, and Park) or worked in tourism-related services in or near Breckenridge. Twelve of the 15 ill persons are believed to have been exposed to the unidentified source, and three cases resulted from secondary transmission. Two cases occurred among high school students; no further transmission in schools was reported.

Interstate transmission of measles occurred through four out-of-state travelers and a Silver Thorn, Colorado, resident—all of whom had visited Breckenridge during

Measles Transmission — Continued

March 18–25. All five visitors are believed to have been exposed to the unidentified source. Two persons (a 46-year-old Texas resident [rash onset: April 16] and a 29-year-old Missouri resident [rash onset: April 4]) developed measles on return home but have not been linked to additional cases. The other three persons—an Illinois resident, a Maryland resident, and the Silver Thorn resident—became sources for further transmission.

Illinois. A 14-year-old unvaccinated female high school student returned home to Jersey County, Illinois; she developed a rash on April 4. The student was identified as the source of an outbreak involving 51 unvaccinated persons (age range: 1–24 years; median: 18 years; last rash onset: June 3) in her community—which was associated with a Christian Science college in the county. She also was identified as the source of an outbreak involving 156 persons (age range: 4–25 years; median: 15 years; rash onsets: April 17–May 15) at the Christian Science boarding high school she attended in St. Louis County, Missouri. After several unvaccinated persons from other states visited the school during the outbreak, six additional cases occurred. Five persons developed measles on return home (two persons to Maine and one each to California, New York, and Washington); the California patient was the source of exposure for a sibling. No further transmission associated with these six cases is known.

Maryland. A 24-year-old woman returned home to Baltimore County, Maryland; she developed a rash on April 4. The woman was the source of exposure for her 56-year-old father, who had rash onset on April 21.

Michigan. A 25-year-old Silver Thorn man visited his family in Wayne County, Michigan; he developed rash on April 17. The man was identified as the source of an outbreak involving 12 persons (age range: 9 months–37 years; median: 24 years; rash onsets: April 17–May 18) who were exposed at a wedding and a restaurant. One additional case (rash onset: April 16) was reported in a 12-year-old Chicago resident who had visited Wayne County. No further transmission associated with the Michigan or Chicago cases is known.

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Editorial Note: The sustained interstate measles outbreak described in this report demonstrates the ability of measles virus to spread rapidly and widely among a highly mobile population. The dates of rash onset for the five Breckenridge visitors suggest that they had been exposed to measles during the same period the Breckenridge cases were exposed; therefore, exposure to the common, unidentified source—not the Breckenridge cases—probably led to this widespread interstate outbreak. Direct contact of the five visitors with the unidentified source resulted in primary transmission of measles in five other states (222 reported cases), and further contact resulted in secondary transmission in four additional states (six reported cases) before the chain of transmission ended.

Measles Transmission — Continued

Factors that may have contributed to this interstate measles outbreak include 1) the timing of the initial exposure during school spring break; 2) exposure of an unvaccinated student who subsequently returned home to a community and school with many susceptible, unvaccinated persons; and 3) special events at the Missouri boarding school that drew susceptible, unvaccinated visitors from other states.

Although measles spread from Colorado to nine other states, transmission in six states stopped with the index case or after one additional case. In some of these states, spread may have been limited because the sources were adults whose routine activities may not have involved close contact with groups containing susceptible persons. Only two outbreaks (Illinois/Missouri and Michigan) resulted in substantial numbers of reported cases, and both were associated with contact with large groups (e.g., high school and college populations, wedding guests, and restaurant patrons). The extended outbreak in Illinois and Missouri has been the largest measles outbreak in the United States (excluding territories) in 1994 (2).

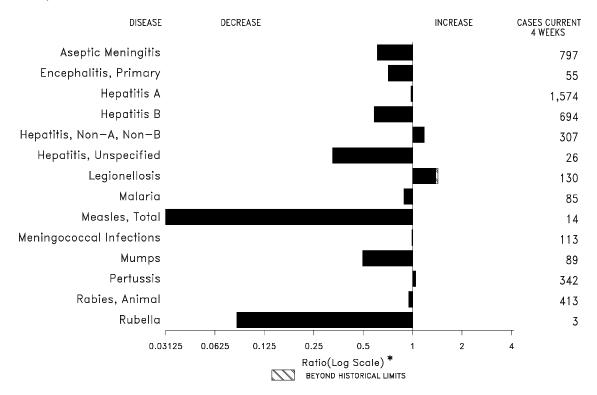
The primary strategy to prevent measles outbreaks is achieving and sustaining measles vaccination coverage levels of at least 90% for a single dose among all age groups. Efforts are under way to increase measles vaccination coverage among preschool children and implement a recommendation that all school-aged and college-aged persons receive two doses of measles-mumps-rubella vaccine. However, additional strategies may be needed to ensure complete vaccination of adults and to prevent outbreaks in settings where large groups of adults gather (e.g., resorts and restaurants). Large groups that do not routinely accept vaccination will remain potential problems for measles-control programs.

To achieve the Childhood Immunization Initiative's goal of eliminating indigenous measles in the United States by 1996 (3), continued efforts to assure rapid detection of measles cases and implementation of control measures are necessary. To define disease transmission patterns more completely, state and local health departments should rapidly investigate and report all suspected measles cases, obtain laboratory confirmation, determine the vaccination status of each suspected case, and determine the source or chain of disease transmission. Identification of measles cases by transmission category (i.e., international importation, linked to an importation, or indigenously acquired) also will be necessary to track progress toward achieving the 1996 elimination goal.

References

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FIGURE I. Notifiable disease reports, comparison of 4-week totals ending August 27, 1994, 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 August 27, 1994 (34th Week)

	Cum. 1994		Cum. 1994
AIDS* Anthrax Botulism: Foodborne Infant Other Brucellosis Cholera Congenital rubella syndrome Diphtheria Encephalitis, post-infectious Gonorrhea Haemophilus influenzae (invasive disease)† Hansen Disease Leptospirosis Lyme Disease	45,801 42 48 6 59 10 2 79 245,524 772 76 18 6,236	Measles: imported indigenous Plague Poliomyelitis, Paralytic§ Psittacosis Rabies, human Syphilis, primary & secondary Syphilis, congenital, age < 1 year¶ Tetanus Toxic shock syndrome Trichinosis Tuberculosis Tularemia Typhoid fever Typhus fever, tickbome (RMSF)	158 651 12 1 25 1 14,031 532 23 125 27 13,845 57 269

through first quarter 1994.

^{*}Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update July 26, 1994.

Of 735 cases of known age, 206 (28%) were reported among children less than 5 years of age.

The remaining 5 suspected cases with onset in 1994 have not yet been confirmed. In 1993, 3 of 10 suspected cases were confirmed. Two of the confirmed cases of 1993 were vaccine-associated and one was classified as imported.

Total reported to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services, the confirmed that the confirmed cases.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending August 27, 1994, and August 28, 1993 (34th Week)

	Aseptic		Encephalitis				Her	oatitis (\	/iral), by t			
Reporting Area	AIDS*	Menin- gitis	Primary	Post-in- fectious	Gono	rrhea	Α	В	NA,NB	Unspeci- fied	Legionel- losis	Lyme Disease
	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	45,801	4,583	382	79	245,524	255,746	14,066	7,494	2,802	278	1,033	6,236
NEW ENGLAND	1,811	150	12	4	5,299	4,821	200	239	94	16	26	1,861
Maine N.H.	70 37	18 22	2	2	54 72	53 39	21 12	11 16	8	-	3	14 15
Vt. Mass.	21 934	15 51	1 7	- 1	20 1,989	17 1,923	5 82	- 153	- 66	- 14	- 16	8 148
R.I.	146	44	2	i	307	270	17	6	20	2	7	286
Conn.	603	-	-	-	2,857	2,519	63	53	-	-	-	1,390
MID. ATLANTIC Upstate N.Y.	13,256 1,145	467 197	36 18	14 2	25,935 6,327	27,774 5,682	1,085 382	931 256	314 155	9 5	164 40	3,514 2,227
N.Y. City N.J.	8,180 2,786	96	6	4	8,503 3,009	7,880 3,041	411 191	206 246	1 130	-	2 29	9 730
Pa.	1,145	174	12	8	8,096	11,171	101	223	28	4	93	548
E.N. CENTRAL	3,645	764	95	17	48,367	53,164	1,328	749	206	7	328	62
Ohio Ind.	649 389	192 116	25 7	2 1	14,488 5,635	14,896 5,328	523 250	117 133	17 9	-	152 91	43 10
III.	1,759	174	32	5 9	12,524	17,838	272	140	42	3 4	16	4
Mich. Wis.	650 198	275 7	27 4	-	11,428 4,292	10,874 4,228	176 107	254 105	135 3	-	53 16	5 -
W.N. CENTRAL	981	241	19	5	13,499	14,030	678	438	111	9	92	118
Minn. Iowa	256 51	18 67	2	-	2,085 987	1,533 1,082	160 33	43 19	17 7	1 7	1 26	66 11
Mo.	431	93	7	4	7,993	8,181	292	334	67	1	42	28
N. Dak. S. Dak.	18 10	2	2 2	-	18 114	35 173	3 24	-	-	-	4	-
Nebr. Kans.	57 158	13 48	4 2	1	2,302	484 2,542	88 78	19 23	8 12	-	14 5	8 5
S. ATLANTIC	10,074	942	74	24	67,630	66,763	925	1,594	439	- 27	235	5 511
Del.	163	24	1	-	853	919	13	4	1	-	22	22
Md. D.C.	1,284 879	135 29	15 -	2 1	11,432 4,789	10,324 2,918	115 17	220 40	21	6 -	60 8	207 4
Va. W. Va.	725 27	154 17	17 6	6	8,542 503	7,985 404	109 10	84 25	18 22	4	5 1	105 13
N.C.	719	154	34	1	17,563	16,774	90	187	45	-	16	59
S.C. Ga.	665 1,186	23 42	- 1	-	8,462	7,042 4,660	30 23	23 506	6 163	-	9 82	7 81
Fla.	4,426	364	-	14	15,486	15,737	518	505	163	17	32	13
E.S. CENTRAL	1,239	318	25	2	29,587	29,135	332	740	557	2	43	27
Ky. Tenn.	207 390	103 55	10 10	1 -	3,248 8,755	3,100 9,039	99 130	57 630	18 527	1	6 22	14 10
Ala. Miss.	366 276	124 36	5	1	10,589 6,995	10,345 6,651	64 39	53	12	1	11 4	3
W.S. CENTRAL	4,667	514	37	2	30,680	28,551	2,028	896	352	50	33	80
Ark.	160 740	37 25	- 6	-	4,494	4,272	111 99	18	6	1 1	7 10	4
La. Okla.	183	-	-	-	8,085 2,489	7,711 2,942	190	115 217	106 203	1	11	46
Tex.	3,584	452	31	2	15,612	13,626	1,628	546	37	47	5	30
MOUNTAIN Mont.	1,405 17	180 3	6	3	5,376 66	7,504 53	2,703 17	420 20	299 5	37 -	62 14	11 -
Idaho	30	3 3 2	- 1	-	58	123	226	62	61	1	1	3
Wyo. Colo.	13 529	76	1 1	2	52 1,821	60 2,503	21 341	18 69	110 47	- 12	3 14	3
N. Mex. Ariz.	106 380	9 44	-	-	636 1,964	605 2,661	760 864	145 26	39 8	9 9	3 3	3
Utah	93	23	-	1	167	299	325	45	17	1	7	1
Nev.	237	20	4	-	612	1,200	149	35	12	5	17	1
PACIFIC Wash.	8,723 588	1,007 -	78 -	8 -	19,151 1,770	24,004 2,513	4,787 225	1,487 45	430 39	121 1	50 5	52 -
Oreg. Calif.	386 7,613	906	- 76	- 7	570 15,807	821 19,940	346 4,022	33 1,376	10 376	1 116	42	- 52
Alaska	29	16	2	-	558	371	155	9	-	-	-	JZ -
Hawaii	107	85	-	1	446	359	39	24	5	3	3	-
Guam P.R.	1 1,424	9 24	-	3	81 301	69 325	17 44	2 229	100	4 10	2	-
V.I. Amer. Samoa	34	-	-	-	17 20	76 35	5	1	-	-	-	-
C.N.M.I.	-	-	-	-	31	64	4	1	-	-	-	-

I: Not notifiable U: Unavailable

C.N.M.I.: Commonwealth of Northern Mariana Islands

^{*}Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update July 26, 1994.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 27, 1994, and August 28, 1993 (34th Week)

			Measle	s (Rube	eola)		Menin-						T			
Reporting Area	Malaria	Indig	enous		orted*	Total	gococcal Infections	Mumps		ı	Pertussi	s	Rubella			
	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	1994	Cum. 1994	Cum. 1993	
UNITED STATES	628	1	651	1	158	248	1,830	16	924	75	2,167	3,171	-	202	157	
NEW ENGLAND		1	15	-	12	60	96	-	14	7	215	457	-	125	1	
Maine N.H.	3 3	-	1 1	-	4	1 1	18 7	-	3 4	1 4	3 48	9 112	-	-	1	
Vt.	2	-	2	-	1	31	2	-	-	-	28	61	-	100	-	
Mass. R.I.	25 5	-	3 4	-	4 3	17 1	38	-	1	2	112 5	226 7	-	122 2	-	
Conn.	13	1	4	-	-	9	31	-	6	-	19	42	-	1	-	
MID. ATLANTIC Upstate N.Y.	116 34	-	180 25	-	22 3	19 4	179 61	2	78 20	21 20	384 162	503 136	-	9 6	55 13	
N.Y. City	41	-	14	-	2	7	11	-	8	-	73	49	-	1	22	
N.J. Pa.	21 20	-	137 4	-	14 3	8	42 65	2	6 44	- 1	9 140	53 265	-	2	15 5	
E.N. CENTRAL	62	_	59	1	41	25	286	1	146	1	287	805	_	11	7	
Ohio	8	-	15	-	-	9	78	-	42	1	106	197	-	-	1	
Ind. III.	11 23	-	- 17	1 [†]	1 39	9	49 93	-	6 61	-	47 59	57 282	-	3	2 1	
Mich.	18	-	24	-	1	5	40	1	33	-	29	33	-	8	2	
Wis.	2	-	3	-	- 42	2	26	-	4	- 15	46	236	-	-	1	
W.N. CENTRAL Minn.	31 10	-	116	-	42	3	128 11	2 1	44 5	15 12	114 51	231 105	-	2	1	
lowa	4	-	6	-	1	-	16	-	11	-	6	13 80	-	-	- 1	
Mo. N. Dak.	11 1	-	108	-	40	1	63 1	1 -	23 3	-	29 5	4	-	2	1 -	
S. Dak.	-	-	-	-	-	-	7 9	-	-	2	6 7	7	-	-	-	
Nebr. Kans.	3 2	-	1 1	-	1	2	21	-	2	1	10	8 14	-	-	-	
S. ATLANTIC	120	-	45	-	4	25	310	1	139	6	216	292	-	9	6	
Del. Md.	3 52	-	- 1	-	2	4	5 25	- 1	39	1	2 59	6 91	-	-	2	
D.C.	8	-	-	-	-	-	3	-	-	-	5	5	-	-	-	
Va. W. Va.	18 -	-	1 36	-	1	1	51 11	-	32 3	4	27 3	38 8	-	-	-	
N.C.	7	-	2	-	1	-	42	-	36	-	58	44	-	-	-	
S.C. Ga.	3 13	-	2	-	-	-	17 63	-	6 8	1 -	12 18	8 28	-	-	-	
Fla.	16	-	3	-	-	20	93	-	15	-	32	64	-	9	4	
E.S. CENTRAL	23 7	-	28	-	-	1	113 33	-	16	2	105 53	135 26	-	-	-	
Ky. Tenn.	8	-	28	-	-	-	25	-	7	-	18	54	-	-	-	
Ala. Miss.	7 1	-	-	-	-	1	55	-	3 6	2	28 6	45 10	-	-	-	
W.S. CENTRAL	33	_	9	_	7	5	230	3	183	_	104	84	_	12	17	
Ark.	3	-	-	-	1	-	36	-	1	-	18	7	-	-	-	
La. Okla.	5 3	-	-	-	1	1	29 24	1	21 23	-	9 22	6 49	-	4	1 1	
Tex.	22	-	9	-	5	4	141	2	138	-	55	22	-	8	15	
MOUNTAIN Mont	22	-	148	-	17	4	122	1	105	7	292 4	235 2	-	5	9	
Mont. Idaho	2	-	-	-	-	-	15	1	8	-	42	60	-	-	1	
Wyo. Colo.	1 10	-	- 16	-	3	3	5 23	-	2	-	108	1 76	-	-	2	
N. Mex.	3	-	-	-	-	-	13	N	N	2	19	30	-	1	-	
Ariz. Utah	1 4	-	1 131	-	1 2	-	40 15	-	71 11	3 2	104 13	40 25	-	3	2	
Nev.	i	-	-	-	11	1	5	-	10	-	2	1	-	1	1	
PACIFIC	170		51		13	106	366	6	199	16	450	429		29	61	
Wash. Oreg.	6 8	U -	-	U -	-	3	24 64	U N	6 N	U 2	23 33	35 28	U -	2	-	
Calif.	141	-	46	-	9	83	270	2	177	14	378	357	-	22	35	
Alaska Hawaii	1 14	-	5	-	4	1 19	2 6	4	2 14	-	16	5 4	-	1 4	1 25	
Guam	2	U	211	U	-	2	1	U	4	U	2	-	U	1	-	
P.R. V.I.	2	-	13	-	-	325	7	-	2	-	1	1	-	-	-	
Amer. Samoa	-		-	-	-	-	-	-	1	-	2	2	-	-	-	
C.N.M.I.	1	U	26	U	-	1	-	U	2	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 August 27, 1994, and August 28, 1993 (34th Week)

Reporting Area	Syp	ohilis Secondary)	Toxic- Shock Syndrome		culosis	Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
Reporting Area	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	14,031	17,229	125	13,845	14,554	57	269	259	3,978
NEW ENGLAND	152	236	3	313	305	-	20	10	1,216
Maine N.H.	4 3	4 21	-	14	12 15	-	-	-	118
Vt.	-	1	1	3	3	-	-	-	99
Mass. R.I.	64 12	101 10	2	166 32	163 38	-	16 1	8 -	465 5
Conn.	69	99	-	98	74	-	3	2	529
MID. ATLANTIC	854	1,540 138	21	2,757 185	3,087	1	80 7	8 2	388 79
Upstate N.Y. N.Y. City	107 371	796	11 -	1,725	466 1,860	1 -	58	1	-
N.J. Pa.	120 256	202 404	- 10	501 346	307 454	-	15 -	1 4	193 116
E.N. CENTRAL	1,900	2,872	25	1,360	1,464	7	46	37	39
Ohio	788	770	9	202	210	1	5	24	2
Ind. III.	163 545	237 1,110	2 5	115 710	143 764	2 2	4 26	5 6	11 9
Mich.	180	412	9	292	286	1	4	2	10
Wis.	224	343	-	41	61	1	7	-	7
W.N. CENTRAL Minn.	790 32	1,131 44	20 1	358 81	321 38	21 1	1 -	22	144 13
Iowa	40	51	7	35	38 171	-	- 1	1	62
Mo. N. Dak.	684	925 4	5 1	155 6	5	14 -	-	9	12 8
S. Dak. Nebr.	-	2 10	2	17 18	11 16	1 1	-	10 1	22
Kans.	34	95	4	46	42	4	-	1	27
S. ATLANTIC	4,076	4,533	6	2,457	2,954	1	36	114	1,357
Del. Md.	13 167	83 256	-	213	30 255	-	1 6	10	37 373
D.C.	157	236	-	81	113	-	1	-	2
Va. W. Va.	516 8	431 8	1	214 58	299 53	-	6 -	12 2	262 55
N.C.	1,141	1,282	1	293	335	-	-	46	108
S.C. Ga.	519 1,005	664 757	-	242 569	271 508	1	2	9 32	126 264
Fla.	550	816	4	787	1,090	-	20	3	130
E.S. CENTRAL Ky.	2,486 135	2,575 216	3 1	814 214	1,057 249	-	2 1	21 4	124 10
Tenn.	656	742	2	207	319	-	i	13	34
Ala. Miss.	447 1,248	555 1,062	-	271 122	318 171	-	-	2 2	80
W.S. CENTRAL	3,102	3,312	1	1,921	1,509	15	10	35	455
Ark.	346	380	-	200	116	13	3	6	20
La. Okla.	1,176 96	1,657 212	1	94 186	116 97	2	2	- 25	47 24
Tex.	1,484	1,063	-	1,441	1,180	-	5	4	364
MOUNTAIN Mont.	176 3	166 1	6	311 9	355 13	10 3	9	12 4	88 13
Idaho	1	-	1	11	9	-	-	-	2
Wyo. Colo.	94	7 45	3	5 21	2 56	- 1	3	2 4	15 8
N. Mex.	18	24	-	43	35	2	1	-	3
Ariz. Utah	31 6	71 4	2	149 29	148 21	2	1 2	1 -	31 10
Nev.	23	14	-	44	71	2	2	1	6
PACIFIC Wash.	495 38	864 37	40	3,554 174	3,502 162	2	65 3	-	167
Oreg.	21	33	-	90	-	2	3	-	7
Calif. Alaska	430 4	785 6	37 -	3,077 35	3,119 42	-	55 -	- -	131 29
Hawaii	2	3	3	178	179	-	4	-	-
Guam	4	3	-	58	42	-	1	-	- E1
P.R. V.I.	187 22	356 32	-	86 -	132 2	-	-	-	51 -
Amer. Samoa	1 2	3	-	3 22	3 20	-	1 1	-	-
C.N.M.I.	۷	ა	-	22	20	-	ı	-	

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending August 27, 1994 (34th Week)

	All Causes, By Age (Years)							'&I [†]		All Causes, By Age (Years)						
Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	Total	Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	P&I [†] Total	
NEW ENGLAND Boston, Mass. Bridgeport, Conn. Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass. New Haven, Conn. Providence, R.I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass.	490 139 41 23 32 41 24 17 47 U 1 29 300 55	334 79 36 18 26 26 16 9 12 24 U	25 2 3 6 7 6 - 2 12 U	47 19 2 2 7 1 2 7 U 1 1	14 8 1 - 1 2 U	12 8 - - 1 - 2 U	46 11 7 2 1 6 1 2 1 U	S. ATLANTIC Atlanta, Ga. Baltimore, Md. Charlotte, N.C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga. St. Petersburg, Fla. Tampa, Fla. Washington, D.C. Wilmington, Del. E.S. CENTRAL	1,134 154 209 113 105 66 46 U 52 58 157 168 6	675 91 116 71 67 33 32 U 25 51 113 71 5	230 36 41 23 24 18 5 U 15 5 25 37 1	161 25 36 11 11 12 4 U 8 - 14 40 -	41 2 6 3 3 2 4 U 2 2 2 2 15	27 10 5 1 1 U 2 - 3 5	49 3 15 7 4 - U 3 4 10 3	
MID. ATLANTIC Albany, N.Y. Allentown, Pa. Buffalo, N.Y. Camden, N.J. Elizabeth, N.J. Erie, Pa.§	2,363 53 20 100 36 19 39	1,516 35 15 73 23 13 33	463 13 2 16 5 3	276 3 2 3 3 3	69 2 1 5 4	36 - 3 1	88 1 1 1 1 1 3	Birmingham, Ala. Chattanooga, Tenn. Knoxville, Tenn. Lexington, Ky. Memphis, Tenn. Mobile, Ala. Montgomery, Ala. Nashville, Tenn.	127 89 77 76 205 41 52 112	77 64 56 48 122 22 36 78	26 14 16 18 49 12 10 23	12 9 3 9 18 3 2 7	6 1 - 1 9 2 2 1	6 1 2 7 2 2 3	4 2 9 8 14 3	
Jersey City, N.J. New York City, N.Y. Newark, N.J. Paterson, N.J. Philadelphia, Pa. Pittsburgh, Pa.§ Reading, Pa. Rochester, N.Y. Schenectady, N.Y. Scranton, Pa.§ Syracuse, N.Y. Trenton, N.J. Utica, N.Y. Yonkers, N.Y.	38 1,261 74 31 321 71 23 117 30 37 54 14 25 U	23 767 21 27 196 55 18 87 20 29 49 10 22 U	257 24 2 67 8 4 21 8 7 5 3	5 174 23 - 47 3 1 6 2 - 1	1 42 4 1 6 2 - 1 - -	21 2 3 3 3 - 2 - 1	33 4 20 7 2 8 2 4	W.S. CENTRAL Austin, Tex. Baton Rouge, La. Corpus Christi, Tex. Dallas, Tex. El Paso, Tex. Ft. Worth, Tex. Houston, Tex. Little Rock, Ark. New Orleans, La. San Antonio, Tex. Shreveport, La. Tulsa, Okla.	1,416 52 60 48 175 69 91 378 62 104 200 68 109	852 26 38 30 94 46 60 210 33 56 143 40 76	290 10 10 10 37 12 18 97 15 20 30 12 19	169 10 9 4 28 5 9 51 5 17 18 8	52 1 3 1 10 2 1 10 5 6 7 4 2	50 5 3 6 4 3 10 4 2 2 4 7	80 3 3 3 3 8 3 3 6 2 - 14 2 3	
E.N. CENTRAL Akron, Ohio Canton, Ohio Chicago, III. Cincinnati, Ohio Cleveland, Ohio Columbus, Ohio Dayton, Ohio Detroit, Mich. Evansville, Ind. Fort Wayne, Ind. Gary, Ind. Grand Rapids, Mich Indianapolis, Ind. Madison, Wis. Milwaukee, Wis. Peoria, III. South Bend, Ind. Toledo, Ohio Youngstown, Ohio W.N. CENTRAL Des Moines, Iowa Duluth, Minn. Kansas City, Kans. Kansas City, Kans. Kansas City, Mo. Lincoln, Nebr. Minneapolis, Minn. Omaha, Nebr. St. Louis, Mo. St. Paul, Minn. Wichita, Kans.	183 68 102 35 45 40 83 73 623 U 177 31 88	1,266 50 25 149 90 87 80 152 30 36 8 38 112 49 79 26 355 54 436 U U 11 20 71 21 23 104 48 46 46	27 36 11 50 9 6 8 31 6 13 3 6 8 19 12 109 5 5 13 4 19 17 28 9	198 6 1 64 3 8 9 6 41 1 4 20 7 5 3 3 3 1 6 3 4 4 U 1 5 2 5 7 4 4 1 2 5 7 7 4 4 1 5 2 5 7 7 7 7 7 8 7 7 7 8 7 7 8 7 8 7 7 8 7 7 7 8 7 8 7 7 8 7 8 7 8 7 8 7 7 8 7 8 7 7 8 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 7 8 7 8 7 7 7 8 7 7 7 7 7 7 8 7 7 7 7 7 8 7	109 2 1 53 3 4 7 3 2 3 14 4 1 1 1 2 2 5 3 3 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1	57 3 - 2 5 1 11 7 7 - 2 1 1 6 2 4 4 2 2 3 3 1 1 1 1 2 2 3 1 1 1 1 2 2 1 1 1 1	92 35 7 1 10 11 7 5 7 8 3 9 2 4 6 1 3 3 1 1 1 5 3 9 4 2 4 2 4 2 4 2 4 2 4 4 2 4 4 2 4 4 2 4 4 4 2 4	MOUNTAIN Albuquerque, N.M. Colo. Springs, Colo Denver, Colo. Las Vegas, Nev. Ogden, Utah Phoenix, Ariz. Pueblo, Colo. Salt Lake City, Utah Tucson, Ariz. PACIFIC Berkeley, Calif. Fresno, Calif. Glendale, Calif. Honolulu, Hawaii Long Beach, Calif. Los Angeles, Calif. Pasadena, Calif. Portland, Oreg. Sacramento, Calif. San Diego, Calif. San Diego, Calif. San Jose, Calif. San Jose, Calif. Santa Cruz, Calif. Seattle, Wash. Spokane, Wash. Tacoma, Wash.	. 46 100 152 24 186 17 90 118 1,227 13 61 16 83 79 334 30 74 U	550 53 33 66 95 19 125 11 62 86 807 840 144 53 214 22 54 U 87 20 81 82 47 6,939	135 22 5 9 35 2 27 3 13 19 202 4 10 1 1 12 10 64 3 11 U 11 U 26 3 22 10 15 22 27 4 10 11 11 26 26 27 27 27 27 27 27 27 27 27 27 27 27 27	87 111 7 17 9 1 18 3 11 10 138 4 1 10 10 37 1 10 26 U 2 17 6 8 1,183	26 1 5 7 1 7 1 7 3 2 36 2 2 5 1 10 5 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1	24 2 1 3 6 1 1 1 3 5 - 4 - U 3 3 U 9 - 4 1 1 - 2 7 6 1 7 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	49 32 66 61 16 9 6 94 12 33 4 12 5 12 U7 U7 U16 48 5 4 5 8 5	

^{*}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.

Emerging Infectious Diseases

Arenavirus Infection — Connecticut, 1994

On August 20, 1994, the Connecticut Department of Public Health and Addiction Services received a report of a case of acute illness in a virologist suspected to be associated with Sabiá virus, a newly described arenavirus. This report presents preliminary findings from the case investigation.

On August 19, 1994, the virologist presented to the Tropical Medicine Clinic at Yale-New Haven Hospital with a 4-day history of fever, malaise, backache, stiff neck, and myalgias that he attributed to a recurrence of a *Plasmodium vivax* infection. On evaluation at the clinic, his temperature was 99.8 F (37.6 C) on antipyretics, and he had a normal physical examination. Laboratory evaluation included a negative malaria smear, a total white blood cell count (WBC) of 2600 cells/mm³ (normal: 4000–10,000 cells/mm³), a platelet count of 138,000 cells/mm³ (normal: 150,000–350,000 cells/mm³), 2+ proteinuria, and alanine aminotransferase (ALT) of 6356 U/L (upper limit normal: 35 U/L).

A history of a possible laboratory exposure to Sabiá virus was obtained, and the man was hospitalized for prompt treatment with intravenous ribavirin, an antiviral drug that is effective against other arenavirus infections such as Lassa fever (1).

On admission, the patient had a temperature of 103 F (39.4 C). Within 24 hours of hospitalization, his total WBC and platelet count had declined to a low of 1400 cells/mm³ and 92,000 cells/mm³, respectively. His ALT peaked at 128 U/L on the 9th day of hospitalization. No hemorrhagic manifestations of the infection were observed during hospitalization. A diagnosis of Sabiá infection was confirmed on acute serum by amplification of a portion of the viral genome by polymerase chain reaction and by isolation of the virus from blood. The patient recovered and was discharged on August 26.

On August 8, the virologist was apparently exposed to an aerosol of Sabiá virus when a centrifuge bottle developed a crack, and tissue culture supernatant containing the virus leaked into the high-speed centrifuge. At the time of the incident, the virologist was working alone in the biosafety level-3 laboratory (negative pressure with HEPA-filtered exhaust system). He cleaned the spilled material from the centrifuge while wearing a gown, surgical mask, and gloves.

Persons who came in contact with the patient or with his biological specimens in the hospital laboratories since onset of his illness were notified and enrolled in a surveillance program. None of these persons have had exposure to the patient that would suggest a high risk for secondary infection. As of August 31, none of the persons under surveillance have reported a febrile illness.

Reported by: M Barry, MD, F Bia, MD, M Cullen, MD, L Dembry, MD, S Fischer, MD, D Geller, MD, W Hierholzer, MD, P McPhedran, MD, P Rainey, MD, M Russi, MD, E Snyder, MD, E Wrone, MD, Yale Univ School of Medicine and Yale-New Haven Hospital; JP Gonzalez, MD, R Rico-Hesse, PhD, R Tesh, MD, R Ryder, MD, R Shope, MD, Yale Arbovirus Research Unit, Yale Univ; WP Quinn, MPH, New Haven Health Dept; PD Galbraith, DMD, ML Cartter, MD, JL Hadler, MD, State Epidemiologist, Connecticut Dept of Public Health and Addiction Svcs. A DeMaria, Jr, MD, State Epidemiologist, Massachusetts Dept of Public Health. Div of Field Epidemiology, Epidemiology Program Office; Special Pathogens Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

Arenavirus Infection — Continued

Editorial Note: Sabiá virus was isolated by scientists in Sáu Paulo, Brazil, in 1990 and characterized by scientists in Belém, Brazil, and at the Yale Arbovirus Research Unit (2). Only two cases of Sabiá virus infection (both in Brazil) have been reported (2). One was a naturally acquired infection in an agricultural engineer who was probably infected by exposure to an infected rodent (the natural reservoir of other known arenaviruses). The engineer died approximately 2 weeks after becoming ill. The second case was in a laboratory technician who was working with the virus. He had a severe illness characterized by 15 days of fever, chills, malaise, headache, generalized myalgia, sore throat, conjunctivitis, nausea, vomiting, diarrhea, epigastric pain, bleeding gums, and leukopenia. He recovered after hospitalization and treatment with intravenous fluids.

Little is known about the modes of transmission of the Sabiá virus. Based on the pathogenesis of other arenaviruses, the Sabiá virus is not believed to be infectious until the patient exhibits symptoms. Other arenaviruses can be transmitted by needlestick but do not readily spread from person to person. Persons in casual contact with persons with arenavirus infection are not at risk for disease and do not require medical follow-up.

References

- 1. McCormick JB, King IJ, Webb PA, et al. Lassa fever: effective therapy with ribavirin. N Engl J Med 1986;314:20–6.
- 2. Coimbra TLM, Nassar ES, Burattini MN, et al. New arenavirus isolated in Brazil. Lancet 1994;343:391–2.

Notice to Readers

NIOSH Alert: Request for Assistance in Preventing Scalping and Other Severe Injuries from Farm Machinery

CDC's National Institute for Occupational Safety and Health (NIOSH) periodically issues alerts on workplace hazards that have caused death, serious injury, or illness to workers. One such alert, *Request for Assistance in Preventing Scalping and Other Severe Injuries from Farm Machinery* (1), was recently published and is available to the public.*

This alert warns that farm workers are at high risk for avulsion of the scalp and other severe injuries when they work near farm machinery with inadequately guarded drivelines or shafts driven by power take-offs (PTOs). Entanglement of hair, clothing, or body parts around these drivelines or shafts kills and injures many farm workers each year: according to the NIOSH National Traumatic Occupational Fatalities Surveillance System, at least 346 farm workers aged ≥16 years died from farm-related entanglement injuries during 1980–1989; 112 of those deaths were caused by entanglement in PTO-driven drivelines and shafts of farm machinery. Approximately 10,000

^{*}Single copies of this document are available without charge from the Publications Office, Division of Standards Development and Technology Transfer, NIOSH, CDC, Mailstop C-13, 4676 Columbia Parkway, Cincinnati, OH 45226-1998; telephone (800) 356-4674 ([513] 533-8328 for persons outside the United States); fax (513) 533-8573.

Notice to Readers — Continued

nonfatal entanglement injuries also occurred on farms during 1982–1986; 864 of these injuries included the loss of a body part (1).

The alert describes five persons who were severely injured when their hair became entangled around the inadequately guarded rotating drivelines or shafts of farm machinery driven by PTOs (1,2). Recommendations are given for farm owners and workers to prevent injuries from primary and secondary drivelines and other PTO-driven shafts.

References

- 1. NIOSH. Request for assistance in preventing scalping and other severe injuries from farm machinery. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, 1994; DHHS publication no. (NIOSH)94-105.
- 2. CDC. Scalping incidents involving hay balers—New York. MMWR 1992;41:489-91.

Monthly Immunization Table

To track progress toward achieving the goals of the Childhood Immunization Initiative (CII), CDC publishes monthly a tabular summary of the number of cases of all diseases preventable by routine childhood vaccination reported during the previous month and year-to-date (provisional data). In addition, the table compares provisional data with final data for the previous year and highlights the number of reported cases among children aged ≤5 years, who are the primary focus of CII. Data in the table are derived from CDC's National Notifiable Diseases Surveillance System.

Number of reported cases of diseases preventable by routine childhood vaccination — United States, July 1994 and 1993–1994*

	No. cases,		cases ry-July	No. cases among children aged <5 years [†] January–July			
Disease	July 1994	1993	1994	1993	1994		
Congenital rubella							
syndrome (CRS)	0	5	2	4	2		
Diphtheria	0	0	0	0	0		
Haemophilus influenzae§	114	795	718	248	194		
Hepatitis B [¶]	1046	7229	6724	68	68		
Measles	71	224	794	80	178		
Mumps	119	1043	830	183	131		
Pertussis	247	2295	1810	1329	1024		
Poliomyelitis, paralytic**	1	3	1	1	1		
Rubella	28	138	199	21	18		
Tetanus	3	20	22	0	1		

^{*}Data for 1993 are final and for 1994, provisional.

[†]For 1993 and 1994, age data were available for 90% or more cases, except for 1993 age data for CRS, which were available for 80% of cases.

[§]Invasive disease; *H. influenzae* serotype is not routinely reported to the National Notifiable Diseases Surveillance System.

Because most hepatitis B virus infections among infants and children aged <5 years are asymptomatic (although likely to become chronic), acute disease surveillance does not reflect the incidence of this problem in this age group or the effectiveness of hepatitis B vaccination in infants.

^{**}One case with onset in 1994 has been confirmed; this case is vaccine-associated. In 1993, three of 10 suspected cases were confirmed; two of the confirmed cases of 1993 were vaccine-associated, and one was classified as imported.

Addendum: Vol. 43, No. 30

In the article "Hantavirus Pulmonary Syndrome—Northeastern United States, 1994," on page 549, the following authors should be added to the reported by section: M Hibberd, MD, M Mayer, MD, R Meyer, Suffolk County Dept of Health Svcs, Hauppauge, New York.

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