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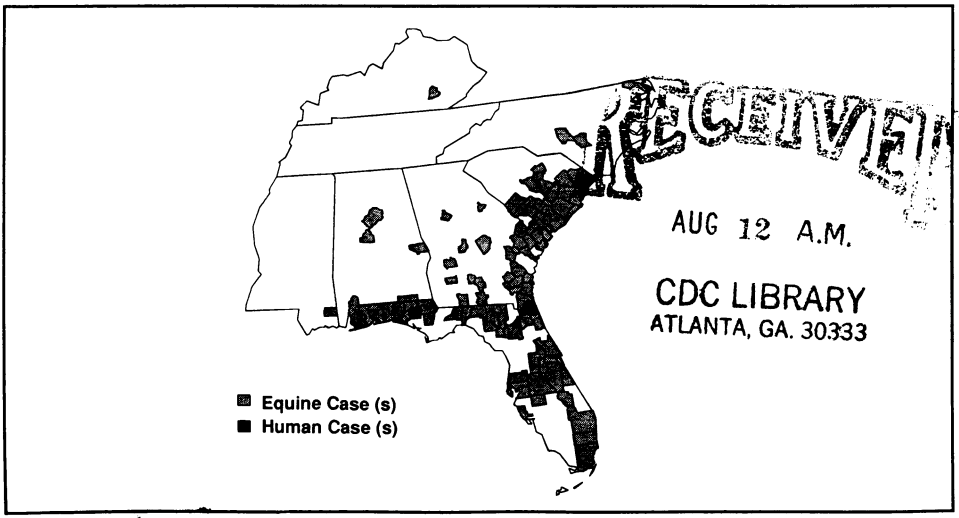
Epidemiologic Notes and Reports

Eastern Equine Encephalitis — Florida, Eastern United States, 1991

The Florida Department of Health and Rehabilitative Services (HRS) has confirmed five human cases of eastern equine encephalitis (EEE) in elderly residents of Bradford, Duval, and Washington counties in northern Florida (Figure 1). Dates of illness onset were in mid-June and early July (Figure 2). One patient partially recovered and has residual neurologic deficits, two patients remain comatose, and two patients died.

From July 1 through July 19, the Duval, Bradford, Leon, and Saint Johns county health departments issued public health alerts after high seroconversion rates in sentinel chicken flocks were detected or after human or equine cases were confirmed.

FIGURE 1. Human and equine cases of eastern equine encephalitis, by county — southeastern United States, 1991



Eastern Equine Encephalitis — Continued

On July 26, the Florida HRS issued an alert for all counties in the state's panhandle. Local mosquito-control districts in affected counties have increased applications of adulticides.

Although human EEE cases have been reported only from northern Florida, an extensive epizootic in horses has been observed over a wide area of the southeastern United States (Figure 1). As of July 29, 246 laboratory-confirmed equine cases and more than 80 unconfirmed but histopathologically compatible equine cases have been reported. The Florida Department of Agriculture and Consumer Services has reported 173 equine cases scattered statewide; 70 of these were reported by the beginning of July—the most ever reported in a season by this time (Figure 2). Subsequently, a new state rule requiring reporting of equine cases was promulgated.

Other states reporting equine cases are Georgia (41 cases), South Carolina (19 cases), Alabama and North Carolina (five cases each), Mississippi and New York (two cases each), and Kentucky (one case). In Georgia, epornitic infections were reported in commercial quail, and fatal cases occurred in two dogs and 70 piglets.

In the northeast, a localized EEE epizootic has been reported in counties bordering the Cicero swamp in upstate New York. EEE was confirmed in one fatal equine case from Oswego County, and four suspected cases from Onondaga and Oswego counties are under investigation. Mosquito surveillance in the two counties detected six EEE viral isolates from *Culiseta melanura*, the principal enzootic vector; three isolates from *Coquillitidea perturbans*; and one isolate from *Aedes canadensis*. The latter two species can function as epizootic vectors. The counties sprayed the swamp preemptively in June and twice in July.

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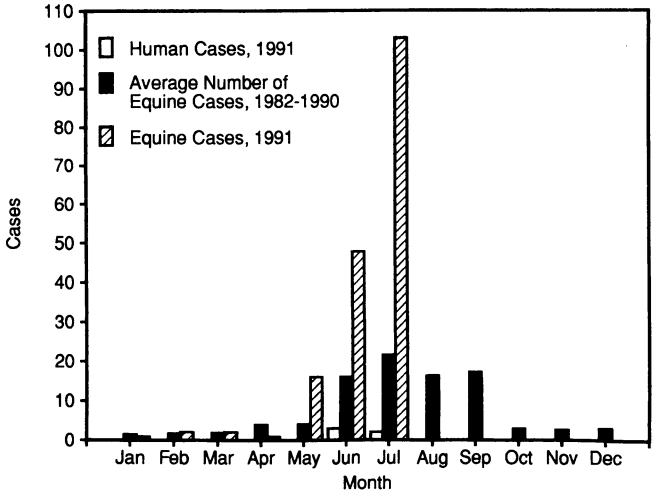
FIGURE 2. Human and equine cases of eastern equine encephalitis reported through 1991, and average number of equine cases during 1982–1990, by month — Florida



Eastern Equine Encephalitis — Continued

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Editorial Note: In the United States, EEE is the rarest of the mosquitoborne arboviral infections (*1*). A median of five sporadically occurring infections among humans are reported annually; however, the illness is fatal in 30% of cases overall, and even higher case-fatality rates are observed at the extremes of age.

Numerous mosquito species have been implicated as potential epizootic vectors of EEE (*2,3*). In the southeast, these species include salt-water–marsh mosquitoes such as *Aedes sollicitans*, which are abundant in coastal areas, and fresh-water mosquitoes, such as *Culex nigripalpus*, *Coquillitidea perturbans*, and *Aedes atlanticus*. Heavy spring rains in northern Florida have led to exceptionally large populations of *Culiseta melanura*, the principal vector of EEE virus in the enzootic cycle, and floodwater species that potentially are epizootic vectors.

An effective EEE vaccine for horses is commercially available, but cases continue to occur because of failures to vaccinate foals and to revaccinate older horses. An experimental EEE vaccine for humans is available to laboratory workers. In many areas where EEE is enzootic, control programs to reduce vector mosquitoes rely on larvicides and adulticides and long-term projects to reduce breeding sites. Personal protective measures to reduce mosquito bites are an important approach to prevention. These measures include the use of repellents, appropriate dress, and avoidance of outdoor activity during twilight hours when many mosquitoes are most active.

References

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2. Morris CD. Eastern equine encephalomyelitis. In: Monath TP, ed. The arboviruses, epidemiology and ecology. Boca Raton, Florida: CRC Press, Inc, 1988:1–20.
3. Scott TW, Weaver SC. Eastern equine encephalomyelitis virus: epidemiology and evolution of mosquito transmission. Adv Virus Res 1989;37:277–328.

Current Trends

Trends in Traumatic Spinal Cord Injury — New York, 1982–1988

In the United States, injuries resulting from falls are the most common type of injury among persons ≥65 years of age (*1*), and most spinal cord injuries (SCIs) among persons in this age group are caused by falls (*2*). SCI, with its resultant paralysis, is one of the most catastrophic and devastating medical conditions. Previous studies have characterized the epidemiology of SCI (*2–4*). This report describes changes in the reported incidence of SCI in New York during 1982–1988.

Data on SCIs were obtained from the New York State Department of Health's Statewide Planning and Research Cooperative System, which documents all hospital discharges from acute-care facilities in New York. This study included a review of hospital discharges from 1982 (the first year information distinguishing new admissions from transfer patients became available) through 1988 (the most recent year for which data are available). Transfer patients were eliminated to avoid duplicate counts of the same person. SCI patients included in the study were New York residents with *International Classification of Diseases, Ninth Revision, Clinical Modification*

Spinal Cord Injury — Continued

(ICD-9-CM) principal diagnosis codes (N-codes) 806 (fracture of vertebral column with SCI) or 952 (SCI without evidence of spinal bone injury). In addition, patients were included if a secondary diagnosis indicated SCI and the principal diagnosis indicated any form of traumatic injury, defined as ICD-9-CM rubrics 800–959, excluding 905–909 (late effects), 930–939 (foreign bodies), and 958 (early complications) (*5*). Incidence rates were calculated by year, sex, and age group. Heterogeneity in annual rates was tested using a chi-square statistic (*6*).

During 1982–1988, 5384 traumatic SCI discharges were reported, for an average crude annual rate of 4.3 SCIs per 100,000 residents. This rate is within the range reported in previous studies (2.8–5.3 SCIs per 100,000 persons) (*2–4*), although it is somewhat higher than the average annual U.S. estimate (3.1 per 100,000) (*2*).

Annual SCI rates did not change significantly over time for men or for all persons (Figure 1). However, a significant ($p<0.001$) decrease occurred in rates for women over time (Figure 2); the largest decrease was for women ≥65 years of age. For men, rates did not decrease for any age group.

Although data are not available for 1982–1988 on the cause of injury for hospital discharges, data are available on the cause of injury deaths. Preliminary analysis of all deaths from falls among persons aged ≥65 years during 1982–1988 showed a continual decline in rates for women over time, from 29 deaths per 100,000 women in 1982 to 24 per 100,000 in 1988. Rates for men declined from 40 deaths per 100,000 men in 1982 to 28 per 100,000 in 1984, then fluctuated from 1985 through 1988 (range: 29 per 100,000 in 1987 to 33 per 100,000 in 1988).

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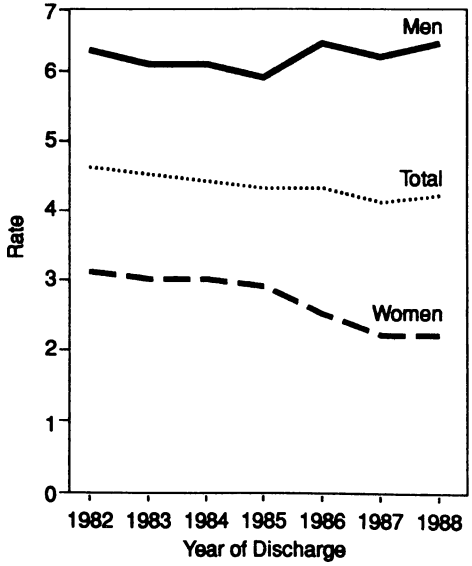
FIGURE 1. Annual rates* of traumatic spinal cord injury, by year of hospital discharge and patient sex — New York, 1982–1988



*Per 100,000 residents.

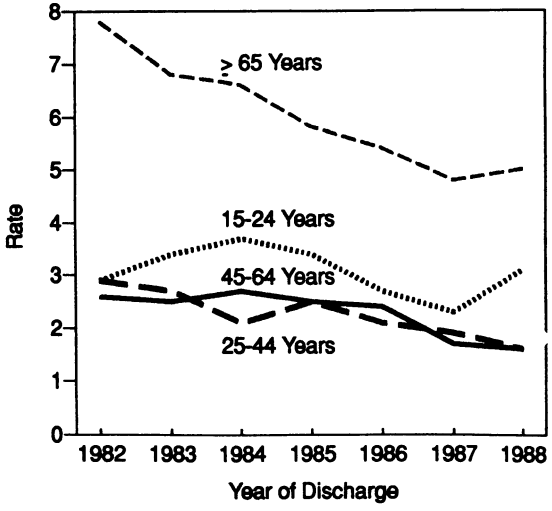
Spinal Cord Injury — Continued

Editorial Note: Interpretation of the trends reported here illustrate how attempts to study severe, nonfatal injuries are frequently complicated by inadequate data. External cause of injury codes (E-codes) were not required in New York hospital discharge records until 1990; their inclusion will allow more detailed analyses of trends in future years. Many scientific and professional groups and private organizations have recognized the need for E-coding hospital discharge data. Both the Association of State and Territorial Health Officials and the Council of State and Territorial Epidemiologists have recommended that hospital discharge data be E-coded. Two reports from the National Research Council have described the detrimental effects on injury research caused by the lack of these data and recommended that hospital discharge data be E-coded (*7,8*). Six states (Arizona, California, New York, Rhode Island, Vermont, and Washington), whose combined populations total more than 20% of the nation's population, have recently begun requiring the use of E-codes in their hospital discharge data. The universal adoption of E-codes on hospital discharges will provide the most cost-effective mechanism for obtaining injury morbidity and cost data.

Universal adoption of E-coding presents logistic and technical challenges. However, E-coding coupled with mandatory reporting of SCIs will permit researchers and health department officials to determine the incidence of SCI, identify high-risk groups, define etiologies, and evaluate the effectiveness of intervention measures. In addition, the Institute of Medicine's Committee on a National Agenda for the Prevention of Disabilities recently recommended the development of a national disability surveillance system to monitor the incidence and prevalence of 1) functional limitations and disabilities; 2) specific developmental disabilities, injuries, and diseases

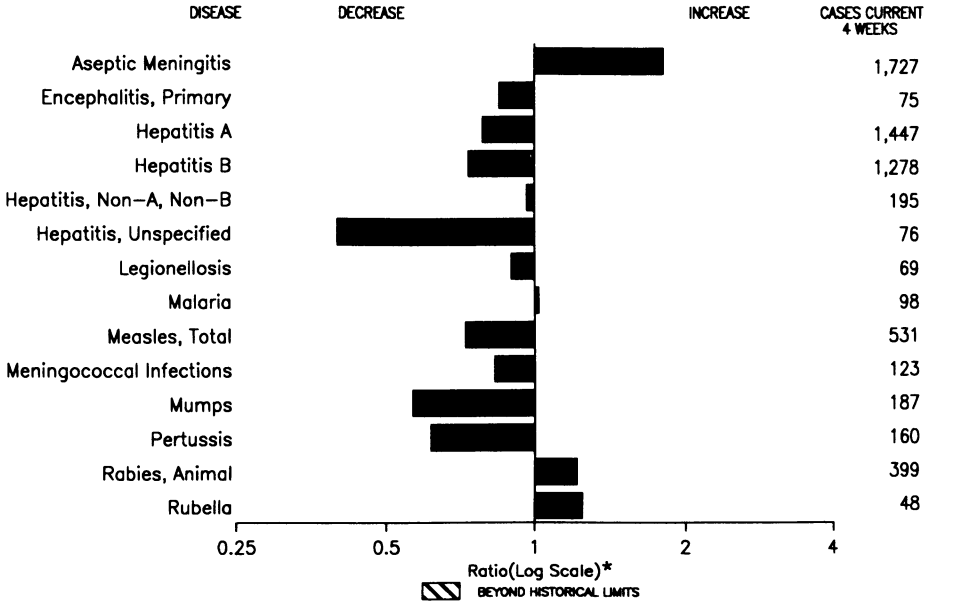
(Continued on page 543)

FIGURE 2. Annual rates* of traumatic spinal cord injury for women, by age group† and year of hospital discharge — New York, 1982–1988



*Per 100,000 female residents.
†Females <15 years of age were excluded because of small numbers.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending August 3, 1991, with historical data — United States



*Ratio of current 4-week total to the 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 3, 1991 (31st Week)

	Cum. 1991		Cum. 1991
AIDS	25,553	Measles: imported	139
Anthrax	-	indigenous	7,547
Botulism: Foodborne	11	Plague	-
Infant	37	Poliomyelitis, Paralytic*	-
Other	4	Psittacosis	55
Brucellosis	40	Rabies, human	-
Cholera	15	Syphilis, primary & secondary	24,407
Congenital rubella syndrome	12	Syphilis, congenital, age < 1 year	12
Diphtheria	1	Tetanus	21
Encephalitis, post-infectious	54	Toxic shock syndrome	180
Gonorrhea	343,101	Trichinosis	51
Haemophilus influenzae (invasive disease)	1,952	Tuberculosis	13,063
Hansen Disease	89	Tularemia	89
Leptospirosis	35	Typhoid fever	221
Lyme Disease	4,001	Typhus fever, tickborne (RMSF)	296

*Three suspected cases of poliomyelitis have been reported in 1991; none of the 8 suspected cases in 1990 have been confirmed to date. Five of the 13 suspected cases in 1989 were confirmed and all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending August 3, 1991, and August 4, 1990 (31st Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	25,553	5,202	430	54	343,101	399,271	14,400	9,841	1,736	785	655	4,001
NEW ENGLAND	1,000	389	19	1	8,495	10,836	347	527	51	22	44	765
Maine	38	13	3	-	102	133	15	15	2	-	-	-
N.H.	27	45	3	-	154	133	23	17	5	-	3	24
Vt.	11	142	2	-	31	34	16	6	5	-	2	4
Mass.	589	93	9	1	3,544	4,378	171	371	27	19	36	63
R.I.	38	89	-	-	698	690	63	17	10	3	3	77
Conn.	297	7	2	-	3,966	5,468	59	101	2	-	-	597
MID. ATLANTIC	6,940	607	33	10	41,014	54,800	1,339	857	167	14	186	2,363
Upstate N.Y.	905	282	15	6	7,452	8,269	547	331	101	8	63	1,462
N.Y. City	3,874	126	-	-	15,199	22,930	436	115	5	-	20	-
N.J.	1,470	-	-	-	6,932	9,461	174	214	34	-	20	500
Pa.	691	199	18	4	11,431	14,140	182	197	27	6	83	401
E.N. CENTRAL	1,838	970	123	7	63,141	74,708	1,817	1,147	288	38	132	134
Ohio	366	336	43	2	19,401	23,282	250	265	128	16	64	76
Ind.	181	103	12	1	6,745	6,482	269	154	1	1	13	7
Ill.	840	162	32	4	18,730	22,768	770	159	40	2	11	5
Mich.	337	345	33	-	14,685	16,911	207	362	79	19	31	46
Wis.	114	24	3	-	3,580	5,265	321	207	40	-	13	-
W.N. CENTRAL	654	313	21	7	16,640	20,736	1,472	446	187	15	33	142
Minn.	141	45	13	-	1,618	2,508	230	45	12	2	5	29
Iowa	66	65	-	4	1,167	1,477	36	30	8	3	9	10
Mo.	346	149	6	3	10,424	12,505	403	302	162	7	12	98
N. Dak.	4	2	-	-	30	77	29	4	2	1	1	-
S. Dak.	1	5	2	-	206	136	554	3	1	-	3	-
Nebr.	37	18	-	-	1,104	980	165	24	1	-	3	-
Kans.	59	29	-	-	2,091	3,053	55	38	1	2	-	5
S. ATLANTIC	6,165	1,079	89	21	104,894	114,745	1,036	2,027	246	160	108	264
Del.	46	22	1	-	1,554	1,873	7	32	4	2	2	27
Md.	602	86	16	1	11,026	12,756	181	257	44	13	22	88
D.C.	423	38	1	-	5,782	7,722	52	87	1	1	1	-
Va.	418	153	25	3	10,133	10,779	107	120	22	110	7	60
W. Va.	39	14	6	-	720	717	15	36	2	6	-	18
N.C.	260	129	22	-	21,059	18,385	107	304	86	-	12	40
S.C.	209	28	-	-	8,186	9,182	27	438	16	3	22	4
Ga.	785	164	6	2	24,643	25,385	122	302	31	-	12	15
Fla.	3,383	445	12	15	21,791	27,946	418	451	40	25	30	12
E.S. CENTRAL	626	399	23	-	32,676	32,410	144	829	216	3	36	72
Ky.	105	79	5	-	3,499	3,987	22	110	5	2	14	27
Tenn.	204	125	13	-	11,716	10,028	88	616	194	-	10	34
Ala.	196	167	5	-	9,111	10,265	28	95	13	1	11	11
Miss.	121	28	-	-	8,350	8,130	6	8	4	-	1	-
W.S. CENTRAL	2,496	762	43	1	39,085	42,812	2,085	1,330	70	157	26	46
Ark.	113	44	3	-	4,730	5,377	195	64	1	5	6	14
La.	449	73	9	-	9,159	7,956	85	178	6	5	5	1
Okla.	110	1	3	-	4,037	3,783	178	139	28	10	6	23
Tex.	1,824	644	28	1	21,159	25,696	1,627	949	35	137	9	8
MOUNTAIN	743	103	11	2	7,297	8,273	2,323	616	89	98	45	10
Mont.	21	2	1	-	64	107	60	46	3	5	2	-
Idaho	12	-	-	-	85	81	58	46	1	-	3	-
Wyo.	9	-	-	-	58	110	90	6	-	-	-	8
Colo.	272	34	2	1	2,062	2,127	359	89	35	16	8	-
N. Mex.	59	12	-	-	675	760	604	139	8	27	1	-
Ariz.	148	30	8	1	2,729	3,246	730	109	12	39	17	-
Utah	76	12	-	-	184	252	188	47	11	11	4	-
Nev.	146	13	-	-	1,440	1,590	234	134	19	-	10	2
PACIFIC	5,091	580	68	5	29,859	39,951	3,837	2,062	422	278	45	205
Wash.	349	-	6	1	2,580	3,595	380	278	94	16	1	-
Oreg.	152	-	-	-	1,209	1,513	245	197	78	8	1	-
Calif.	4,463	525	60	4	25,120	33,704	3,108	1,534	233	253	41	205
Alaska	15	22	2	-	479	720	84	25	13	1	-	-
Hawaii	112	33	-	-	471	419	20	28	4	-	2	-
Guam	2	-	-	-	-	178	-	-	-	-	-	-
P.R.	860	168	2	2	378	460	66	298	130	39	-	-
V.I.	12	-	-	-	259	249	1	6	-	-	-	-
Amer. Samoa	-	-	-	-	-	53	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	145	-	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 3, 1991, and August 4, 1990 (31st Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991	Cum. 1990
UNITED STATES	624	134	7,547	14	139	17,525	1,379	31	2,795	34	1,254	2,037	17	1,063	683
NEW ENGLAND	43	-	46	-	10	275	99	-	21	-	197	229	-	4	7
Maine	1	-	2	-	-	29	7	-	-	-	45	6	-	-	-
N.H.	2	-	-	-	-	8	11	-	3	-	17	22	-	1	1
Vt.	1	-	5	-	-	1	12	-	2	-	3	6	-	-	-
Mass.	20	-	19	-	8	21	53	-	1	-	116	180	-	2	2
R.I.	7	-	2	-	-	30	-	-	3	-	-	2	-	-	1
Conn.	12	-	18	-	2	186	16	-	12	-	16	13	-	1	3
MID. ATLANTIC	88	37	4,056	-	6	1,237	138	-	203	4	106	337	1	558	5
Upstate N.Y.	21	-	324	-	4	310	76	-	76	2	73	259	-	536	4
N.Y. City	35	25	1,600	-	-	281	8	-	-	-	-	-	-	-	-
N.J.	24	-	598	-	1	275	26	-	54	-	1	21	-	-	-
Pa.	8	12	1,534	-	1	371	28	-	73	2	32	57	1	22	1
E.N. CENTRAL	53	-	67	-	10	3,371	218	1	261	3	207	554	-	173	30
Ohio	12	-	1	-	2	439	73	-	58	3	77	110	-	147	1
Ind.	3	-	-	-	1	409	17	-	6	-	47	81	-	1	-
Ill.	20	-	25	-	-	1,305	63	-	102	-	38	196	-	4	18
Mich.	16	-	39	-	-	468	46	1	79	-	23	44	-	20	9
Wis.	2	-	2	-	7	750	19	-	16	-	22	123	-	1	2
W.N. CENTRAL	20	-	30	-	5	781	79	-	81	8	90	88	-	16	14
Minn.	6	-	5	-	5	307	16	-	9	6	35	18	-	6	9
Iowa	4	-	15	-	-	24	8	-	15	2	10	8	-	5	4
Mo.	5	-	-	-	-	97	29	-	26	-	30	52	-	5	-
N. Dak.	1	-	-	-	-	-	1	-	2	-	1	1	-	-	1
S. Dak.	-	-	-	-	-	23	2	-	-	-	3	1	-	-	-
Nebr.	-	-	1	-	-	106	6	-	5	-	5	2	-	-	-
Kans.	4	-	9	-	-	224	17	-	24	-	6	6	-	-	-
S. ATLANTIC	132	6	420	-	17	1,028	255	17	1,021	11	141	166	-	12	16
Del.	2	-	21	-	-	11	2	-	6	-	-	5	-	-	-
Md.	37	5	172	-	-	206	28	4	194	2	33	38	-	6	2
D.C.	8	-	-	-	-	22	7	-	21	-	-	14	-	1	1
Va.	25	-	24	-	4	70	26	-	43	-	16	14	-	-	1
W. Va.	2	-	-	-	-	6	11	-	16	1	8	12	-	-	-
N.C.	8	1	36	-	3	30	47	4	207	2	21	40	-	2	-
S.C.	7	-	12	-	-	4	27	1	343	-	9	5	-	-	-
Ga.	15	-	10	-	4	150	51	5	36	2	24	20	-	-	-
Fla.	28	-	145	-	6	529	56	3	155	4	30	18	-	3	12
E.S. CENTRAL	11	-	6	-	1	146	95	1	153	-	46	99	-	100	1
Ky.	2	-	1	-	1	30	36	-	-	-	-	-	-	-	-
Tenn.	5	-	5	-	-	69	27	1	126	-	17	43	-	100	1
Ala.	4	-	-	-	-	21	31	-	8	-	29	50	-	-	-
Miss.	-	-	-	-	-	26	1	-	19	-	-	6	-	-	-
W.S. CENTRAL	39	29	144	2	14	3,974	100	3	305	2	35	43	-	5	4
Ark.	4	-	-	-	5	42	15	-	39	1	4	2	-	1	3
La.	8	-	-	-	-	10	23	1	21	-	9	16	-	-	-
Okla.	5	-	-	-	-	172	13	-	12	1	16	25	-	-	1
Tex.	22	29	144	2†	9	3,750	49	2	233	-	6	-	-	4	-
MOUNTAIN	23	8	923	-	17	817	57	4	274	1	142	184	1	6	101
Mont.	1	-	-	-	-	1	9	-	-	-	2	26	-	-	13
Idaho	2	7	387	-	2	25	7	1	8	1	21	35	-	2	49
Wyo.	-	-	1	-	2	15	1	-	3	-	3	-	-	-	-
Colo.	7	-	1	-	4	133	11	3	116	-	66	68	-	-	4
N. Mex.	5	-	117	-	5	90	8	N	N	-	22	13	-	-	-
Ariz.	6	-	274	-	-	279	15	-	122	-	8	28	-	-	30
Utah	1	-	125	-	4	71	-	-	13	-	18	10	-	-	1
Nev.	1	1	18	-	-	203	6	-	12	-	2	4	1	4	4
PACIFIC	215	54	1,855	12	59	5,896	338	5	476	5	290	337	15	189	505
Wash.	16	45	46	12†	15	254	41	-	88	1	69	80	8	8	-
Oreg.	5	-	34	-	29	206	44	N	N	2	40	32	-	2	9
Calif.	190	9	1,771	-	11	5,344	245	5	360	2	137	193	7	176	486
Alaska	-	-	-	-	1	80	7	-	9	-	12	4	-	-	-
Hawaii	4	-	4	-	3	12	1	-	19	-	32	28	-	3	10
Guam	-	U	-	U	-	1	-	U	-	U	-	-	U	-	-
P.R.	1	1	88	-	1	1,044	15	1	9	4	31	5	-	1	-
V.I.	2	-	-	-	2	21	-	-	8	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	377	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes 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 3, 1991, and August 4, 1990 (31st Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	24,407	28,944	180	13,063	13,608	89	221	296	3,546
NEW ENGLAND	654	1,063	10	351	304	1	26	5	28
Maine	-	5	4	27	-	-	1	-	-
N.H.	12	41	1	5	3	-	1	-	1
Vt.	1	1	-	4	7	-	-	-	-
Mass.	309	411	5	179	166	1	23	4	-
R.I.	36	9	-	27	43	-	-	-	-
Conn.	296	596	-	109	85	-	1	1	27
MID. ATLANTIC	4,002	5,974	29	3,006	3,332	1	42	6	1,125
Upstate N.Y.	103	528	13	193	260	1	8	5	388
N.Y. City	1,975	2,696	1	1,875	2,098	-	21	-	-
N.J.	819	987	-	530	546	-	10	1	544
Pa.	1,105	1,763	15	408	428	-	3	-	193
E.N. CENTRAL	2,872	1,947	36	1,304	1,297	3	13	24	78
Ohio	400	326	19	186	219	-	2	14	11
Ind.	78	44	-	112	114	-	-	7	7
Ill.	1,341	733	9	680	645	1	3	2	15
Mich.	766	618	8	266	267	2	7	1	14
Wis.	287	226	-	60	52	-	1	-	31
W.N. CENTRAL	426	284	30	308	338	34	2	24	543
Minn.	45	52	7	59	61	-	2	-	187
Iowa	37	39	6	46	35	-	-	1	100
Mo.	299	150	8	131	165	30	-	14	11
N. Dak.	-	1	-	4	14	-	-	-	65
S. Dak.	1	1	1	24	9	3	-	1	140
Nebr.	9	8	1	11	15	-	-	3	10
Kans.	35	33	7	33	39	1	-	5	30
S. ATLANTIC	7,320	9,304	16	2,470	2,473	4	42	120	863
Del.	97	107	1	16	28	-	-	-	93
Md.	615	700	1	222	191	-	8	15	328
D.C.	469	621	1	117	90	-	2	-	6
Va.	549	534	3	219	215	-	8	6	164
W. Va.	19	10	-	42	41	-	1	3	37
N.C.	1,139	1,087	7	339	322	1	2	55	5
S.C.	923	576	-	239	285	1	-	26	64
Ga.	1,761	2,337	-	482	389	1	5	14	146
Fla.	1,748	3,332	3	794	912	1	16	1	20
E.S. CENTRAL	2,702	2,526	9	917	1,002	9	2	51	107
Ky.	52	49	4	200	234	3	2	17	27
Tenn.	933	1,030	5	294	277	6	-	24	29
Ala.	970	768	-	237	307	-	-	10	51
Miss.	747	679	-	186	184	-	-	-	-
W.S. CENTRAL	4,480	4,720	6	1,518	1,640	24	12	59	426
Ark.	386	314	3	131	208	16	-	11	23
La.	1,490	1,475	-	139	201	-	2	-	4
Okla.	111	150	3	104	116	8	-	48	124
Tex.	2,493	2,781	-	1,144	1,115	-	10	-	275
MOUNTAIN	351	559	23	356	304	9	5	5	120
Mont.	5	-	-	6	10	7	-	4	21
Idaho	3	6	-	4	8	-	-	-	1
Wyo.	4	1	-	3	4	1	-	-	57
Colo.	54	33	5	33	13	1	1	1	9
N. Mex.	21	29	6	44	70	-	-	-	1
Ariz.	223	399	4	195	142	-	3	-	24
Utah	5	6	8	30	18	-	-	-	3
Nev.	36	85	-	41	39	-	1	-	4
PACIFIC	1,600	2,567	21	2,833	2,918	4	77	2	256
Wash.	95	252	3	178	165	2	4	1	1
Oreg.	49	91	-	67	77	1	3	1	4
Calif.	1,448	2,197	18	2,436	2,539	1	67	-	247
Alaska	4	12	-	35	32	-	-	-	3
Hawaii	4	15	-	117	105	-	3	-	1
Guam	-	2	-	-	29	-	-	-	-
P.R.	287	204	-	126	66	-	9	-	26
V.I.	73	3	-	1	4	-	-	-	-
Amer. Samoa	-	-	-	-	11	-	-	-	-
C.N.M.I.	-	1	-	-	40	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending August 3, 1991 (31st Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	610	396	124	46	16	28	37
Boston, Mass.	185	104	41	22	6	12	13
Bridgeport, Conn.	21	14	4	3	-	-	3
Cambridge, Mass.	26	24	2	-	-	-	3
Fall River, Mass.	24	19	3	1	1	-	-
Hartford, Conn.	44	28	12	2	1	1	-
Lowell, Mass.	29	21	7	1	-	-	-
Lynn, Mass.	18	12	6	-	-	-	1
New Bedford, Mass.	29	22	3	3	1	-	-
New Haven, Conn.	52	26	11	3	2	10	1
Providence, R.I.	55	38	11	4	2	-	4
Somerville, Mass.	4	4	-	-	-	-	-
Springfield, Mass.	51	38	8	3	2	-	6
Waterbury, Conn.	24	14	6	2	1	1	1
Worcester, Mass.	48	32	10	2	-	4	5
MID. ATLANTIC	2,564	1,659	475	286	76	68	104
Albany, N.Y.	48	33	8	5	1	1	3
Allentown, Pa.	17	14	3	-	-	-	-
Buffalo, N.Y.	100	77	13	1	6	3	3
Camden, N.J.	31	19	6	2	2	2	3
Elizabeth, N.J.	19	15	1	2	1	-	-
Erie, Pa.†	36	29	5	2	-	-	-
Jersey City, N.J.	82	49	13	11	4	5	5
New York City, N.Y.	1,327	832	250	178	34	33	50
Newark, N.J.	79	18	25	25	8	3	6
Paterson, N.J.	14	10	2	1	1	-	1
Philadelphia, Pa.	395	266	75	31	14	9	12
Pittsburgh, Pa.†	61	43	10	3	1	4	2
Reading, Pa.	33	27	5	1	-	-	5
Rochester, N.Y.	119	89	15	8	-	7	10
Schenectady, N.Y.	22	13	8	1	-	-	-
Scranton, Pa.†	26	18	6	1	1	-	1
Syracuse, N.Y.	85	59	15	8	2	1	1
Trenton, N.J.	31	19	8	4	-	-	2
Utica, N.Y.	12	10	-	1	1	-	-
Yonkers, N.Y.	27	19	7	1	-	-	-
E.N. CENTRAL	2,166	1,273	401	274	174	44	95
Akron, Ohio	53	29	14	8	1	1	-
Canton, Ohio	29	20	5	4	-	-	4
Chicago, Ill.	525	214	109	111	80	11	16
Cincinnati, Ohio	156	110	27	14	3	2	14
Cleveland, Ohio	155	82	41	24	5	3	1
Columbus, Ohio	166	117	32	9	4	4	4
Dayton, Ohio	117	81	27	5	1	3	4
Detroit, Mich.	210	110	-	48	46	6	8
Evansville, Ind.	47	38	5	1	-	3	3
Fort Wayne, Ind.	51	34	10	-	6	1	3
Gary, Ind.	19	9	4	4	2	-	-
Grand Rapids, Mich.	79	56	17	3	2	1	7
Indianapolis, Ind.	154	92	32	14	10	6	11
Madison, Wis.§	U	U	U	U	U	U	U
Milwaukee, Wis.	124	86	23	14	1	-	10
Peoria, Ill.	46	31	8	2	4	1	1
Rockford, Ill.	42	27	10	2	3	-	3
South Bend, Ind.	48	31	12	2	3	-	2
Toledo, Ohio	80	57	17	3	2	1	2
Youngstown, Ohio	65	49	8	6	1	1	2
W.N. CENTRAL	695	482	129	47	21	16	25
Des Moines, Iowa	51	39	8	1	1	2	1
Duluth, Minn.	38	28	9	1	-	-	1
Kansas City, Kans.	31	18	8	2	3	-	-
Kansas City, Mo.	111	80	16	8	4	3	6
Lincoln, Nebr.	27	21	3	2	1	-	1
Minneapolis, Minn.	162	106	35	15	4	2	6
Omaha, Nebr.	82	56	15	5	3	3	5
St. Louis, Mo.	117	80	20	8	4	5	2
St. Paul, Minn.	54	37	10	5	1	1	3
Wichita, Kans.	22	17	5	-	-	-	-
S. ATLANTIC	1,283	774	280	146	37	46	60
Atlanta, Ga.	202	119	43	30	6	4	8
Baltimore, Md.	194	121	38	25	6	4	15
Charlotte, N.C.	90	54	20	11	-	5	3
Jacksonville, Fla.	112	66	33	8	2	3	9
Miami, Fla.	104	62	30	7	2	3	-
Norfolk, Va.	55	27	9	8	5	6	2
Richmond, Va.	90	49	20	9	2	10	3
Savannah, Ga.	50	33	12	3	-	2	5
St. Petersburg, Fla.	66	48	11	4	-	3	-
Tampa, Fla.	153	111	25	14	2	1	9
Washington, D.C.	142	67	33	25	12	5	3
Wilmington, Del.	25	17	6	2	-	-	3
E.S. CENTRAL	836	538	162	74	38	24	67
Birmingham, Ala.	145	90	26	17	6	6	4
Chattanooga, Tenn.	49	31	11	3	3	1	1
Knoxville, Tenn.	76	53	15	7	1	-	9
Louisville, Ky.	96	65	21	7	3	-	8
Memphis, Tenn.	175	122	31	11	7	4	18
Mobile, Ala.	112	66	28	10	6	2	13
Montgomery, Ala.	43	24	9	5	3	2	1
Nashville, Tenn.	140	87	21	14	9	9	13
W.S. CENTRAL	1,210	744	247	143	46	30	54
Austin, Tex.	58	42	10	3	2	1	4
Baton Rouge, La.	63	40	11	8	3	1	1
Corpus Christi, Tex.	43	27	12	2	1	1	-
Dallas, Tex.	216	111	55	36	10	4	8
El Paso, Tex.	61	40	12	5	1	3	3
Ft. Worth, Tex.	106	70	22	7	6	1	3
Houston, Tex.	225	115	46	43	15	6	15
Little Rock, Ark.	70	43	15	6	2	4	6
New Orleans, La.	94	62	19	12	1	-	-
San Antonio, Tex.	151	103	25	14	4	5	7
Shreveport, La.	37	31	4	-	-	2	3
Tulsa, Okla.	86	60	16	7	1	2	4
MOUNTAIN	651	418	137	59	12	24	26
Albuquerque, N.M.	77	52	15	5	-	5	-
Colo. Springs, Colo.	36	21	9	4	1	1	4
Denver, Colo.	89	51	23	8	3	4	3
Las Vegas, Nev.	120	75	23	18	2	1	4
Ogden, Utah	20	18	-	1	-	1	4
Phoenix, Ariz.	136	81	30	16	3	6	5
Pueblo, Colo.	19	12	6	1	-	-	-
Salt Lake City, Utah	49	29	14	3	2	1	1
Tucson, Ariz.	105	79	17	3	1	5	5
PACIFIC	1,706	1,087	309	191	67	46	88
Berkeley, Calif.	21	15	5	1	-	-	2
Fresno, Calif.	110	65	20	14	6	5	5
Glendale, Calif.	19	15	3	-	-	-	1
Honolulu, Hawaii	87	65	11	6	4	1	3
Long Beach, Calif.	66	46	11	3	2	4	6
Los Angeles, Calif.	383	224	72	56	19	7	23
Oakland, Calif.§	U	U	U	U	U	U	U
Pasadena, Calif.	32	29	2	-	1	-	4
Portland, Oreg.	109	73	22	9	3	2	6
Sacramento, Calif.	152	101	29	12	7	3	8
San Diego, Calif.	124	73	20	20	8	3	12
San Francisco, Calif.	146	78	33	28	1	6	5
San Jose, Calif.	162	96	35	19	6	6	4
Seattle, Wash.	168	117	28	17	4	2	7
Spokane, Wash.	54	38	6	4	2	4	1
Tacoma, Wash.	73	52	12	2	4	3	1
TOTAL	11,721††	7,371	2,264	1,266	487	326	556

*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.

§Report for this week is unavailable (U).

Spinal Cord Injury — Continued

that cause functional limitations and disability; and 3) secondary conditions resulting from the primary disability. Information derived from E-coding is a fundamental requisite for such a system.

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Effectiveness in Disease and Injury Prevention

Assessment of Broadcast Media Airings of AIDS-Related Public Service Announcements — United States, 1987–1990

Television and radio public service announcements (PSAs) are an integral part of acquired immunodeficiency syndrome (AIDS) public information campaigns. This report summarizes an assessment of airings of AIDS PSAs in the United States during October 1987–December 1990 that were produced by CDC's "America Responds to AIDS" (ARTA) (*1*) campaign and other groups.* The assessment used data obtained from Broadcast Advertisers Reports (BAR) of the Arbitron Company.†

Broadcast Advertisers Reports

BAR monitors commercial advertising and selected PSAs on television and radio stations. Since October 1987, CDC has used BAR to monitor the airing of AIDS-related PSAs.

BAR monitors airing of advertisements on three national television networks (ABC, CBS, and NBC), six major cable television networks, and 75 top television markets throughout the United States; these 75 markets are considered to represent approximately 80% of the U.S. households that have televisions. Most stations in a given

*AIDS PSAs produced by a number of national, state, and local organizations.

†Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

AIDS-Related PSAs — Continued

market are monitored, except for some local independent and educational stations. In addition to television, BAR monitors 17 radio networks.

Network and cable television and network radio stations are monitored continually. Seventeen of the 75 top local television markets (considered to be "major spot markets") are monitored daily either from 7 a.m. to 1 a.m. (14 markets) or to 3 a.m. (Chicago, Los Angeles, and New York City). The remaining 58 ("local spot markets") are monitored from 7 a.m. to 1 a.m. during 1 randomly selected week each month. These data are then used to project monthly estimates of the number of airings and their dollar value.

For each PSA airing, BAR collects 1) date, day of week, and time of day broadcast; 2) length of the PSA; 3) category of the PSA; 4) name of the show during which the PSA aired; 5) market type (e.g., network or spot); and 6) estimated commercial dollar value of the airing.

Airing of AIDS PSAs

From October 1987 to December 1990, local, state, and national broadcasters donated more than 120,000 spots with a value of almost $139 million (Table 1),

TABLE 1. Estimated number of spots and dollar value of air time for "America Responds to AIDS" (ARTA) and all other AIDS public service announcements (PSAs), by broadcast medium — Selected markets, October 1987–December 1990

Medium	ARTA PSAs		All other AIDS PSAs	
	No. spots	Dollar value	No. spots	Dollar value
Network television	3,298	$45,976,269	4,763	$54,965,487
Cable television	402	214,643	1,644	1,953,268
Network radio	2,446	8,086,120	326	1,079,320
Major spot markets*	15,377	5,945,993	26,195	10,761,950
Local spot markets†	35,724	5,223,833	31,411	4,577,926
Total	**57,247**	**$65,446,858**	**64,339**	**$73,337,951**

*Monitored daily from 7 a.m. to 1 a.m. in 14 markets and to 3 a.m. in three markets.
†Monitored from 7 a.m. to 1 a.m. during 1 randomly selected week each month in 58 markets.
Source: Broadcast Advertisers Reports, Arbitron Company.

TABLE 2. Percent distribution of spots, by time of day, for "America Responds to AIDS" (ARTA) and all other AIDS public service announcements (PSAs), by broadcast medium — Selected markets, October 1987–December 1990

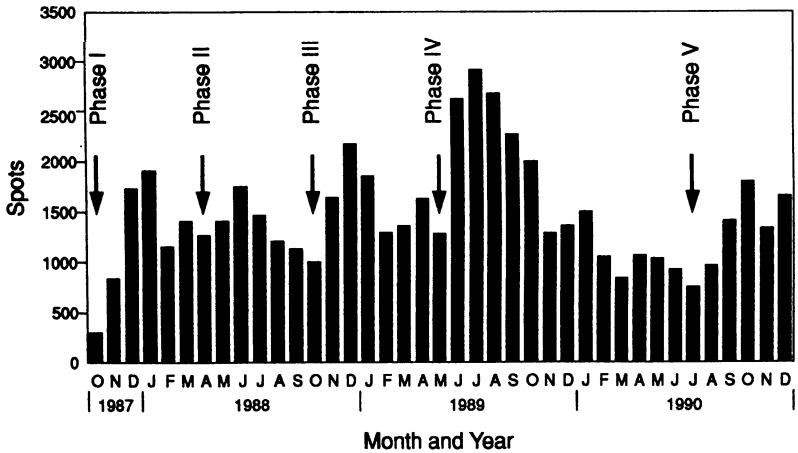
Medium	ARTA PSAs			All other AIDS PSAs		
	6 a.m.–8 p.m.	8–11 p.m.	11 p.m.–6 a.m.	6 a.m.–8 p.m.	8–11 p.m.	11 p.m.–6 a.m.
Network television	24%	7%	69%	21%	11%	68%
Cable television	37%	10%	53%	41%	12%	47%
Network radio	51%	14%	34%	34%	13%	53%
Major and local spot markets*	62%	9%	29%	62%	8%	30%
Total	**59%**	**9%**	**32%**	**58%**	**9%**	**33%**

*For major spot markets, monitored daily from 7 a.m. to 1 a.m. in 14 markets and to 3 a.m. in three markets. For local spot markets, monitored from 7 a.m. to 1 a.m. during 1 randomly selected week each month in 58 markets.
Source: Broadcast Advertisers Reports, Arbitron Company.

AIDS-Related PSAs — Continued

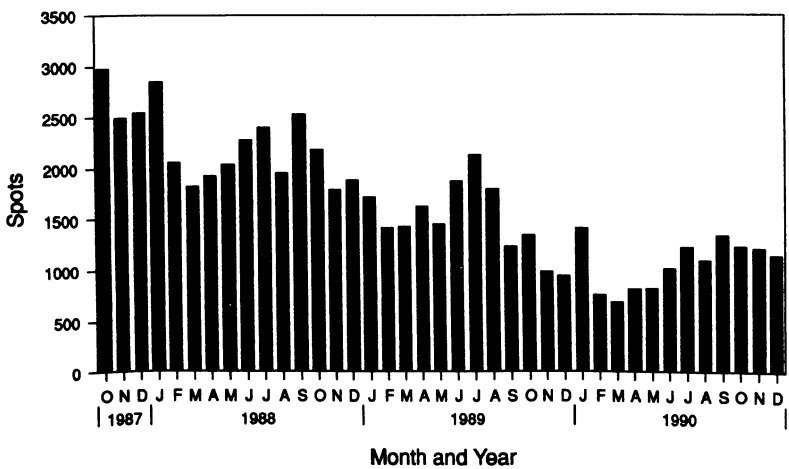
divided almost equally between ARTA (47%) and all other AIDS-related (53%) PSAs. PSAs are primarily shown during late-night television on the national and cable networks (Table 2). However, AIDS PSAs were aired during daytime hours, particularly in the top local television markets. During television "prime time" (8 p.m.–11 p.m.), other AIDS PSAs received slightly higher network exposure than did ARTA.

FIGURE 1. Estimated number of donated spots for "America Responds to AIDS" (ARTA) public service announcements, by month and by ARTA campaign phase — broadcast media in selected markets, October 1987–December 1990



Source: Broadcast Advertisers Reports, Arbitron Company.

FIGURE 2. Estimated number of donated spots for AIDS public service announcements not produced by CDC's "America Responds to AIDS" campaign — broadcast media in selected markets, October 1987–December 1990



Source: Broadcast Advertisers Reports, Arbitron Company.

AIDS-Related PSAs — Continued

AIDS PSAs were aired predominantly during news shows; however, both ARTA and all other AIDS PSAs were shown on highly rated entertainment shows. Most (76%) AIDS PSAs on network radio were broadcast during daytime and late-night hours.

The total estimated number of donated spots for ARTA PSAs increased after the launch of each of the five ARTA campaign phases and decreased during the following months (Figure 1). The recorded number of spots for all other AIDS PSAs peaked in October 1987, when almost 3000 PSAs were broadcast (Figure 2).

Reported by: National AIDS Information and Education Program, Office of the Deputy Director (HIV), CDC.

Editorial Note: The findings in this report indicate that AIDS information campaigns have benefited from the donation of a substantial amount of air time by national television and radio and by local broadcasters. These PSA broadcasts have occurred throughout the day and night, providing potential exposure to many different audiences.

Assessment of monthly patterns indicate that airings of PSAs increased after the implementation of each phase of ARTA, probably because of increased marketing at both national and local levels. Airings declined to their lowest level at the end of the 14-month interval between ARTA phases IV and V—an interval twice that between any of the other phases. This finding suggests that, to maintain optimal broadcasting of PSAs, new campaign materials should be released at 6-month intervals or marketing efforts intensified at 5- to 6-month intervals.

Airing of PSAs is voluntary; however, during October–December 1989, 80% of adults polled in a national survey reported having seen an AIDS-related PSA on television, and 45% reported having heard a PSA about AIDS on the radio (*2*). In addition, the recent report from Baltimore (*3*) shows that PSAs can be an effective education tool among injectable-drug users. Further studies, including controlled trials of the direct effects of individual ARTA campaign phases, will be used to determine the impact of messages and to identify when new messages are needed. Periodic evaluation of the National AIDS Hotline will assess the association between calls for information and exposure to PSAs.

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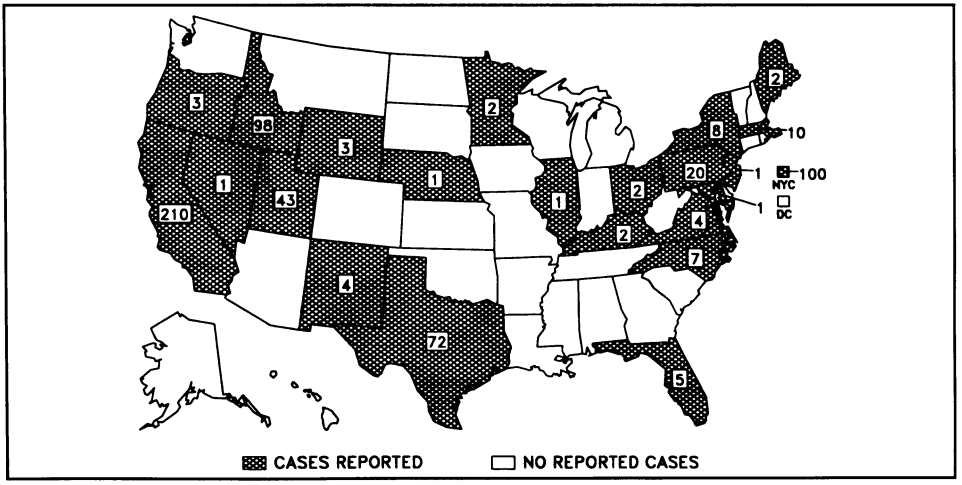
Reported cases of measles, by state — United States, weeks 27–30, 1991



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The data in this report 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. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations, should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Mailstop C-08, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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