CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

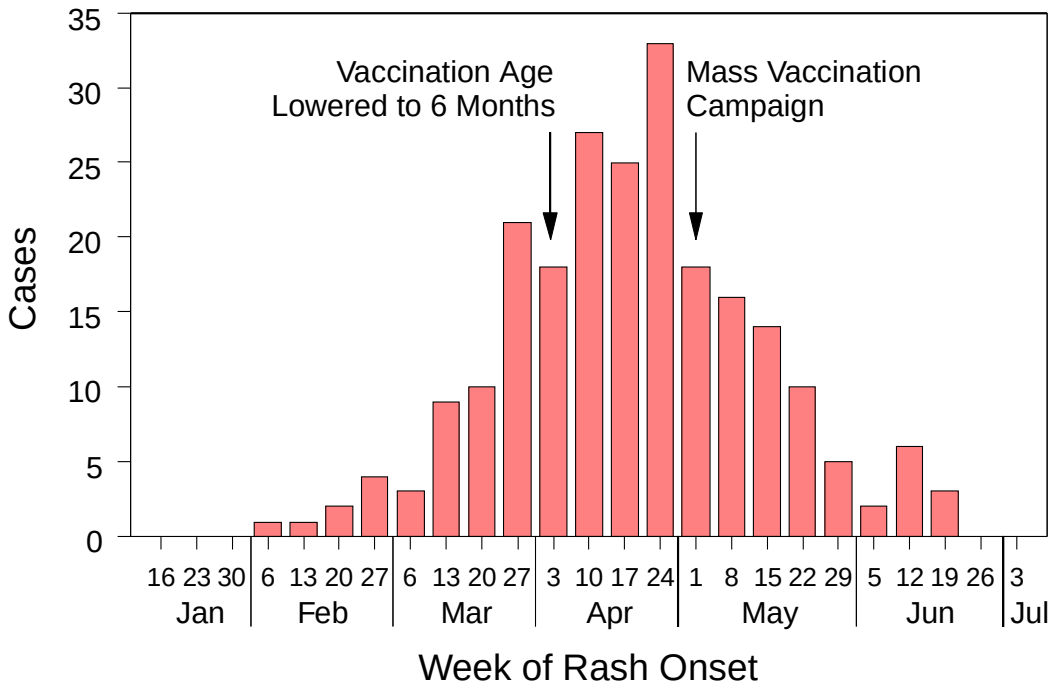
September 15, 1995 / Vol. 44 / No. 36

MMWR™
MORBIDITY AND MORTALITY WEEKLY REPORT

Measles Outbreak — Guam, 1994

One of the largest outbreaks of measles in the United States and its territories since 1992 occurred in Guam during 1994. From February 8 through June 25, 1994, a total of 280 suspected, probable, or confirmed cases of measles were reported to the Guam Department of Public Health and Social Services (GDPH). Of these cases, 228 were considered confirmed, including 47 serologically confirmed cases (Figure 1). This report summarizes findings from the investigation of these 228 cases.

FIGURE 1. Number of measles cases,* by week of rash onset — Guam, 1994



* n=228.

Measles Outbreak — Continued

The index case occurred in an 8-month-old child who developed a rash on February 7, 1994. This case could not be epidemiologically linked to a previous measles outbreak in Guam (22 cases) that occurred during October 20–December 26, 1993; that outbreak was initiated by an imported case from the Republic of Palau. In addition, genetic sequencing of viral isolates indicated that viruses that had circulated in Palau and in Guam were different. The outbreak peaked in April, when 104 cases were reported.

The incidence of confirmed cases was 17 per 10,000 population. Patients ranged in age from 2 months to 57 years (median: 16 months), and 70% of cases occurred among preschool-aged children. The age-specific incidence was highest for children aged <1 year (318.0 per 10,000 population), and was higher for children aged 1–4 years (57.9) and 10–19 years (20.1) than for children aged 5–9 years (7.8) and persons aged ≥20 years (4.8).

Of the 228 cases, 133 (58%) occurred among patients who were Chamorros (an ethnic group native to Guam), 45 (20%) occurred among persons from the Chuuk State of the Federated States of Micronesia (FSM), and 29 (13%) among Filipinos. The highest ethnicity-specific attack rate was among persons from FSM (91 per 10,000 population). The incidence among U.S. military personnel and dependents was three per 10,000 population.

Of the 138 (61%) patients aged ≥12 months, measles vaccination history was known for 84 (61%). A history of receipt of at least one dose of measles-containing vaccine (MCV) was reported for 52 (62%) persons, and 14 (17%) had documentation of measles vaccination on or after their first birthday and at least 14 days before rash onset. Appropriate vaccination was documented for 7% of those aged 1–4 years and 25% of those aged 5–19 years. No cases were reported among persons who had received two doses of MCV.

Twenty-three (10%) patients were hospitalized, and three died (case-fatality rate=1.3%). The three fatal cases occurred among patients aged 9 months, 17 months, and 22 years who were immigrants or children of immigrants from the Chuuk State, FSM. The hospitalization rate was highest among children aged <6 months (four [22%] of 18).

Outbreak-control measures focused on vaccinating preschool-aged children and immigrants. Routine vaccination clinic hours were extended, and outreach clinics were provided in shopping centers, villages, and housing areas with large immigrant populations. On April 8, GDPH lowered the age for measles vaccination from 12 months to 6 months. In May, GDPH implemented a mass vaccination campaign and encouraged families to take all children aged 6 months–5 years to vaccination clinics for measles vaccination, regardless of previous vaccination history; children with documentation of two doses of MCV after age 12 months were not revaccinated. During March–June, approximately 12,000 doses of MCV were administered, 4000 of which were given to children aged <5 years. This was the first measles vaccination for 70% of the children who participated in the campaign. The campaign is estimated to have increased measles vaccination coverage among children aged <5 years to approximately 74%.

Other outbreak-control efforts included improving passive surveillance by providing outbreak information to health-care providers and active surveillance through periodic phone calls to the civilian hospital and private clinics, instituting triage and

Measles Outbreak — Continued

isolation for patients with rash illness in medical settings, exclusion of persons with cases from day care centers and schools and vaccination of their contacts, and disseminating public education messages about measles and measles vaccination.

Since June 25, when two cases imported from the Philippines were reported, no additional cases are known to have occurred.

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Editorial Note: The mass vaccination campaign in Guam appeared to be an effective strategy for controlling measles outbreaks among island populations. Although the campaign was initiated late in the course of the outbreak, the decline of the outbreak may have been accelerated by efforts to encourage all preschool-aged children to receive a dose of MCV, regardless of prior receipt of one dose of vaccine. Most of the preschool-aged children who participated in the campaign received their first dose of MCV during the campaign; among children who had already received a dose, the campaign also effectively lowered the age at which many children received a second dose of vaccine.*

Lowering the age for primary vaccination also was an important control strategy in Guam because the risk was highest among infants. Many of these infants lacked maternal antibody because they had been born to mothers who had received a maximum of one dose of measles vaccine and who had not had natural measles infection (e.g., children of immigrant mothers from islands where previous outbreaks occurred >20 years ago) (*1,2*). The Advisory Committee on Immunization Practices (ACIP) recommends that measles vaccine be administered at age 6 months if exposure of children aged <1 year is likely (*3*). Children vaccinated before age 12 months should be revaccinated after their first birthday and should be given another dose of MCV before entering school.

The outbreak in Guam was especially a consequence of the large number of unvaccinated, preschool-aged children. A retrospective survey in 1991 of the vaccination records of children entering school for the first time documented that only 55% of children on Guam had received a dose of MCV by age 2 years. Audits of records from public and private clinics in 1993 and 1994 indicated that coverage among 2-year-old children with one dose of MCV ranged from 53% to 90% depending on the site.

Reasons for higher morbidity and mortality in the Chuukese population than in other ethnic groups are unclear. Possible explanations include low levels of immunity because of low vaccination coverage levels; the lower likelihood of exposure to measles (the last outbreak in Chuuk was in 1968); limited access to health care; and large family size, resulting in increased exposure to measles.

Other factors associated with increased risk for measles importation and transmission on islands such as Guam include tourism and the high mobility of the local population. These factors underscore the importance of the need to achieve and maintain high vaccination coverage levels. Approaches to maintaining high vaccination

*The second dose of measles vaccine is routinely recommended at entry to primary or secondary school but may be given at earlier ages provided it is administered at least 30 days after the first dose, and both doses are given after age 12 months.

Measles Outbreak — Continued

coverage levels among preschool-aged children should include establishing walk-in service to provide vaccinations on a routine basis, extending clinic hours, offering door-to-door vaccination in areas with hard-to-reach populations (e.g., immigrants), educating providers and parents about contraindications to vaccinations, and taking advantage of all opportunities to vaccinate children during health-care visits, as is recommended in the United States. Optimal levels of immunity may be achieved in school children through the establishment and enforcement of requirements for receipt of two doses of vaccine.

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Agricultural Auger-Related Injuries and Fatalities — Minnesota, 1992–1994

Agriculture remains one of the most hazardous industries in the United States: in 1992, approximately 37 fatalities occurred per 100,000 agricultural workers and an estimated 140,000 disabling injuries to farm workers (*1*). Recent surveillance for agricultural injuries and fatalities in Minnesota has helped characterize problems associated with the use of one type of implement—agricultural augers (large, corkscrew-like devices used to move dry materials [e.g., grains, animal feeds, and granular fertilizers]). This report presents surveillance findings for auger-related injuries during 1992–1994, summarizes the investigations of four selected auger-related injuries that occurred in the state, and provides recommendations to prevent injuries to farmers who use these devices.

Since 1992, the Minnesota Department of Health has collected surveillance data about agricultural injuries and fatalities through three programs sponsored by CDC's National Institute for Occupational Safety and Health (NIOSH): the Fatality Assessment and Control Evaluation Program (FACE), which conducts on-site investigations of selected categories of occupational fatalities (e.g., falls and machinery-related and logging-related deaths); the Sentinel Event Notification System for Occupational Risks (SENSOR), which conducts surveillance for occupational amputation injuries; and the Occupational Health Nurses in Agricultural Communities Program (OHNAC), which identifies and investigates farm-related injuries and illnesses.* Case ascertainment employs a combination of surveillance methods, including reviews of medical re-

*FACE, SENSOR, and OHNAC are cooperative agreements between NIOSH and various state health departments and are intended to develop models for state-based occupational health surveillance and intervention. FACE was developed to more accurately identify and evaluate work-related fatalities; 14 states currently have FACE programs. Fourteen states have been awarded SENSOR cooperative agreements to develop systems for surveillance of 12 occupational conditions. OHNAC is a national surveillance system that has placed public health nurses in 10 states. Surveillance data compiled by these programs ultimately are used to reduce work-related injury and illness.

Auger-Related Injuries — Continued

cords, articles from newspaper clipping services, death certificates, hospital records, and Minnesota Occupational Safety and Health Administration (M-OSHA) program records. In addition, the Minnesota Extension Service independently records agricultural injuries and deaths reported by extension agents and newspaper clipping services.

Surveillance for Auger-Related Injuries

During 1992–1994, augers were associated with two fatal and 25 nonfatal injuries in Minnesota. From 1993[†] through 1994, FACE received reports of two auger-related deaths, and SENSOR was notified of seven auger-related amputations. During 1992–1994, OHNAC was notified of 18 auger-related injuries, of which six (33%) were among children aged <18 years; three of these resulted in amputations.

During 1984–1994, the Minnesota Extension Service received reports of 14 auger-related deaths, which were attributed to entanglement or crushing (eight) and electrocution (six). Although cases reported to OHNAC and SENSOR were not duplicated, duplication of fatalities reported to the Extension Service and to FACE could not be excluded.

Case Reports

Incident 1. On April 14, 1992, a 13-year-old boy was cleaning inside an oxygen-limiting silo while a sweep auger was in operation. The unguarded auger swept slowly around the silo floor, pivoting about a central axis. As the boy stepped over the moving equipment, the hem of his pants caught in the auger, and his leg was traumatically amputated below the knee as it became entangled. He required multiple surgical procedures and had been hospitalized for 2½ months at the time of the OHNAC interview.

Incident 2. On January 16, 1993, a 70-year-old farm laborer was cleaning a grain auger that had been shut off, but the machine's electric power supply had not been disconnected (the controls for switching the auger on and off were located in a different building). The auger was inadvertently activated by a co-worker, and the laborer's left hand was traumatically amputated above the wrist. He was subsequently hospitalized and had not resumed work at the time of the SENSOR interview 2 months later.

Incident 3. On January 8, 1994, a 21-year-old farm laborer was using an auger to unload a silo. While attempting to step over the machine, he stepped on a metal shield that covered the bottom of the auger. The shield broke, and he fell into the auger, sustaining a traumatic below-the-knee amputation. He subsequently was hospitalized and had not resumed work at the time of the SENSOR interview 3 months later.

Incident 4. On June 22, 1994, a 46-year-old farmer died after becoming entangled in an unshielded auger system that was being used to move feed down the length of a feed bunk in a cattle feed lot. While the system was in operation, the farmer entered the feed bunk, and his leg became entangled when he either slipped or attempted to step over the auger. The electric motor driving the system stopped after the fuse blew. Although he freed himself from the auger and climbed out of the feed bunk, he died a short distance from the feed lot as a result of massive hemorrhage. This incident was unwitnessed, and data were compiled by FACE investigators based on a review of sheriff's reports and photographs of the incident site.

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[†]Both FACE and SENSOR in Minnesota were initiated in 1993.

Auger-Related Injuries — Continued

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Editorial Note: An agricultural auger consists of a continuous corkscrew blade attached to a long metal shaft and a round metal tube into which the blade is inserted. The metal tube contains the material as it is moved from the intake at one end of the auger to the discharge at the other end and protects the operator from contact with the rotating blade.[§] Augers vary in size, generally ranging from 4 to 15 inches in diameter and from several feet to 100 feet or more in length (*2*). An auger can be independent and movable or it can be integrated with another piece of machinery or a grain storage system (e.g., as a fixed component of a combine, grain dryer, grain wagon, storage bin system, or silo unloader). In addition, augers can be self-powered (by an electric motor or a gasoline- or diesel-fueled engine) or driven by power transferred from a second piece of equipment through a power take-off shaft (PTO) or a series of gears, chains, belts, and/or pulleys. Auger-related injuries result from 1) contact with the exposed auger blade; 2) entanglement in a belt drive or PTO conveying power to the blade; 3) electrocution when an auger contacts overhead power lines (e.g., while it is being moved or positioned in an upright configuration); or 4) contact with a spinning crank, which is used to position the auger (*3*).

Although auger-related injuries are preventable, they remain a public health concern among farmers. On a per-hour-of-use basis, augers are one of the most dangerous types of farming equipment (*4*); severe injuries have resulted from entanglement and electrocution (*2*). The occupational injury surveillance and investigation data from Minnesota underscore the risks augers pose for both disabling and fatal injuries among farmers. In particular, the Minnesota data emphasize the risk for traumatic amputation resulting from entanglement of extremeties.

NIOSH recommends the following precautions to substantially reduce the risks for hazards related to auger use:

1. Barriers (e.g., fences) should be used to prevent persons not involved in the operation of an auger from entering the area adjacent to the auger.
2. Children aged <18 years should not operate augers and should not enter the area near an auger.[¶]
3. Before starting an auger, the operator should ensure that all protective shields, as supplied by the manufacturer, are in place and in good condition. The federal OSHA standard for safety of farm equipment requires placement of guards on augers consistent with their designed use (*5*).
4. Before service or repair, power should be shut off and the auger power source "locked-out" and "tagged." (Locking out prevents power from being restored while maintenance is in progress, and tagging the switch indicates that power is disabled and the reason).

[§]An auger also may consist of only an exposed spiral corkscrew. A "sweep" auger, referred to in incident 1, is typically an exposed auger used to move material such as grain to a central discharge point inside a large storage structure. A sweep auger usually extends from the center of a round structure to its outside wall, is powered by a drive system that contacts the bin or silo wall, and slowly rotates (i.e., sweeps) around a pivot point at the center of the structure. The auger rests directly in the grain (or similar material), and the excess grain alongside the auger acts to confine the grain that is in contact with the auger.

[¶]Federal child labor laws prohibit employees aged <16 years from operating hazardous equipment (including agricultural augers). However, family members working on family farms are exempt from these provisions.

Auger-Related Injuries — Continued

5. To prevent entanglement, persons wearing loose clothing or jewelry or persons with long, untied hair should not operate augers.
6. Workers should not step or jump on or over an auger while it is in operation.
7. Grain augers always should be lowered to a horizontal position before being moved from one location to another. Workers always should observe the presence and location of power lines before raising an auger into position.
8. Whenever possible, operators should ensure good footing while working around augers. Portable augers should be placed on dry, level ground or a gravel pad. Spilled grain should be removed between loads, after the equipment has been turned off.
9. Operators should never use their hands or feet to redirect the flow of grain or other materials into the auger.
10. All farm workers and auger operators should be educated about safe operating procedures and hazards associated with augers.
11. Augers should be clearly labeled as posing a hazard for entanglement and subsequent serious injury.

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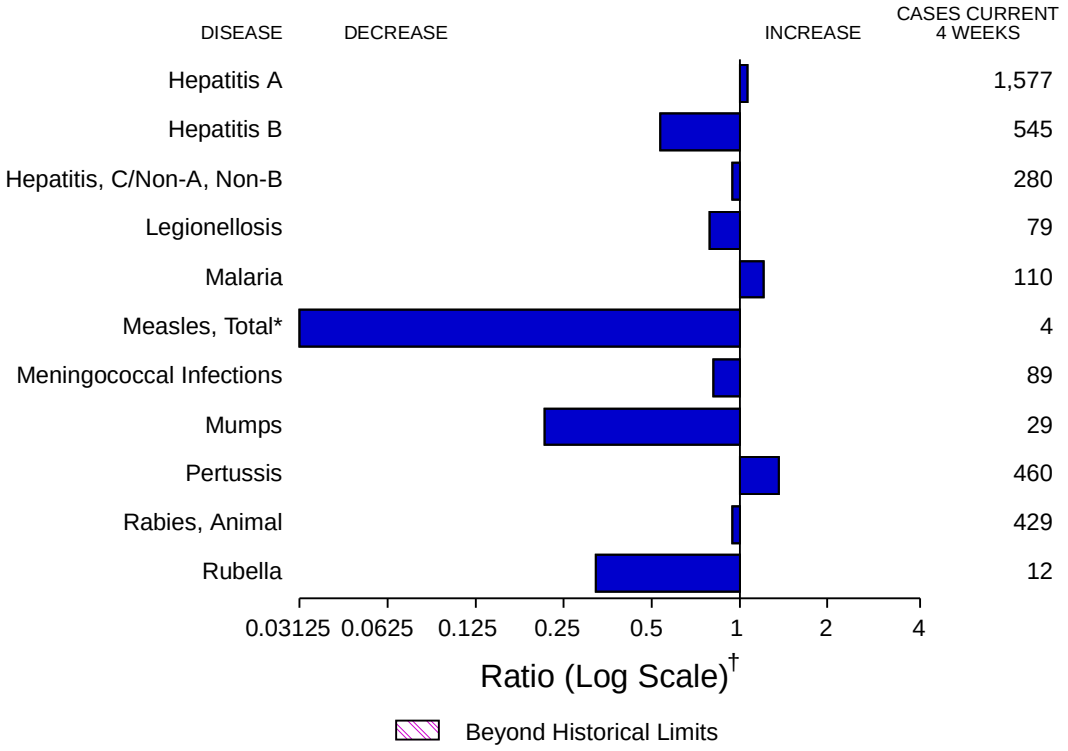
State-Specific Changes in Physical Inactivity Among Persons Aged ≥65 Years — United States, 1987–1992

Regular physical activity can provide important health benefits, even when such activities are initiated later in life (*1,2*). Despite these benefits, most older persons in the United States have sedentary lifestyles (*3*). One of the national health objectives for the year 2000 is to reduce to 22% the proportion of adults aged ≥65 years who engage in no leisure-time physical activity (objective 1.5a) (*4*). This report uses data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) to summarize state-specific trends during 1987–1992 in the prevalence of physical inactivity during leisure time among persons aged ≥65 years and projects state-specific prevalences for 1997.

The BRFSS is a population-based, random-digit–dialed telephone survey of the noninstitutionalized U.S. population. Data were available for 83,858 persons aged ≥65 years residing in 49 states and the District of Columbia who participated in the BRFSS during 1987–1992. Of the 50 reporting areas, 32 states and the District of Columbia collected information about physical activity for the entire study period. Respondents were asked specific questions about physical activity, including the type, frequency, and duration of the two leisure-time physical activities in which they participated most frequently during the preceding month. Persons who reported

(Continued on page 669)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending September 9, 1995, with historical data — United States



*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline.

†Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending September 9, 1995 (36th Week)

	Cum. 1995		Cum. 1995
Anthrax	-	Psittacosis	48
Brucellosis	64	Rabies, human	1
Cholera	11	Rocky Mountain Spotted Fever	375
Congenital rubella syndrome	4	Syphilis, congenital, age <1 year†	132
Diphtheria	-	Tetanus	19
*Haemophilus influenzae**	829	Toxic shock syndrome	127
Hansen Disease	89	Trichinosis	24
Plague	6	Typhoid fever	207
Poliomyelitis, Paralytic	-		

*Of 809 cases of known age, 192 (24%) were reported among children less than 5 years of age.
†Updated quarterly from reports to the Division of STD Prevention, National Center for Prevention Services. This total through first quarter 1995.
-: no reported cases

TABLE II. Cases of selected notifiable diseases, United States, weeks ending September 9, 1995, and September 10, 1994 (36th Week)

Reporting Area	AIDS*	Gonorrhea		Hepatitis (Viral), by type						Legionellosis	
				A		B		C/NA,NB			
	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	47,385	237,353	274,367	18,263	16,342	6,795	7,918	2,942	2,864	853	1,082
NEW ENGLAND	2,412	3,624	5,478	188	207	155	243	79	106	23	41
Maine	74	58	64	19	20	7	11	-	-	5	4
N.H.	72	77	77	7	16	16	16	11	8	4	-
Vt.	23	39	21	4	6	1	6	1	7	-	-
Mass.	1,014	1,951	2,152	78	82	57	145	63	71	11	25
R.I.	184	348	324	24	18	8	6	4	20	3	12
Conn.	1,045	1,151	2,840	56	65	66	59	-	-	N	N
MID. ATLANTIC	12,777	22,975	30,968	1,068	1,164	825	1,035	272	338	123	167
Upstate N.Y.	1,634	3,846	7,397	268	410	274	277	153	161	33	38
N.Y. City	6,547	7,375	11,689	520	434	256	222	1	1	3	4
N.J.	2,983	3,162	3,512	132	216	166	275	90	147	17	31
Pa.	1,613	8,592	8,370	148	104	129	261	28	29	70	94
E.N. CENTRAL	3,613	51,929	55,292	2,008	1,601	671	817	190	238	225	313
Ohio	733	15,659	14,647	1,287	578	82	118	8	17	115	148
Ind.	383	5,727	6,066	118	263	165	148	5	8	53	34
Ill.	1,525	14,024	17,090	217	404	94	221	33	63	13	29
Mich.	721	12,539	12,217	260	190	290	263	144	150	23	56
Wis.	251	3,980	5,272	126	166	40	67	-	-	21	46
W.N. CENTRAL	1,091	13,476	15,425	1,296	801	433	456	84	62	83	74
Minn.	243	1,933	2,265	125	163	37	43	2	14	2	2
Iowa	55	983	1,008	50	37	32	22	11	7	17	27
Mo.	476	7,734	8,521	935	390	311	340	48	15	43	23
N. Dak.	5	20	28	23	4	4	-	7	1	4	4
S. Dak.	11	123	140	37	24	2	-	1	-	1	1
Nebr.	80	697	958	34	102	22	24	6	10	9	12
Kans.	221	1,986	2,505	92	81	25	27	9	15	7	5
S. ATLANTIC	12,200	69,840	73,077	871	832	984	1,468	229	318	159	264
Del.	220	1,502	1,323	7	19	2	11	1	1	2	31
Md.	1,635	7,471	12,907	154	116	179	236	3	17	25	58
D.C.	738	3,121	5,028	17	16	15	36	-	-	4	5
Va.	965	7,422	9,178	142	118	81	89	10	20	15	5
W. Va.	77	471	545	17	11	40	29	41	23	3	3
N.C.	712	16,430	18,528	80	91	203	194	43	47	29	18
S.C.	671	8,333	9,056	35	30	37	23	17	7	29	9
Ga.	1,628	10,893	U	55	25	63	505	15	165	23	95
Fla.	5,554	14,197	16,512	364	406	364	345	99	38	29	40
E.S. CENTRAL	1,551	28,964	32,018	1,068	414	590	841	721	655	37	67
Ky.	197	3,377	3,437	30	119	45	61	15	21	7	8
Tenn.	638	9,343	10,295	863	170	468	725	704	621	21	33
Ala.	411	11,637	10,849	63	68	77	55	2	13	6	11
Miss.	305	4,607	7,437	112	57	-	-	-	-	3	15
W.S. CENTRAL	4,178	22,444	32,318	2,586	2,128	1,142	813	496	212	11	33
Ark.	186	2,080	4,735	343	143	36	20	4	6	1	6
La.	715	7,863	8,489	82	111	148	125	129	124	2	10
Okla.	196	1,496	3,482	662	208	376	95	323	42	3	11
Tex.	3,081	11,005	15,612	1,499	1,666	582	573	40	40	5	6
MOUNTAIN	1,466	6,113	6,894	2,784	3,161	544	463	310	311	89	70
Mont.	16	47	66	75	17	19	17	11	6	4	14
Idaho	37	91	61	229	242	61	65	40	63	2	1
Wyo.	10	38	55	86	20	16	19	129	107	7	3
Colo.	491	1,980	2,352	360	340	81	75	42	54	37	15
N. Mex.	123	716	694	594	786	212	145	37	41	4	3
Ariz.	392	2,334	2,251	819	1,242	82	48	29	14	7	8
Utah	98	131	186	510	349	48	54	8	13	13	6
Nev.	299	776	1,229	111	165	25	40	14	13	15	20
PACIFIC	8,097	17,988	22,897	6,394	6,034	1,451	1,782	561	624	103	53
Wash.	667	1,771	2,044	551	775	128	164	147	187	18	10
Oreg.	285	212	716	1,361	670	60	100	29	26	-	-
Calif.	6,910	15,123	18,995	4,333	4,390	1,242	1,483	357	407	80	41
Alaska	53	485	629	31	161	9	11	1	-	-	-
Hawaii	182	397	513	118	38	12	24	27	4	5	2
Guam	-	51	87	2	18	1	4	-	-	1	1
P.R.	1,851	351	344	80	45	523	238	239	128	-	-
V.I.	27	6	20	-	2	2	6	-	1	-	-
Amer. Samoa	-	18	21	5	8	-	-	-	-	-	-
C.N.M.I.	-	23	34	15	5	7	1	-	-	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for Prevention Services, last update August 31, 1995.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 9, 1995, and September 10, 1994 (36th Week)

Reporting Area	Lyme Disease		Malaria		Measles (Rubeola)						Meningococcal Infections		Mumps	
					Indigenous		Imported*		Total					
	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	1995	Cum. 1995	1995	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	5,345	8,253	784	725	-	218	-	21	239	837	2,156	1,968	577	1,033
NEW ENGLAND	1,395	2,011	35	54	-	6	-	1	7	27	100	90	10	17
Maine	16	17	4	4	-	-	-	-	-	5	7	18	4	3
N.H.	18	15	2	3	-	-	-	-	-	1	19	8	1	4
Vt.	8	12	1	3	-	-	-	-	-	3	6	2	-	-
Mass.	121	126	10	27	-	1	-	1	2	7	36	40	2	2
R.I.	240	307	4	5	-	5	-	-	5	7	-	-	1	2
Conn.	992	1,534	14	12	-	-	-	-	-	4	32	22	2	6
MID. ATLANTIC	3,186	4,880	194	140	-	6	-	4	10	211	257	210	83	86
Upstate N.Y.	1,746	3,155	45	38	-	1	-	-	1	17	80	65	23	25
N.Y. City	115	11	101	48	-	2	-	3	5	13	34	26	13	4
N.J.	581	1,020	34	32	-	3	-	1	4	173	72	47	6	13
Pa.	744	694	14	22	-	-	-	-	-	8	71	72	41	44
E.N. CENTRAL	59	449	77	74	-	7	-	3	10	102	290	288	99	169
Ohio	40	31	9	8	-	1	-	-	1	17	89	82	32	42
Ind.	11	14	14	11	-	-	-	-	-	1	41	38	3	7
Ill.	3	22	32	35	-	-	-	2	2	56	71	96	30	79
Mich.	5	5	13	18	-	4	-	1	5	25	55	41	34	33
Wis.	-	377	9	2	-	2	-	-	2	3	34	31	-	8
W.N. CENTRAL	98	152	17	32	-	2	-	-	2	170	142	127	38	52
Minn.	42	58	3	10	-	-	-	-	-	-	22	12	2	4
Iowa	8	13	1	4	-	-	-	-	-	7	26	16	9	12
Mo.	30	70	6	11	-	1	-	-	1	160	58	62	22	33
N. Dak.	-	-	1	1	-	-	-	-	-	-	1	1	1	2
S. Dak.	-	-	1	-	-	-	-	-	-	-	5	7	-	-
Nebr.	1	3	3	4	-	-	-	-	-	2	12	9	4	1
Kans.	17	8	2	2	-	1	-	-	1	1	18	20	-	-
S. ATLANTIC	410	570	169	139	-	10	-	1	11	53	394	291	85	151
Del.	7	78	1	3	-	-	-	-	-	-	6	5	-	-
Md.	267	179	43	49	-	-	-	1	1	4	28	26	20	42
D.C.	1	4	15	11	-	-	-	-	-	-	3	3	-	-
Va.	38	113	35	20	-	-	-	-	-	2	47	53	17	35
W. Va.	21	13	2	-	-	-	-	-	-	37	8	11	-	3
N.C.	44	63	14	7	-	-	-	-	-	3	62	42	16	35
S.C.	12	7	1	4	-	-	-	-	-	-	52	19	9	7
Ga.	12	102	22	22	-	2	-	-	2	2	80	65	8	8
Fla.	8	11	36	23	-	8	-	-	8	5	108	67	15	21
E.S. CENTRAL	33	36	17	27	-	-	-	-	-	28	133	144	13	18
Ky.	5	21	1	8	-	-	-	-	-	-	46	33	-	-
Tenn.	19	9	7	9	U	-	U	-	-	28	35	26	-	6
Ala.	7	6	6	9	-	-	-	-	-	-	29	56	4	5
Miss.	2	-	3	1	-	-	-	-	-	-	23	29	9	7
W.S. CENTRAL	82	86	33	36	-	19	-	3	22	16	268	232	35	182
Ark.	5	7	3	3	-	2	-	-	2	1	22	37	3	5
La.	3	1	3	6	-	17	-	1	18	1	39	31	8	22
Okla.	36	48	1	4	-	-	-	-	-	-	26	24	-	23
Tex.	38	30	26	23	-	-	-	2	2	14	181	140	24	132
MOUNTAIN	7	11	41	25	-	49	-	1	50	163	151	136	24	128
Mont.	-	-	3	-	-	-	-	-	-	-	2	6	1	-
Idaho	-	3	1	2	-	-	-	-	-	-	6	15	2	7
Wyo.	3	3	-	1	-	-	-	-	-	-	7	5	-	2
Colo.	1	1	17	11	-	8	-	-	8	19	37	25	2	3
N. Mex.	1	2	4	3	-	30	-	1	31	-	31	13	N	N
Ariz.	-	-	7	2	-	10	-	-	10	1	48	47	2	91
Utah	-	1	5	4	-	-	-	-	-	134	13	18	11	14
Nev.	2	1	4	2	-	1	-	-	1	9	7	7	6	11
PACIFIC	75	58	201	198	-	119	-	8	127	67	421	450	190	230
Wash.	8	1	16	21	-	16	-	4	20	3	71	70	10	14
Oreg.	4	6	9	12	-	1	-	-	1	2	66	99	N	N
Calif.	63	51	165	152	-	102	-	3	105	53	273	274	162	198
Alaska	-	-	1	1	-	-	-	-	-	5	7	2	13	2
Hawaii	-	-	10	12	-	-	-	1	1	4	4	5	5	16
Guam	-	-	-	-	U	-	U	-	-	228	3	-	3	6
P.R.	-	-	1	3	-	11	-	-	11	11	14	6	-	2
V.I.	-	-	-	-	U	-	U	-	-	-	-	-	2	3
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-	-	-	2
C.N.M.I.	-	-	1	1	U	-	U	-	-	29	-	-	-	2

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

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 9, 1995, and September 10, 1994 (36th Week)

Reporting Area	Pertussis			Rubella			Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	1995	Cum. 1995	Cum. 1994	1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	86	2,418	2,584	1	114	205	10,303	14,791	13,278	15,141	4,867	5,228
NEW ENGLAND	7	312	266	-	34	128	120	158	341	331	1,106	1,296
Maine	2	24	9	-	1	-	2	4	12	8	22	-
N.H.	3	25	52	-	1	-	1	3	9	13	113	116
Vt.	1	44	32	-	-	-	-	-	3	5	134	102
Mass.	-	205	149	-	7	124	43	66	190	174	335	485
R.I.	1	2	5	-	-	2	3	12	33	32	237	26
Conn.	-	12	19	-	25	2	71	73	94	99	265	567
MID. ATLANTIC	9	196	406	-	11	6	572	981	2,753	3,114	943	1,365
Upstate N.Y.	9	107	172	-	4	5	43	127	317	382	379	1,001
N.Y. City	-	21	80	-	7	-	261	437	1,470	1,835	-	-
N.J.	-	5	12	-	-	1	120	151	522	527	257	203
Pa.	-	63	142	-	-	-	148	266	444	370	307	161
E.N. CENTRAL	16	241	402	-	4	9	1,770	2,213	1,225	1,393	61	44
Ohio	5	96	106	-	-	-	614	863	184	231	9	2
Ind.	1	15	47	-	-	-	176	175	56	122	10	12
Ill.	8	61	83	-	1	1	659	741	668	697	3	13
Mich.	2	57	39	-	3	8	197	203	269	302	32	10
Wis.	-	12	127	-	-	-	124	231	48	41	7	7
W.N. CENTRAL	1	135	118	-	-	2	542	871	416	389	221	157
Minn.	-	43	51	-	-	-	28	33	94	95	8	14
Iowa	1	7	8	-	-	-	34	43	48	40	88	67
Mo.	-	40	31	-	-	2	462	742	162	167	19	15
N. Dak.	-	8	4	-	-	-	-	1	3	7	23	9
S. Dak.	-	10	7	-	-	-	-	1	15	17	49	25
Nebr.	-	7	7	-	-	-	9	11	17	16	5	-
Kans.	-	20	10	-	-	-	9	40	77	47	29	27
S. ATLANTIC	5	228	245	-	26	15	2,642	3,807	2,334	2,727	1,473	1,416
Del.	-	9	2	-	-	-	10	21	12	28	74	42
Md.	-	18	57	-	-	-	137	202	241	226	265	390
D.C.	-	4	5	-	-	-	77	161	70	90	11	2
Va.	-	15	28	-	-	-	435	548	167	212	287	279
W. Va.	-	-	3	-	-	-	8	8	54	60	82	58
N.C.	-	84	58	-	1	-	796	1,183	303	344	344	115
S.C.	2	20	12	-	1	-	412	560	222	252	97	132
Ga.	3	22	24	-	1	2	504	575	323	516	189	273
Fla.	-	56	56	-	23	13	263	549	942	999	124	125
E.S. CENTRAL	2	249	117	-	-	-	2,683	2,662	998	1,041	193	141
Ky.	2	11	58	-	-	-	145	145	204	231	22	15
Tenn.	U	202	18	U	-	-	592	731	294	347	56	34
Ala.	-	34	29	-	-	-	460	467	283	285	108	88
Miss.	-	2	12	N	N	N	1,486	1,319	217	178	7	4
W.S. CENTRAL	10	208	105	-	7	12	1,367	3,211	1,708	1,917	527	467
Ark.	-	28	18	-	-	-	82	360	113	188	21	23
La.	-	11	10	-	-	-	715	1,253	6	11	25	55
Okla.	1	24	22	-	-	4	54	114	146	178	31	25
Tex.	9	145	55	-	7	8	516	1,484	1,443	1,540	450	364
MOUNTAIN	12	365	355	-	4	4	189	199	410	377	111	112
Mont.	-	3	4	-	-	-	4	2	10	9	34	13
Idaho	2	79	42	-	-	-	-	1	10	11	2	3
Wyo.	-	1	-	-	-	-	4	-	1	7	21	16
Colo.	-	34	173	-	-	-	87	101	22	47	-	9
N. Mex.	6	78	20	-	-	-	32	18	60	43	5	6
Ariz.	4	147	95	-	3	-	30	39	209	146	34	48
Utah	-	18	19	-	1	3	4	10	19	29	9	10
Nev.	-	5	2	-	-	1	28	28	79	85	6	7
PACIFIC	24	484	570	1	28	29	418	689	3,093	3,852	232	230
Wash.	5	118	84	-	2	-	11	28	180	191	5	11
Oreg.	4	26	83	-	1	4	6	28	25	90	-	9
Calif.	14	300	388	1	22	21	400	627	2,726	3,349	223	179
Alaska	-	-	-	-	-	-	1	3	47	48	4	31
Hawaii	1	40	15	-	3	4	-	3	115	174	-	-
Guam	U	-	2	U	-	1	3	3	33	62	-	-
P.R.	-	6	2	-	-	-	172	218	123	116	27	62
V.I.	U	-	-	U	-	-	2	23	-	-	-	-
Amer. Samoa	-	-	1	-	-	-	-	1	3	4	-	-
C.N.M.I.	U	-	-	U	-	-	4	1	13	25	-	-

U: Unavailable -: no reported cases

TABLE III. Deaths in 121 U.S. cities,* week ending September 9, 1995 (36th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	558	370	112	49	14	11	38
Boston, Mass.	183	102	48	19	8	6	22
Bridgeport, Conn.	29	19	7	2	1	-	1
Cambridge, Mass.	20	12	6	2	-	-	1
Fall River, Mass.	16	15	1	-	-	-	-
Hartford, Conn.	59	36	16	5	2	-	-
Lowell, Mass.	16	11	-	4	1	-	-
Lynn, Mass.	14	8	2	2	-	-	1
New Bedford, Mass.	24	23	1	-	-	-	-
New Haven, Conn.	30	21	4	4	-	1	1
Providence, R.I.	44	28	11	3	-	2	4
Somerville, Mass.	1	1	-	-	-	-	-
Springfield, Mass.	42	33	5	3	1	-	4
Waterbury, Conn.	33	24	6	2	1	-	3
Worcester, Mass.	47	37	5	3	-	2	1
MID. ATLANTIC	2,037	1,322	404	212	55	44	68
Albany, N.Y.	42	36	2	3	1	-	4
Allentown, Pa.	27	21	5	1	-	-	-
Buffalo, N.Y.	99	76	11	7	4	1	-
Camden, N.J.	34	20	4	5	3	2	2
Elizabeth, N.J.	13	7	1	1	1	3	-
Erie, Pa.§	32	23	6	3	-	-	1
Jersey City, N.J.	36	24	7	3	-	2	-
New York City, N.Y.	1,149	711	242	139	31	26	32
Newark, N.J.	75	34	16	19	3	3	2
Paterson, N.J.	24	17	1	2	4	-	2
Philadelphia, Pa.	200	133	46	17	2	2	10
Pittsburgh, Pa.§	50	35	9	-	4	2	5
Reading, Pa.	11	10	1	-	-	-	1
Rochester, N.Y.	99	68	23	8	-	-	5
Schenectady, N.Y.	19	16	2	-	1	-	-
Scranton, Pa.§	26	19	6	1	-	-	2
Syracuse, N.Y.	27	21	4	-	-	2	1
Trenton, N.J.	28	17	10	-	-	1	1
Utica, N.Y.	22	18	4	-	-	-	-
Yonkers, N.Y.	24	16	4	3	1	-	-
E.N. CENTRAL	1,812	1,181	360	160	34	53	120
Akron, Ohio	54	42	9	2	-	1	-
Canton, Ohio	31	25	3	1	1	1	2
Chicago, Ill.	423	249	101	47	7	16	38
Cincinnati, Ohio	75	35	12	6	-	1	11
Cleveland, Ohio	120	85	20	10	3	2	1
Columbus, Ohio	127	80	29	7	4	7	12
Dayton, Ohio	108	82	19	5	1	1	7
Detroit, Mich.	174	104	43	15	6	6	4
Evansville, Ind.	43	36	5	2	-	-	3
Fort Wayne, Ind.	39	32	3	1	1	2	1
Gary, Ind.	17	9	2	6	-	-	-
Grand Rapids, Mich.	66	44	11	6	2	3	3
Indianapolis, Ind.	146	88	35	18	3	2	13
Madison, Wis.	U	U	U	U	U	U	U
Milwaukee, Wis.	118	78	21	13	2	4	9
Peoria, Ill.	28	23	2	2	1	-	2
Rockford, Ill.	50	30	9	8	-	3	-
South Bend, Ind.	38	28	7	2	-	1	5
Toledo, Ohio	99	69	19	7	1	3	6
Youngstown, Ohio	56	42	10	2	2	-	3
W.N. CENTRAL	673	466	99	62	21	15	34
Des Moines, Iowa	17	14	1	1	1	-	-
Duluth, Minn.	15	12	3	-	-	-	1
Kansas City, Kans.	47	33	6	6	1	1	1
Kansas City, Mo.	110	64	15	10	8	3	6
Lincoln, Nebr.	26	20	4	2	-	-	1
Minneapolis, Minn.	152	111	20	16	5	-	4
Omaha, Nebr.	77	53	15	3	3	3	5
St. Louis, Mo.	99	68	13	13	2	3	5
St. Paul, Minn.	47	33	5	8	-	1	6
Wichita, Kans.	83	58	17	3	1	4	5

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,204	713	270	151	43	27	62
Atlanta, Ga.	117	67	29	17	3	1	1
Baltimore, Md.	164	90	37	24	9	4	19
Charlotte, N.C.	154	103	27	16	2	6	2
Jacksonville, Fla.	123	80	24	13	3	3	8
Miami, Fla.	118	70	26	19	3	-	2
Norfolk, Va.	43	26	8	4	3	2	4
Richmond, Va.	77	40	25	8	3	1	-
Savannah, Ga.	61	34	15	8	3	1	8
St. Petersburg, Fla.	35	25	5	4	-	1	3
Tampa, Fla.	137	91	34	6	2	4	12
Washington, D.C.	164	82	40	27	11	4	3
Wilmington, Del.	11	5	-	5	1	-	-
E.S. CENTRAL	656	437	136	43	18	22	38
Birmingham, Ala.	107	70	15	10	2	10	4
Chattanooga, Tenn.	62	43	10	5	3	1	6
Knoxville, Tenn.	81	53	21	4	2	1	11
Lexington, Ky.	36	23	8	1	1	3	1
Memphis, Tenn.	156	103	36	8	5	4	8
Mobile, Ala.	91	64	16	7	3	1	5
Montgomery, Ala.	41	27	12	2	-	-	-
Nashville, Tenn.	82	54	18	6	2	2	3
W.S. CENTRAL	1,112	686	214	138	45	29	55
Austin, Tex.	45	23	10	9	2	1	4
Baton Rouge, La.	46	34	8	3	-	1	-
Corpus Christi, Tex.	47	31	5	8	1	2	1
Dallas, Tex.	140	80	27	26	4	3	6
El Paso, Tex.	32	25	3	2	2	-	3
Ft. Worth, Tex.	72	49	10	6	6	1	3
Houston, Tex.	299	157	71	46	13	12	18
Little Rock, Ark.	45	31	5	4	5	-	3
New Orleans, La.	71	38	12	12	4	5	-
San Antonio, Tex.	161	117	28	10	4	2	12
Shreveport, La.	59	42	15	1	1	-	3
Tulsa, Okla.	95	59	20	11	3	2	2
MOUNTAIN	678	423	143	74	22	15	41
Albuquerque, N.M.	70	50	11	6	3	-	3
Colo. Springs, Colo.	49	27	11	8	2	1	6
Denver, Colo.	65	40	15	7	-	3	3
Las Vegas, Nev.	131	78	37	14	1	1	7
Ogden, Utah	22	14	3	3	2	-	3
Phoenix, Ariz.	133	72	30	17	8	5	7
Pueblo, Colo.	22	19	2	1	-	-	4
Salt Lake City, Utah	86	54	20	8	3	1	6
Tucson, Ariz.	100	69	14	10	3	4	2
PACIFIC	1,528	989	290	158	51	35	103
Berkeley, Calif.	13	10	1	2	-	-	-
Fresno, Calif.	71	44	15	4	4	4	3
Glendale, Calif.	15	10	2	3	-	-	2
Honolulu, Hawaii	96	73	11	5	5	2	5
Long Beach, Calif.	U	U	U	U	U	U	U
Los Angeles, Calif.	414	248	81	56	16	9	10
Pasadena, Calif.	27	19	5	1	1	1	4
Portland, Oreg.	110	75	23	7	1	4	5
Sacramento, Calif.	106	74	20	7	2	3	5
San Diego, Calif.	128	80	22	20	3	2	23
San Francisco, Calif.	142	80	34	21	5	2	16
San Jose, Calif.	159	105	32	13	7	2	15
Santa Cruz, Calif.	20	17	2	1	-	-	3
Seattle, Wash.	97	58	21	13	1	4	4
Spokane, Wash.	50	44	4	2	-	-	4
Tacoma, Wash.	80	52	17	3	6	2	4
TOTAL	10,258¶	6,587	2,028	1,047	303	251	559

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.
†Pneumonia and influenza.
§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.
¶Total includes unknown ages.
U: Unavailable -: no reported cases

Physical Inactivity — Continued

engaging in no physical activity during leisure time were categorized as inactive. Confidence intervals and prevalence estimates were calculated using SUDAAN (*5*).

For the 33 reporting areas that participated in the BRFSS each year during 1987–1992, the median prevalence of no reported leisure-time physical activity among persons aged ≥65 years declined from 43.2% in 1987 to 38.5% in 1992. Consistent decreases (i.e., a decrease from the previous year in at least 4 years) occurred in three states (Maryland, New Mexico, and New York) and the District of Columbia; no state reported consistent increases (i.e., an increase over the previous year in at least 4 years) in physical inactivity (Table 1). The largest overall declines in prevalence of inactivity over the 6-year period were reported from Rhode Island (21.5%), Massachusetts (15.0%), Ohio (14.1%), New Mexico (12.7%) and Maryland (10.1%). The largest overall increases in prevalence were reported from Montana (7.2%), West Virginia (4.3%), Maine (3.9%), and Georgia (2.9%).

Two methods, a state-specific method and an aggregate method, were used to project the prevalence of physical inactivity in 1997. The analysis using the state-specific method was limited to data from the 33 reporting areas that collected physical activity information from 1987 through 1992. For each of these reporting areas, the 5-year change (i.e., the 1992 value minus the 1987 value) in the percentage of respondents participating in no leisure-time physical activity was added to that state's 1992 value to project the 1997 prevalence. The analysis using the aggregate method employed the median 5-year change in the prevalence of no leisure-time physical activity during 1987–1992 from the 33 areas reporting throughout the interval. The median 5-year change was then added to the 1992 prevalence for each of the 49 participating states and the District of Columbia to project the 1997 prevalence.

The projected median prevalence of no leisure-time physical activity for 1997 was 35.9% based on the state-specific method and 37.1% based on the aggregate method. Using the state-specific method, three states (Massachusetts, Rhode Island, and Minnesota) are projected in 1997 to meet the year 2000 objective to reduce physical inactivity. Using the aggregate method, the lowest projected prevalence is 24.8% for Washington, followed by 25.3% for Colorado.

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Editorial Note: The findings in this report indicate that in 19 (58%) of the 33 states for which complete data were available, the prevalence of physical inactivity among persons aged ≥65 years declined moderately during 1987–1992. This analysis extends

TABLE 1. Prevalence of leisure-time physical inactivity among persons aged ≥65 years, by state — United States, Behavioral Risk Factor Surveillance System, 1987–1992

State	1987* %	1987* (95% CI[†††])	1988[†] %	1988[†] (95% CI)	1989[§] %	1989[§] (95% CI)	1990[¶] %	1990[¶] (95% CI)	1991** %	1991** (95% CI)	1992[††] %	1992[††] (95% CI)	Change in prevalence 1987–1992[§§]	Projected 1997 prevalence based on state-specific method[¶¶]	Projected 1997 prevalence based on aggregate method***
Alabama	42.7	(±7.1)	45.7	(± 6.7)	45.6	(±5.7)	43.6	(±5.1)	47.1	(± 5.7)	44.1	(± 5.3)	1.4	45.5	42.2
Alaska	NA[§§§]		NA		NA		NA		48.8	(±12.9)	30.2	(±12.5)	NA	NA	28.3
Arizona	32.9	(±6.5)	28.3	(± 6.3)	26.8	(±5.7)	23.4	(±5.3)	31.0	(± 5.9)	34.4	(± 5.9)	1.5	35.9	32.5
Arkansas	NA		NA		NA		NA		48.9	(± 6.3)	NA		NA	NA	NA
California	27.8	(±5.7)	29.1	(± 5.3)	31.5	(±6.5)	30.0	(±4.9)	26.7	(± 4.3)	29.3	(± 4.1)	1.5	30.8	27.4
Colorado	NA		NA		NA		30.4	(±6.3)	26.4	(± 5.3)	27.2	(± 6.1)	NA	NA	25.3
Connecticut	NA		53.1	(± 7.4)	42.7	(±7.6)	36.8	(±5.9)	42.8	(± 5.9)	40.9	(± 5.5)	NA	NA	39.0
Delaware	NA		NA		NA		39.3	(±6.1)	47.9	(± 6.9)	44.8	(± 6.1)	NA	NA	42.9
District of Columbia	59.0	(±8.2)	71.2	(± 7.4)	63.8	(±6.1)	62.1	(±7.1)	56.6	(± 6.7)	50.2	(± 6.9)	– 8.8	41.4	48.3
Florida	39.1	(±6.1)	30.5	(± 4.9)	29.7	(±4.5)	39.1	(±4.5)	30.8	(± 4.5)	32.0	(± 3.7)	– 7.1	24.9	30.1
Georgia	49.6	(±6.9)	54.2	(±14.5)	53.6	(±7.1)	51.2	(±6.9)	53.9	(± 6.9)	52.5	(± 6.3)	2.9	55.4	50.6
Hawaii	31.5	(±7.6)	36.0	(± 6.9)	32.6	(±6.5)	29.0	(±6.3)	23.3	(± 5.3)	32.6	(± 6.9)	1.1	33.7	30.7
Idaho	32.9	(±5.1)	33.4	(± 5.1)	43.1	(±5.5)	40.8	(±5.7)	33.7	(± 4.9)	30.0	(± 5.1)	– 2.9	27.1	28.1
Illinois	44.5	(±5.9)	40.7	(± 5.9)	42.3	(±6.1)	44.6	(±6.3)	49.0	(± 5.5)	44.1	(± 4.9)	– 0.4	43.7	42.2
Indiana	40.4	(±5.3)	48.7	(± 5.1)	47.8	(±5.1)	35.7	(±4.9)	39.3	(± 4.9)	38.5	(±24.9)	– 1.9	36.6	36.6
Iowa	NA		45.7	(± 7.8)	43.7	(±5.7)	46.4	(±5.9)	40.1	(± 5.5)	42.4	(± 5.1)	NA	NA	40.5
Kansas	NA		NA		NA		NA		NA		38.2	(± 6.1)	NA	NA	36.3
Kentucky	56.4	(±5.3)	54.9	(± 5.3)	54.3	(±5.7)	55.3	(±5.3)	56.0	(± 5.5)	56.5	(± 5.3)	0.1	56.6	54.6
Lousianna	NA		NA		NA		44.3	(±9.4)	45.5	(± 6.7)	48.7	(± 6.3)	NA	NA	46.8
Maine	42.4	(±6.7)	44.9	(± 6.3)	60.0	(±7.4)	53.1	(±7.4)	42.8	(± 6.7)	46.3	(± 6.9)	3.9	50.2	44.4
Maryland	52.0	(±8.6)	50.7	(± 7.3)	49.2	(±6.3)	43.5	(±6.7)	42.3	(± 6.5)	41.9	(± 5.5)	–10.1	31.8	40.0
Massachusetts	44.4	(±6.9)	48.5	(± 6.5)	47.3	(±7.1)	36.4	(±7.4)	39.9	(± 7.1)	29.4	(± 6.1)	–15.0	14.4	27.5
Michigan	NA		42.8	(± 8.4)	44.2	(±5.3)	46.6	(±5.1)	39.8	(± 5.1)	35.6	(± 4.7)	NA	NA	33.7
Minnesota	38.6	(±4.1)	37.2	(± 4.1)	44.5	(±4.1)	36.4	(±3.9)	36.7	(± 4.1)	29.6	(± 3.7)	– 9.0	20.6	27.7
Mississippi	NA		NA		NA		50.7	(±6.1)	55.3	(± 6.3)	62.5	(± 6.3)	NA	NA	60.6
Missouri	46.3	(±6.7)	45.5	(± 6.1)	45.5	(±6.7)	38.8	(±6.3)	47.8	(± 5.9)	44.0	(± 5.7)	– 2.3	41.7	42.1
Montana	28.3	(±5.5)	30.7	(± 5.9)	28.9	(±5.5)	33.1	(±6.3)	32.1	(± 6.1)	35.5	(± 6.5)	7.2	42.7	33.6
Nebraska	43.2	(±6.5)	47.0	(± 5.9)	48.6	(±5.7)	36.9	(±5.1)	40.6	(± 5.7)	39.2	(± 5.3)	– 4.0	35.2	37.3
Nevada	NA		NA		NA		NA		NA		37.3	(± 6.3)	NA	NA	35.4
New Hampshire	40.5	(±7.6)	42.2	(± 8.0)	35.5	(±6.9)	29.0	(±6.3)	35.5	(± 6.9)	32.0	(± 6.3)	– 8.5	23.5	30.1
New Jersey	NA		NA		NA		NA		45.6	(± 6.5)	45.1	(± 6.9)	NA	NA	43.2
New Mexico	51.7	(±7.6)	43.4	(± 8.2)	40.8	(±7.4)	37.2	(±7.6)	42.4	(± 8.8)	39.0	(± 7.1)	–12.7	26.3	37.1
New York	57.2	(±6.9)	53.7	(± 7.3)	48.1	(±7.3)	40.6	(±6.9)	49.8	(± 6.1)	47.4	(± 5.5)	– 9.8	37.6	45.5
North Carolina	45.4	(±5.5)	52.0	(± 5.7)	46.6	(±5.9)	50.8	(±5.5)	47.4	(± 5.5)	46.7	(± 5.1)	1.3	48.0	44.8

North Dakota	36.7	(±5.1)	36.7	(± 5.3)	42.8	(±5.5)	43.7	(±5.5)	42.2	(± 5.3)	37.7	(± 5.1)	1.0	38.7	35.8
Ohio	60.1	(±5.9)	46.3	(± 6.5)	51.6	(±6.7)	46.3	(±6.1)	46.9	(± 6.7)	46.0	(± 6.1)	–14.1	31.9	44.1
Oklahoma	NA		40.2	(±7.6)	53.9	(±6.5)	47.3	(±6.5)	49.0	(± 6.7)	43.9	(± 6.1)	NA	NA	42.0
Oregon	NA		NA		26.0	(±4.7)	28.8	(±3.7)	31.6	(± 3.7)	31.5	(± 3.7)	NA	NA	29.6
Pennsylvania	NA		NA		46.9	(±5.5)	40.1	(±4.7)	42.8	(± 5.1)	35.2	(± 4.7)	NA	NA	33.3
Rhode Island	59.5	(±5.7)	57.8	(± 5.3)	58.7	(±5.5)	37.7	(±5.1)	39.3	(± 5.5)	38.0	(± 5.3)	–21.5	16.5	36.1
South Carolina	44.7	(±6.3)	46.2	(± 5.9)	58.7	(±6.1)	48.7	(±5.5)	52.1	(± 5.5)	46.9	(± 5.7)	2.2	49.1	45.0
South Dakota	43.2	(±6.9)	39.6	(± 5.9)	42.1	(±5.3)	40.2	(±5.1)	37.0	(± 5.3)	38.1	(± 5.1)	– 5.1	33.0	36.2
Tennessee	57.3	(±4.9)	57.4	(± 4.9)	57.3	(±4.7)	52.1	(±5.1)	50.0	(± 4.7)	53.9	(± 5.1)	– 3.4	50.5	52.0
Texas	36.7	(±7.6)	42.4	(± 7.8)	40.0	(±7.3)	38.0	(±6.3)	39.6	(± 7.1)	31.8	(± 5.3)	– 4.9	26.9	29.9
Utah	31.1	(±6.9)	32.7	(± 6.9)	33.0	(±5.5)	31.6	(±5.5)	30.4	(± 5.7)	32.3	(± 6.1)	1.2	33.5	30.4
Vermont	NA		NA		NA		38.1	(±7.4)	45.8	(± 6.3)	40.3	(± 5.3)	NA	NA	38.4
Virginia	NA		NA		53.7	(±8.6)	41.5	(±6.5)	39.0	(± 7.1)	40.9	(± 6.7)	NA	NA	39.0
Washington	27.8	(±6.5)	30.6	(± 6.3)	28.8	(±5.9)	27.9	(±5.1)	24.3	(± 4.9)	26.7	(± 4.3)	– 1.1	25.6	24.8
West Virginia	48.7	(±5.5)	51.1	(± 5.3)	61.9	(±5.3)	55.3	(±4.5)	55.8	(± 4.5)	53.0	(± 4.7)	4.3	57.3	51.1
Wisconsin	34.5	(±6.5)	35.9	(± 6.5)	40.9	(±6.9)	36.0	(±6.5)	33.0	(± 6.3)	35.6	(± 5.9)	1.1	36.7	33.7

* Sample sizes for individual states ranged from 169 to 644 persons aged ≥65 years.
† Sample sizes for individual states ranged from 62 to 636 persons aged ≥65 years.
§ Sample sizes for individual states ranged from 199 to 652 persons aged ≥65 years.
¶ Sample sizes for individual states ranged from 147 to 643 persons aged ≥65 years.
** Sample sizes for individual states ranged from 123 to 665 persons aged ≥65 years.
†† Sample sizes for individual states ranged from 122 to 699 persons aged ≥65 years.
§§ 1992 percentage minus 1987 percentage.
¶¶ For this analysis, for each of the 33 participating reporting areas, the 5-year change (i.e., the 1992 value minus the 1987 value) in the percentage of respondents participating in no leisure-time physical activity was added to that state's 1992 value to project the 1997 prevalence.
*** This analysis employed the median 5-year change (1.9% decrease) in the prevalence of no leisure-time physical activity during 1987–1992 from the 33 areas reporting throughout the interval. The median 5-year change was then added to the 1992 prevalence for each of the 49 participating states and the District of Columbia to project the 1997 prevalence.
††† Confidence interval.
§§§ Not available.

Physical Inactivity — Continued

findings from a previous analysis of BRFSS data for 1986–1990 (*6*). However, based on analysis of the data for 1987–1992 by the state-specific and aggregate trends methods, the median prevalence in 1997 is projected to be approximately 36%–37%; if the decline continues at the projected rate, it will be insufficient to achieve the year 2000 objective.

Factors that may be associated with variations among the states in physical inactivity include differences in the age distribution of persons aged ≥65 years, perceptions among both health-care providers and the public about the benefits and need for physical activity in older adults, variations in climate, and differences in community-level resources for physical activity (e.g., state funding of facilities and programs to promote physical activity). Community efforts have targeted barriers to participation in physical activity for older adults (e.g., lack of access to age-appropriate activities) by providing transportation to safe and accessible facilities, such as local malls to attend walking programs or to senior centers for low-impact stretching and exercise programs in conjunction with congregate meals.

The findings in this report are subject to at least three limitations. First, because BRFSS data are self-reported, activity levels cannot be validated; however, the categorization of only those persons who report no leisure-time activities as inactive probably reduced the degree of misclassification. Second, some respondents may have been active for other reasons (e.g., occupation or housework) but were misclassified as inactive. Third, the sensitivity of questions to ascertain leisure-time physical activity may vary in relation to the age of respondents.

The health benefits of regular physical activity for persons aged ≥65 years include reducing the risks for coronary heart disease and noninsulin-dependent diabetes, preventing osteoporosis, promoting weight loss and weight maintenance, preserving functional capacity, and fostering psychologic well-being (*1,2*). In 1993, CDC and the American College of Sports Medicine recommended that all adults in the United States participate in ≥30 minutes of moderate-intensity physical activity on most, if not all, days of the week (*7*). Persons who report no leisure-time physical activity are the target population with the greatest potential gain in health benefits as they increase their level of activity (*8*). Although increases in longevity are diminished compared with younger persons, older adults who begin to participate in regular physical activity can decrease their risks for death and disability and improve their quality of life (*9*).

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