

# MMWR

641 Use of Smokeless Tobacco —  
Wisconsin  
649 Update *Aedes albopictus* Infestation  
— United States

## MORBIDITY AND MORTALITY WEEKLY REPORT

### Current Trends

#### Use of Smokeless Tobacco — Wisconsin

The recent marked increase in smokeless tobacco use, predominantly by pre-adolescent and adolescent males, has prompted action on local, state, and Federal levels. Smokeless tobacco products have apparently become popular among students in schools across the United States. Data from various regions of the country indicate that 8%-36% of male high school- and college-age students use smokeless tobacco products regularly (1). One study reported an 11% usage rate among 8- to 9-year-olds (2), and a recent U.S. Inspector General's national survey reported the overall average age at first use to be 10.4 years of age—in the 5th grade (3). Two other recent surveys reported 35% and 36% smokeless tobacco use in male adolescent populations in Pittsburgh, Pennsylvania (4), and Arkansas (5), respectively.

Data on smokeless tobacco usage among Wisconsin school-age children reflect national trends. A 1985 Dane County youth survey (6) of students in grades 7-12 showed that more males used smokeless tobacco than smoked cigarettes. For example, 45% of 8th-grade boys reported that they had tried smokeless tobacco at least once. Regular use of smokeless tobacco products increased from 9% of 7th-grade boys to 22% of 12th-grade boys (Table 1). Fifteen percent of 12th-grade boys were daily users.

Other preliminary data from the Wisconsin Division of Health's Project Model Health for rural Wisconsin schools demonstrate the following: 22% of 8th-grade boys in specific schools are regular users of smokeless tobacco; 35% of 8th-grade girls have tried smokeless tobacco; 12 years is the mean age of initiating smokeless tobacco use; among regular users, the students chew or dip smokeless tobacco an average of 6 times/day, with 25% chewing or dipping over 10 times/day; the average duration time per dip or chew is 1 hour. On the basis

**TABLE 1. Frequency of smokeless tobacco use among school-age males, by grade in school — Dane County (Madison), Wisconsin**

Grade level	No use (%)	Regular use (%)*	Daily use (%)
7 (n=327)	68	9	3
8 (n=327)	55	12	6
9 (n=414)	53	12	3
10 (n=393)	50	16	8
11 (n=371)	53	14	11
12 (n=349)	52	22	15

\*More than 1 time/week.

*Smokeless Tobacco – Continued*

of these data, the Wisconsin Division of Health has projected that one in five pre-adolescent and adolescent males is a regular smokeless tobacco user in specific Wisconsin communities.

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**Editorial Note:** Smokeless tobacco products include both snuff and chewing tobacco. Moist snuff, packaged in small tins, is most commonly used by young people in the United States (7). Sales of moist snuff have increased substantially in recent years, possibly as a result of successful tobacco company marketing strategies. For example, sales rose 55% during the period 1978-1984, while cigarette sales were decreasing (8). A bill to ban electronic media advertising passed Congress and became law, the Comprehensive Smokeless Tobacco Health Education Act of 1986 (P.L. 99-252), in February 1986. The ban took effect in August 1986; before that time, smokeless tobacco products were advertised without restriction on television and radio and had no health-warning labels. P.L. 99-252 also requires that by February 1987 all smokeless tobacco products and print advertisements be accompanied by one of the following three health warnings that are to be rotated every 4 months: (1) WARNING: THIS PRODUCT MAY CAUSE MOUTH CANCER, (2) WARNING: THIS PRODUCT MAY CAUSE GUM DISEASE, and (3) WARNING: THIS PRODUCT IS NOT A SAFE ALTERNATIVE TO CIGARETTES. Outdoor advertisements are exempt from this law.

Several factors may have contributed to passive acceptance of smokeless tobacco in schools and work-place settings, even where smoking restrictions and prohibitions are strictly enforced. For example, marketing campaigns have frequently used active and retired professional athletes and entertainers to promote the use of smokeless tobacco. Smokeless tobacco products are usually displayed in locations removed from smoking tobacco in convenience stores, grocery stores, and other retail outlets, often close to candy and other fast-food products. The image of smokeless tobacco also has been enhanced by promotional give-aways on college campuses, at state fairs, and at sporting events; free samples through printed advertising coupons; and mail-order, product-identified clothing and accessories.

Health professionals and the general public are well aware of the causal link between cigarette use and a multitude of detrimental health conditions. In contrast, the health effects of smokeless tobacco are not so well recognized. Smokeless tobacco products, especially moist snuff, contain potent carcinogens. Studies have consistently demonstrated a strong association between snuff use and oral cancer (7). Carcinogens in the five most popular U.S. snuff brands include polynuclear aromatic hydrocarbons, radiation-emitting polonium, and a variety of tobacco-specific nitrosamines. Levels of nitrosamines in commercial snuff range from 9,600-289,000 parts/billion (ppb) (9), which are hundreds of times higher than the levels allowed in foods and commercial products (7). Nitrosamines are strictly limited in these products. Bacon and beer, for example, are each limited to 5 ppb, and rubber nipples of baby bottles are limited to 10 ppb of nitrosamines.

Tissue changes have been reported for school-age children who use smokeless tobacco. One study showed that in rural Colorado, 62.5% of teenagers who used smokeless tobacco had lesions described as alterations in texture, color, or contour of the mucosal lining; localized periodontal degeneration; or a combination of the two (10). In the recent Inspector General's survey (3), 39% of regular users of smokeless tobacco reported that they had a white, wrinkled patch (which characterizes leukoplakia, a precancerous condition), and 37% reported some other form of sore, ulcer, blister, or lesion of the gums, lips, or mouth. It has been estimated that from 1% to 18% of all leukoplakias transform to malignancies (7).

*Smokeless Tobacco – Continued*

Smokeless tobacco use may also be associated with a number of other conditions including localized gingival recession, tooth loss, tooth abrasion, and stained teeth.

Exposure to nicotine from smokeless tobacco use is comparable with nicotine exposure from cigarette smoking; therefore, nicotine-related health consequences of smokeless tobacco use may be similar to those of smoking. In addition to addiction, nicotine may contribute to coronary artery and peripheral vascular disease, hypertension, peptic ulcer disease, and fetal morbidity and mortality (11).

The January 1986 National Institutes of Health Consensus Development Conference concerning the health implications of smokeless tobacco use concluded that the use of smokeless tobacco is one of a number of health-endangering behaviors that raise the clear potential for long-term and serious consequences (7).

In 1986, almost 30 years after the Public Health Service's first statement on the health effects of cigarette smoking, a comprehensive review by the Advisory Committee to the Surgeon General on the health consequences of using smokeless tobacco concluded the following:

After a careful examination of the relevant epidemiologic, experimental, and clinical data, the committee concludes that the oral use of smokeless tobacco represents a significant health risk. It is not a safe substitute for smoking cigarettes. It can cause cancer and a number of noncancerous oral conditions and can lead to nicotine addiction and dependence (11).

The Division of Health, Wisconsin Department of Health and Social Services, a) has suggested that preventive and regulatory actions are needed to offset a trend in smokeless tobacco use that may produce increased oral cancer death rates for this generation of young people, and b) has proposed the following measures (12):

- Educational campaigns to increase public awareness of the possible adverse health effects caused by smokeless tobacco use. Students, school officials, coaches, and parents should be informed of these health effects.
- State laws to prohibit sales to minors. Presently, 14 states have no such law.
- Additional excise taxes levied on smokeless tobacco products. Presently, 28 states tax smokeless tobacco products.
- State laws enacted to prohibit free distribution. Only two states have such a law.
- A ban placed on media advertising.
- A requirement for strong health-warning labels.
- Increased awareness of health professionals concerning the effects of smokeless tobacco use. Because a substantial number of pre-adolescent and adolescent males may be regular smokeless tobacco users, oral examinations should be carried out to detect oral lesions.
- Primary prevention programs, as well as cessation programs, need to be developed and implemented.

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## Smokeless Tobacco — Continued

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TABLE I. Summary—cases specified notifiable diseases, United States

Disease	41st Week Ending			Cumulative, 41st Week Ending		
	Oct. 11, 1986	Oct. 12, 1985	Median 1981-1985	Oct. 11, 1986	Oct. 12, 1985	Median 1981-1985
Acquired Immunodeficiency Syndrome (AIDS)	200	271	N	10,091	6,267	N
Aseptic meningitis	270	414	315	7,760	7,854	7,538
Encephalitis						
Primary (arthropod-borne & unspc.)	36	50	54	928	1,002	1,200
Post-infectious	2	2	1	84	106	76
Gonorrhoea						
Civilian	16,710	18,245	18,245	689,025	699,654	708,495
Military	261	196	317	12,965	16,528	19,206
Hepatitis						
Type A	376	539	457	17,281	17,577	17,577
Type B	421	540	431	20,031	20,325	18,727
Non A, Non B	35	75	N	2,706	3,254	N
Unspecified	82	120	137	3,528	4,513	5,727
Legionellosis	13	12	N	553	586	N
Leprosy	6	2	2	200	293	195
Malaria	10	24	13	857	825	825
Measles						
Total*	46	35	23	5,580	2,557	2,372
Indigenous	45	34	N	5,302	2,130	N
Imported	1	1	N	278	427	N
Meningococcal infections						
Total	19	41	41	1,950	1,894	2,182
Civilian	19	41	41	1,948	1,888	2,167
Military	-	-	-	2	6	11
Mumps	93	49	44	3,983	2,384	2,623
Pertussis	117	82	41	2,726	2,599	1,920
Rubella (German measles)	5	5	5	434	571	813
Syphilis (Primary & Secondary)						
Civilian	348	540	540	20,545	21,153	24,150
Military	1	1	9	129	139	309
Toxic Shock syndrome	6	7	N	275	301	N
Tuberculosis	339	427	427	17,185	16,690	18,377
Tularemia	2	6	6	116	150	221
Typhoid fever	4	9	13	236	303	313
Typhus fever, tick-borne (RMSF)	17	13	14	664	620	903
Rabies, animal	81	100	111	4,324	4,276	4,976

TABLE II. Notifiable diseases of low frequency, United States

	Cum 1986		Cum 1986
Anthrax	-	Leptospirosis	27
Botulism	11	Plague	7
Foodborne	40	Poliomyelitis, Paralytic	1
Infant (Wash 1)	1	Psittacosis	77
Other	63	Rabies, human	-
Brucellosis (Ark 1)	2	Tetanus (N.J. 1, Fla. 1)	54
Cholera	9	Trichinosis	30
Congenital rubella syndrome	107	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	37
Congenital syphilis, ages < 1 year	-		
Diphtheria	-		

\*One of the 46 reported cases for this week was imported from a foreign country or can be directly traceable to a known internationally imported case within two generations

TABLE III. Cases of specified notifiable diseases, United States, weeks ending  
October 11, 1986 and October 12, 1985 (41st Week)

Reporting Area	AIDS Cum 1986	Aseptic Mening- itis 1986	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel- losis 1986	Leprosy Cum 1986
			Primary Cum 1986	Post-in- fectious Cum 1986	Cum		A 1986	B 1986	NA,NB 1986	Unspeci- fied 1986		
					1986	1985						
UNITED STATES	10091	270	928	84	689,025	699,654	376	421	35	82	13	200
NEW ENGLAND	432	2	22	3	18,332	18,046	6	35	2	13	3	7
Maine	17	1	-	-	691	908	-	2	1	-	-	-
NH	10	-	2	-	449	450	-	-	-	-	-	-
Vt	4	-	4	2	209	263	1	-	-	-	-	-
Mass	237	1	5	-	7,071	7,339	4	25	1	13	3	7
RI	28	-	-	-	1,401	1,447	-	-	-	-	-	-
Conn	136	-	11	1	8,511	7,639	1	8	-	-	-	-
MID ATLANTIC	3,795	39	87	7	117,506	101,752	21	34	2	18	-	14
Upstate N Y	378	28	33	4	14,426	13,888	15	14	2	1	-	1
NY City	2,595	2	18	-	67,320	50,436	1	6	-	15	-	12
NJ	585	9	10	-	15,283	15,439	5	14	-	2	-	-
Pa	237	-	26	3	20,477	21,989	-	-	-	-	-	1
EN CENTRAL	615	80	280	11	88,657	92,977	18	37	2	3	3	5
Ohio	131	48	108	3	23,223	24,315	4	13	1	1	3	-
Ind	52	9	64	3	10,153	10,043	2	6	-	-	-	-
Ill	296	-	42	4	23,150	22,827	3	5	-	-	-	4
Mich	104	23	45	1	28,886	26,669	9	13	1	2	-	1
Wis	32	-	21	-	3,245	9,123	-	-	-	-	-	-
WN CENTRAL	194	12	63	9	29,929	32,496	13	8	2	-	1	3
Minn	72	-	26	-	4,243	4,790	5	4	1	-	-	1
Iowa	15	2	20	-	3,058	3,503	-	-	-	-	1	-
Mo	66	5	1	-	15,153	15,867	4	3	-	-	-	-
N Dak	2	-	3	-	256	227	-	-	-	-	-	-
S Dak	2	3	11	-	622	630	2	-	1	-	-	-
Nebr	9	-	-	1	2,243	2,689	-	-	-	-	-	-
Ians	28	2	2	8	4,354	4,790	2	1	-	-	-	2
S ATLANTIC	1,349	64	121	31	180,337	182,725	62	125	10	7	4	2
Del	19	2	6	-	3,003	3,492	2	2	-	1	-	-
Md	123	2	27	1	21,182	23,339	6	21	4	-	-	-
DC	170	-	-	1	13,387	12,331	-	6	-	-	-	-
Va	125	16	33	1	14,887	15,336	3	21	1	-	1	1
W Va	7	-	37	-	1,803	2,118	-	4	-	1	-	-
NC	60	11	16	2	27,772	28,333	-	9	3	3	-	-
SC	34	-	-	-	15,688	17,434	-	11	-	-	-	-
Ga	197	10	-	1	30,017	36,154	5	8	1	-	2	-
Fla	614	23	2	25	52,598	44,188	45	43	1	2	1	1
ES CENTRAL	115	23	58	4	55,948	59,628	4	36	2	-	1	1
Ky	25	3	28	1	6,206	6,818	2	8	-	-	-	-
Tenn	53	9	7	1	21,377	22,643	-	13	1	-	-	-
Ala	23	11	22	2	16,199	18,036	1	14	1	-	-	1
Miss	14	-	1	-	12,166	12,131	1	1	-	-	1	-
WS CENTRAL	742	38	140	6	81,845	87,792	77	61	5	25	1	19
Ark	26	-	2	-	7,752	8,543	1	1	-	4	-	1
La	124	5	8	-	14,521	16,958	7	11	-	-	1	1
Okla	27	5	19	-	9,458	9,795	4	3	-	1	-	-
Tex	565	28	113	4	50,114	52,496	65	46	5	20	-	17
MOUNTAIN	257	7	29	1	20,755	21,947	73	36	2	7	-	11
Mont	4	-	1	1	555	597	2	3	-	-	-	-
Wyo	3	-	-	-	688	747	10	-	-	-	-	-
Wyo	4	-	2	-	446	515	-	-	-	-	-	-
Colo	118	1	4	-	5,323	6,403	6	8	-	3	-	3
N Mex	20	-	3	-	2,203	2,200	21	5	-	-	-	-
Ariz	67	6	11	-	6,672	6,650	28	15	2	4	-	5
Utah	13	-	6	-	870	1,013	5	4	-	-	-	1
Nev	28	-	2	-	3,998	3,612	1	1	-	-	-	2
PACIFIC	2,592	5	128	12	95,716	102,291	102	49	8	9	-	138
Wash	119	3	11	-	7,094	7,927	64	33	3	9	-	17
Oreg	49	-	-	-	4,213	5,118	35	13	3	-	-	-
Calif	2,372	U	111	12	81,241	85,476	U	U	U	U	U	91
Alaska	12	-	6	-	2,143	2,375	3	-	1	-	-	-
Hawaii	40	2	-	-	1,025	1,395	-	3	1	-	-	30
Guam	-	-	-	-	158	161	-	-	-	-	-	1
PR	77	3	5	1	1,895	2,542	4	6	-	3	-	7
HI	3	-	-	-	199	348	-	-	-	-	-	-
Ac Trust Terr	-	-	-	-	388	706	1	-	-	-	-	43
Amer Samoa	-	-	-	-	42	-	-	-	-	-	-	2

N Not notifiable

U Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending  
October 11, 1986 or October 12, 1985 (41st Week)

Reporting Area	Malaria Cum 1986	Measles (Rubeola)					Menin- gococcal infections Cum 1986	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total		1986	Cum 1986	1986	Cum 1986	Cum 1985	1986	Cum 1986	Cum 1985
		1986	Cum 1986	1986	Cum 1986	Cum 1985									
UNITED STATES	857	45	5,302	1	278	2,557	1,950	93	3,983	117	2,726	2,599	5	434	571
NEW ENGLAND	55	-	82	-	15	126	136	2	56	-	132	145	-	9	12
Maine	2	-	12	-	1	1	25	-	-	-	2	9	-	-	-
NH	3	-	43	-	-	-	6	-	13	-	68	68	-	1	2
Vt	1	-	-	-	-	-	16	1	4	-	3	3	-	4	6
Mass	31	-	24	-	12	118	32	-	9	-	29	43	-	2	-
RI	7	-	2	-	-	-	19	-	9	-	6	15	-	1	4
Conn	11	-	1	-	2	7	38	1	21	-	24	7	-	-	-
MID ATLANTIC	112	13	1,685	-	33	212	316	4	175	2	172	175	1	33	221
Upstate NY	43	-	77	-	23	106	106	2	58	1	108	93	1	25	117
N Y City	29	13	681	-	4	72	68	-	29	-	10	23	-	5	179
NJ	20	-	905	-	4	28	30	2	43	-	17	7	-	3	11
Pa	20	-	22	-	2	28	112	-	45	1	37	52	-	-	14
E N CENTRAL	56	11	1,042	-	28	533	267	59	2,719	1	318	640	-	44	31
Ohio	18	-	-	-	10	58	106	-	109	-	145	86	-	1	-
Ind	2	6	25	-	11	57	27	-	34	-	26	188	-	-	-
Ill	15	5	689	-	4	299	69	53	2,086	-	32	61	-	33	118
Mich	18	-	59	-	-	60	57	6	275	1	33	43	-	8	10
Wis	3	-	269	-	3	59	8	-	215	-	82	262	-	2	15
W N CENTRAL	27	-	322	-	17	11	91	7	102	99	502	181	-	13	18
Minn	7	-	45	-	4	6	17	-	1	1	49	81	-	1	2
Iowa	1	-	133	-	1	-	11	1	30	-	19	28	-	1	2
Mo	10	-	25	-	6	2	31	-	17	-	18	28	-	1	2
N Dak	-	-	25	-	1	2	-	-	3	-	5	9	-	-	-
S Dak	2	-	-	-	-	-	5	-	1	-	14	3	-	-	-
Nebr	4	-	-	-	-	-	10	-	-	-	7	8	-	-	-
Kans	3	-	94	-	5	1	17	6	50	98	390	24	-	9	14
S ATLANTIC	104	21	647	-	56	319	351	5	199	9	695	464	1	13	21
Del	1	-	1	-	-	-	4	-	-	-	227	1	-	-	-
Md	14	-	26	-	9	107	44	-	18	2	161	267	-	-	-
DC	1	-	-	-	2	27	4	-	-	-	-	-	-	-	-
Va	26	-	36	-	24	28	61	-	37	1	36	17	-	-	-
W Va	4	-	2	-	-	33	3	2	44	-	23	4	-	-	-
NC	5	-	3	-	1	9	58	1	20	-	66	25	-	-	-
SC	6	-	274	-	-	3	33	-	12	-	18	2	-	-	-
Ga	10	-	79	-	14	8	52	-	28	-	122	88	-	-	-
Fla	37	21	226	-	6	104	92	2	40	6	42	60	1	13	21
E S CENTRAL	18	-	58	-	9	7	107	3	35	2	47	49	-	4	10
Ky	5	-	-	-	6	5	24	-	6	-	5	8	-	4	10
Tenn	1	-	55	-	1	1	37	3	24	-	16	19	-	-	-
Ala	8	-	1	-	1	-	33	-	4	2	25	18	-	-	-
Miss	4	-	2	-	1	1	13	-	1	-	1	4	-	-	-
W S CENTRAL	90	-	604	-	38	431	175	11	181	1	217	360	-	63	10
Ark	1	-	276	-	2	-	27	-	7	-	15	14	-	-	-
La	16	-	4	-	-	42	23	-	3	-	13	12	-	-	-
Okla	10	-	37	-	2	1	27	N	N	1	106	154	-	-	-
Tex	63	-	287	-	34	388	98	11	171	-	83	180	-	63	10
MOUNTAIN	31	-	302	-	29	539	96	2	230	1	236	188	-	23	19
Mont	-	-	-	-	8	137	9	-	5	1	15	9	-	2	10
Idaho	1	-	1	-	-	137	4	-	8	-	40	14	-	-	-
Wyo	-	-	-	-	-	5	2	-	-	-	4	-	-	1	10
Colo	8	-	2	-	8	13	16	-	12	-	62	71	-	-	-
N Mex	5	-	33	-	7	6	9	N	N	-	20	11	-	-	-
Ariz	11	-	252	-	6	241	21	2	186	-	56	38	-	2	10
Utah	3	-	12	-	-	-	9	-	13	-	35	45	-	14	10
Nev	3	-	2	-	-	-	26	-	6	-	4	-	-	3	10
PACIFIC	364	-	560	1	53	379	411	-	286	2	407	397	3	232	19
Wash	23	-	139	1†	26	105	56	-	10	1	138	69	1	6	10
Oreg	15	-	7	-	4	5	31	N	N	-	12	40	2	3	10
Calif	325	U	387	U	22	245	303	U	250	U	241	242	U	208	14
Alaska	-	-	-	-	-	-	12	-	6	-	2	29	-	-	-
Hawaii	1	-	27	-	1	24	9	-	20	1	14	17	-	5	10
Guam	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PR	4	-	36	-	1	11	-	-	4	-	-	-	-	3	10
VI	-	-	-	-	-	63	3	1	32	2	15	10	-	60	10
Pac. Trust Terr	-	-	-	-	-	10	-	1	15	-	-	-	-	-	-
Amer Samoa	-	-	2	-	-	-	1	-	11	-	-	-	-	2	10
								1	5					1	10

\*For measles only, imported cases includes both out-of-state and international importations

N Not notifiable U Unavailable † International § Out-of-state

**TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending October 11, 1986 and October 12, 1985 (41st Week)**

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies. Animal
	Cum 1986	Cum 1985	1986	Cum 1986	Cum 1985	Cum 1986	Cum 1986	Cum 1986	Cum 1986
UNITED STATES	20,545	21,153	6	17,185	16,690	116	236	664	4,324
NEW ENGLAND	369	464	-	557	570	1	13	12	8
Maine	15	13	-	34	40	-	-	-	-
NH	10	36	-	23	19	-	-	2	1
Vt	8	6	-	15	7	-	-	-	2
Mass	198	230	-	302	340	1	11	4	-
RI	18	14	-	40	42	-	-	3	3
Conn	120	165	-	143	122	-	2	3	2
MID ATLANTIC	2,943	2,865	-	3,441	3,045	1	21	31	544
Upstate N Y	150	212	-	490	532	-	4	19	71
N Y City	1,669	1,758	-	1,811	1,462	-	9	5	-
N J	515	547	-	589	413	1	7	2	16
Pa	609	348	-	551	638	-	1	5	457
E N CENTRAL	726	806	1	2,086	2,057	-	21	54	118
Ohio	101	115	1	364	353	-	7	48	14
Ind	93	71	-	230	251	-	2	-	17
Ill	351	381	-	877	911	-	3	2	34
Mich	139	187	-	518	426	-	7	4	23
Wis	42	52	-	97	116	-	2	-	30
W N CENTRAL	165	177	2	516	464	34	8	46	677
Minn	28	37	1	120	99	-	1	1	98
Iowa	6	17	-	42	49	1	-	1	154
Mo	89	92	1	258	224	26	6	23	66
N Dak	3	2	-	6	9	-	-	1	138
S Dak	7	5	-	23	25	2	-	6	141
Nebr	11	7	-	12	13	1	-	5	28
Kans	21	17	-	55	45	4	1	9	52
S ATLANTIC	6,268	6,191	2	3,376	3,388	9	39	307	1,041
Del	51	30	-	36	34	-	1	1	1
Md	367	373	-	241	279	2	14	28	508
DC	245	271	1	116	132	1	4	-	28
Va	283	239	-	278	311	2	8	45	158
W Va	18	20	-	97	89	-	3	8	38
NC	405	539	1	464	427	1	4	117	9
SC	540	654	-	432	421	-	-	70	56
Ga	1,188	1,091	-	575	573	3	-	36	162
Fla	3,171	2,974	-	1,137	1,122	-	5	2	81
E S CENTRAL	1,410	1,621	-	1,532	1,450	9	3	91	292
Ky	60	54	-	344	345	3	-	20	80
Tann	495	497	-	452	422	5	1	40	109
Ala	428	513	-	480	439	1	1	18	101
Miss	427	557	-	256	244	-	1	13	2
W S CENTRAL	4,132	4,865	-	2,151	2,101	53	20	114	612
Ark	187	264	-	291	221	37	-	9	138
La	712	857	-	346	303	1	1	-	18
Okla	103	149	-	205	211	10	1	89	55
Tex	3,130	3,595	-	1,309	1,366	5	18	16	401
MOUNTAIN	462	563	-	411	430	7	15	8	581
Mont	6	6	-	24	46	1	1	4	186
Idaho	13	5	-	20	22	-	-	-	8
Wyo	2	7	-	-	5	-	-	-	1
Wyo	107	143	-	34	53	3	1	3	29
N Mex	54	106	-	80	73	1	1	-	6
Ariz	195	251	-	194	192	-	8	-	93
Utah	15	8	-	29	12	1	3	-	6
Nev	70	37	-	30	27	1	1	-	10
PACIFIC	4,070	3,601	1	3,115	3,185	2	96	1	451
Wash	110	90	1	163	185	-	3	-	5
Oreg	91	84	-	107	107	-	-	-	-
Calif	3,842	3,372	U	2,665	2,662	1	88	1	438
Alaska	1	2	-	41	81	1	1	-	8
Hawaii	26	53	-	139	150	-	4	-	-
Guam	1	2	-	34	35	-	1	-	-
P R	716	678	-	281	293	-	5	-	41
VI	1	3	-	1	1	-	-	-	-
Pac Trust Terr	213	100	-	58	61	-	-	-	-
Amer Samoa	-	-	-	5	-	-	46	-	-

U Unavailable

TABLE IV. Deaths in 121 U.S. cities.\* week ending October 11, 1986 (41st Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	623	432	130	41	5	15	42	S ATLANTIC	1,421	863	316	133	51	58	71
Boston, Mass	166	95	41	16	3	11	18	Atlanta, Ga	153	93	30	16	8	6	6
Bridgeport, Conn	38	27	9	2	-	-	2	Baltimore, Md	366	232	85	25	10	14	16
Cambridge, Mass	27	20	5	-	2	-	1	Charlotte, N.C	76	47	17	8	4	-	4
Fall River, Mass	28	20	6	1	-	1	-	Jacksonville, Fla	132	78	34	8	8	4	10
Hartford, Conn	60	36	18	6	-	-	1	Miami, Fla	135	69	29	24	7	6	6
Lowell, Mass	25	13	11	1	-	-	-	Norfolk, Va	62	35	13	7	3	4	6
Lynn, Mass	17	16	1	-	-	-	1	Richmond, Va	95	50	23	12	2	8	9
New Bedford, Mass	18	15	2	1	-	-	1	Savannah, Ga	39	24	8	4	1	2	4
New Haven, Conn	41	31	7	2	-	1	2	St Petersburg, Fla	100	82	11	4	1	2	5
Providence, RI	51	40	11	-	-	-	4	Tampa, Fla	58	39	14	4	1	-	2
Somerville, Mass	6	5	1	-	-	-	1	Washington, D.C	182	98	47	20	5	12	6
Springfield, Mass	49	35	6	7	-	1	3	Wilmington, Del	23	16	5	1	1	-	-
Waterbury, Conn	34	26	4	3	-	1	2								
Worcester, Mass	63	53	8	2	-	-	6	ES CENTRAL	696	459	150	42	22	23	22
	2,461	1,599	505	215	68	74	91	Birmingham, Ala	104	60	27	9	2	6	6
MID ATLANTIC	459	31	9	4	-	5	1	Chattanooga, Tenn	58	43	10	2	1	2	2
Albany, NY	21	17	2	2	-	-	2	Knoxville, Tenn	76	44	18	7	5	2	2
Allentown, Pa	94	59	26	7	1	1	6	Louisville, Ky	97	62	20	5	6	4	4
Buffalo, NY	35	26	7	-	1	1	1	Memphis, Tenn	155	106	35	10	4	-	-
Camden, N.J	29	23	4	1	-	1	2	Mobile, Ala	63	47	11	4	-	1	1
Elizabeth, N.J	26	17	7	2	-	2	2	Montgomery, Ala	44	33	9	2	-	-	-
Erle, Pa †	60	37	13	4	2	4	2	Nashville, Tenn	99	64	20	3	4	8	1
Jersey City, N.J	1,271	819	256	118	37	41	34	WS CENTRAL	1,247	733	305	123	41	43	54
N.Y. City, N.Y	92	42	22	21	4	3	3	Austin, Tex	50	33	8	8	-	1	2
Newark, N.J	25	14	6	3	1	1	1	Baton Rouge, La	44	28	13	1	2	-	-
Paterson, N.J	299	196	66	20	8	9	24	Corpus Christi, Tex	50	34	7	3	1	5	3
Philadelphia, Pa	46	32	7	3	4	-	2	Dallas, Tex	201	102	43	34	10	12	8
Pittsburgh, Pa †	38	30	3	3	-	2	2	El Paso, Tex	80	50	19	5	3	2	3
Reading, Pa	130	86	23	7	9	5	3	Fort Worth, Tex	83	56	16	7	2	2	2
Rochester, N.Y	29	25	2	2	-	-	-	Houston, Tex	305	154	99	29	12	11	8
Schenectady, N.Y	33	28	4	-	1	-	-	Little Rock, Ark	44	30	10	2	1	1	1
Scranton, Pa †	90	56	25	8	-	1	3	New Orleans, La	109	66	27	12	1	3	5
Syracuse, N.Y	48	31	12	5	-	-	-	San Antonio, Tex	165	97	39	18	7	3	5
Trenton, N.J	20	12	6	2	-	-	2	Shreveport, La	36	29	4	1	-	2	2
Utica, N.Y	26	18	5	3	-	-	1	Tulsa, Okla	80	54	20	3	2	1	1
Yonkers, N.Y								MOUNTAIN	597	356	131	51	25	34	25
EN CENTRAL	2,250	1,450	520	148	62	70	99	Albuquerque, N Mex	91	50	26	9	4	2	4
Akron, Ohio	61	42	14	2	2	1	-	Colorado Springs, Colo	36	26	4	2	1	3	3
Canton, Ohio	36	25	10	1	-	-	4	Denver, Colo	104	59	18	9	5	13	4
Chicago, Ill ‡	564	362	125	45	10	22	16	Las Vegas, Nev	91	52	27	7	4	1	1
Cincinnati, Ohio	141	82	39	9	7	4	16	Ogden, Utah	21	14	3	2	-	2	2
Cleveland, Ohio	145	95	34	8	5	3	2	Phoenix, Ariz	91	45	24	13	2	7	3
Columbus, Ohio	134	76	36	10	5	7	11	Pueblo, Colo	13	11	2	-	-	-	-
Dayton, Ohio	109	65	33	7	1	3	4	Salt Lake City, Utah	39	21	8	4	2	4	4
Detroit, Mich	262	156	59	20	15	12	5	Tucson, Ariz	111	78	19	5	7	2	2
Evansville, Ind	43	30	8	2	2	1	2	PACIFIC	1,924	1,216	417	172	72	43	104
Fort Wayne, Ind	59	41	12	3	-	3	1	Berkeley, Calif	24	19	5	-	-	-	-
Gary, Ind	20	11	6	2	1	-	1	Fresno, Calif	76	48	21	1	2	4	4
Grand Rapids, Mich	36	25	8	1	1	1	2	Glendale, Calif §	25	20	3	2	-	-	-
Indianapolis, Ind	173	114	40	9	5	5	6	Honolulu, Hawaii	79	55	17	2	1	4	4
Madison, Wis	54	37	9	7	-	1	2	Long Beach, Calif	78	57	14	2	2	3	3
Milwaukee, Wis	148	108	27	9	3	1	7	Los Angeles, Calif §	557	336	116	71	23	7	13
Peoria, Ill	48	30	10	3	2	3	5	Oakland, Calif	77	48	15	6	7	1	1
Rockford, Ill	40	28	7	3	1	1	6	Pasadena, Calif	33	23	6	2	1	1	1
South Bend, Ind	48	33	13	1	-	1	3	Portland, Ore	117	76	28	7	2	4	4
Toledo, Ohio	76	52	18	3	2	1	7	Sacramento, Calif	145	93	28	11	10	3	12
Youngstown, Ohio	53	38	12	3	-	-	-	San Diego, Calif	125	75	26	14	6	4	6
WS CENTRAL	815	575	154	40	23	23	29	San Francisco, Calif	154	79	41	26	2	6	17
Des Moines, Iowa	63	41	15	2	4	1	4	San Jose, Calif	188	121	44	14	6	3	3
Duluth, Minn	32	25	5	1	-	1	1	Seattle, Wash	135	95	27	7	5	1	1
Kansas City, Kans	38	22	9	4	2	1	-	Spokane, Wash	70	47	14	5	4	-	-
Kansas City, Mo	106	71	24	5	1	5	7	Tacoma, Wash	41	24	12	2	1	2	2
Lincoln, Nebr	51	36	9	3	-	3	2	TOTAL	12,034	7,683	2,628	965	369	383	411
Minneapolis, Minn	173	121	32	8	6	6	2								
Omaha, Nebr	83	59	16	4	4	-	4								
St Louis, Mo	133	99	20	7	5	2	2								
St Paul, Minn	65	54	7	1	1	2	1								
Wichita, Kans	71	47	17	5	-	2	6								

\* 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

§ Data not available. Figures are estimates based on average of past 4 weeks.

Epidemiologic Notes and Reports**Update: *Aedes albopictus* Infestation — United States**

In August 1985, an infestation of *Aedes albopictus* ("Asian Tiger Mosquito"), an exotic mosquito known to transmit epidemic dengue fever in its native Asia, was discovered in Harris County, Texas. *Ae. albopictus* has been shown in the laboratory to be capable of efficiently transmitting dengue and several other viruses (including California [LaCrosse] encephalitis virus) that can infect humans and are indigenous to the United States. In the spring of 1986, efforts were begun to determine the distribution of this mosquito vector in the United States. The most recent survey for *Ae. albopictus* breeding was conducted September 15-29 in Ohio, Indiana, Illinois, Missouri, Kentucky, and Arkansas. Sites inspected were the business premises of tire dealers and re-treaders, because the mosquito commonly breeds in standing water found in tires stored outdoors on their sides. *Ae. albopictus* larvae were found in at least one location in two of 10 counties surveyed in Illinois, two of 16 in Indiana, three of 11 in Missouri, and one of seven in Arkansas; none were found in the Kentucky survey. In early September, a single positive site had been discovered by the Ohio Department of Health in Darke County; no further breeding was found during surveys in five other Ohio counties. Oviposition trap surveillance also has provided evidence for an infestation in San Antonio, Texas. Figure 1 shows the present distribution of *Ae. albopictus*-positive counties.

To determine the mode of introduction and to characterize the risk of further introduction, CDC has conducted inspections of used auto and truck tires entering United States ports from Asia, the source of several million used tires each year. For example, in 1985, a total of 3.2 million used tires were imported, of which 2.8 million came from Asian countries with indigenous *Ae. albopictus* populations, including 890,000 from Japan.

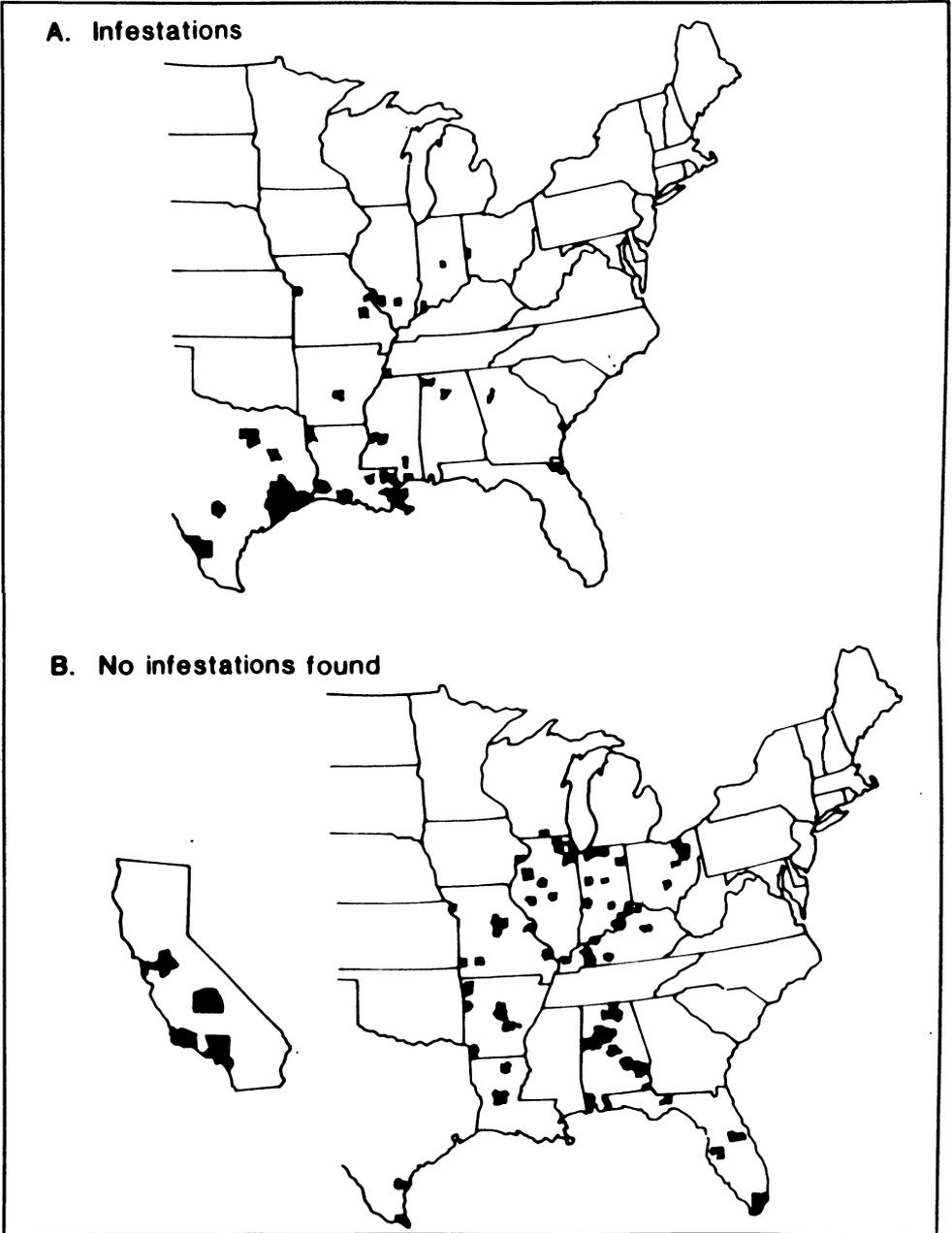
On October 6-7, 1986, inspectors checked 2,613 tires in nine cargo containers originating in Japan and off-loaded in Seattle, Washington; *Ae. albopictus* larvae were found in 11 tires in two of the cargo containers. The two positive containers had a higher proportion of tires (91%) holding water than did the negative containers (17%). Both positive containers were shipped by the same exporter in Japan. The positive containers were fumigated with methyl bromide to kill larvae and ova. Although tire shipments originating in Japan have been inspected since June, the October shipment was the first one found to be infested.

*Reported by E Roberts, Barberton Health Dept, D Somers, Cuyahoga County Health Dept, K Mizer, Stark County Health Dept, M Parsons, R Berry, E Peterson, Ohio State Health Dept; G Craig, W Hawley, K Rai, P Grimstad, Notre Dame University, C Dulla, S Brewer, J Erwin, Marion County Health Dept, D Harvey, Clark County Health Dept, C Mayfield, M Galbraith, Bartholomew County Health Dept, M Sinsko, PhD, B Foster, E McDonald, V Dunn, Indiana State Board of Health; J Nielsen, Louisville-Jefferson County Health Dept, G Moorer, Lexington-Fayette County Health Dept, C Gayle, Kentucky Dept of Agriculture; H Meyer, City of St. Louis Health Division, W Willey, W Kottkamp, St. Louis County Health Dept, H Bengsch, J Boles, Springfield-Greene County Health Dept, J Hounschell, City of Joplin Dept of Health and Welfare, C Lansford, Jefferson City Dept of Planning and Code Enforcement, C Sanders, City of Columbia-Boone County Dept of Health, A Thomas, Kansas City Health Dept, F Unnewehr, R Tanner, R Field, R Larkam, Missouri State Health Dept; H Dominic, L Haramis, PhD, Illinois Dept of Public Health; E Swearingen, Jr., Ft. Smith-Sebastian County Dept of Public Health; D Harmon, Area 1 Headquarters, Arkansas State Health Dept; M Meisch, PhD, D Bassi, A Weathersbee, M Riggs, Dept of Entomology, University of Arkansas, D Purifoy, Miller County Health Dept, M Townsend, Jefferson County Health Unit, H Spatz, Faulkner County Health Unit, D Edwards, T Reid, North Little Rock Health Dept, W Teer, R Neill, K Free, Arkansas State Health Dept; Div of Vector-Borne Viral Diseases, Center for Infectious Diseases, CDC.*

**Editorial Note:** The recent surveys described above confirm the presence of *Ae. albopictus* in northern areas of the Ohio-Mississippi Valley, an area in which California (LaCrosse)

*Aedes albopictus* Infestation — Continued

FIGURE 1. Counties\* with and without *Aedes albopictus* infestation — United States, September 30, 1986



\*Where one or more tire-related businesses were inspected.

*Aedes albopictus* Infestation — Continued

encephalitis is known to be endemic. Because laboratory studies have shown that *Ae. albopictus* is capable of entering diapause (1), it is expected that these populations will successfully overwinter and resume breeding activity in the spring. In the summer of 1987, investigations should be conducted to determine the role of *Ae. albopictus* in transmission of California-group viruses—especially LaCrosse encephalitis—in the Central United States.

The evidence suggests that the *Ae. albopictus* infestation of the northern United States has occurred relatively recently, since only seven (13%) of 53 counties sampled were infested in Ohio, Indiana, Illinois, Kentucky, Missouri, and Wisconsin, compared with 31 (89%) of 35 counties sampled in the area of the United States already known to be infested by this mosquito (Texas, Louisiana, and Mississippi). Efforts to control/prevent the spread of *Ae. albopictus* in the northern states will become an even greater concern as mosquito breeding resumes next spring.

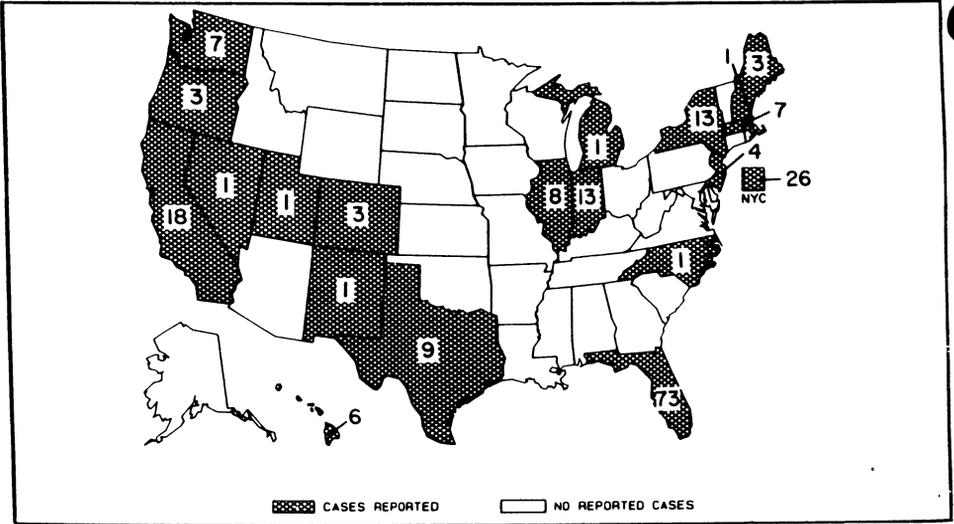
The finding of infested used tires in Washington State indicates a need for further evaluation of the hypothesis that importation of tires from Asia represents a possible source of the original infestation in the United States. CDC is currently reviewing options for preventing further introduction of *Ae. albopictus*.

*Reference*

1. Craig GB. University of Notre Dame. Personal communication.

**NOTE:** As of October 1, 1986, the text of each week's issue of the *Morbidity and Mortality Weekly Report (MMWR)*, which has been available through CDC's Rapid Information Transmittal System (RITS), will no longer be available on that system. Persons who wish to obtain the *MMWR* text electronically must do so through Medical Information Network (MINET). For additional information about MINET, contact Ms. Joan Kennedy, Information Resources Management Office, Centers for Disease Control, Atlanta, GA 30333; phone: (404) 329-3396, FTS 236-3396.

**FIGURE I. Reported measles cases — United States, weeks 37-40, 1986**



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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.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

Director, Centers for Disease Control James O. Mason, M.D., Dr.P.H. Director, Epidemiology Program Office Carl W. Tyler, Jr., M.D.	Editor Pro Tem Richard A. Goodman, M.D., M.P.H.
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