CENTERS FOR DISEASE CONTROL

November 18, 1983 / Vol. 32 / No. 45

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Occupational Finger Injuries — United States, 1982

The National Institute for Occupational Safety and Health, in collaboration with the Consumer Product Safety Commission, surveys occupational injuries treated at a representative sample of hospital emergency rooms in the United States (*1,2*). These data permit estimates of the number of persons treated for occupational injuries, secular trends in incidence, anatomical site of the injury, rates of injury by age and sex (in conjunction with data on employment) (*3*), and other epidemiologic indices.

From January 1, to December 31, 1982, an estimated 3,199,359 patients with occupational injuries were treated in hospital emergency rooms in the United States (Table 1). Of these, an estimated 823,343 (25.7%) were treated for finger injuries. Of the 823,343, an estimated 13,500 (1.6%) suffered amputation of one or more fingers.

Estimated incidence rates for occupational finger injuries, based on estimated numbers of persons injured per "100 person work years"* by sex and age, were also calculated (Table 2).

*Two thousand person-hours constitutes "1 person work year."

TABLE 1. Estimated numbers of patients with occupational injuries treated in hospital emergency rooms and proportional distribution by part of body injured — United States, 1982

Part of body injured	Total	Percentage
Head/neck	157,739	4.9
Face	437,357	13.7
Arm	196,781	6.2
Wrist	109,858	3.4
Hand	306,049	9.6
Finger	823,343	25.7
Trunk	510,198	16.0
Leg	245,879	7.7
Ankle	121,416	3.9
Foot	158,119	4.9
Toe	64,939	2.0
Multiple sites	66,284	2.1
Not stated/ unknown	1,397	0.0
Total	**3,199,359**	**100.0**

National Electronic Injury Surveillance System, Consumer Product Safety Commission.

Finger Injuries – Continued

Although the differences between groups varied widely, the overall ratio of injury incidence rates for males to injury incidence rates for females approximates 1.5.

Available information on the nature of the injury and the agent or source causing the injury permits listing by nature and source, which provides some understanding of the epidemiology of these injuries. The 10 listings of nature and source observed most commonly in occupational finger injuries account for 37.8% of all such injuries (Table 3). Lacerations caused by knives were the most frequent single cause, accounting for more than 10% of occupational injuries to fingers, followed by puncture wounds from hypodermic needles.

Reported by Div of Safety Research, National Institute for Occupational Safety and Health, CDC.

Editorial Note: These surveillance data emphasize the immensity of the problem of occupational injuries. Because the National Electronic Injury Surveillance System (NEISS) through which these data were collected includes neither patients seen in industrial clinics nor physicians' offices, the estimates produced are underestimates. It is not unreasonable to assume that, if all sources of care were included in the reporting system, a million or more workers were treated for significant finger injuries in 1982. The young male worker appears to be at highest risk; rates for those under 20 years of age are five to six times higher than rates for workers over 35 years of age. Among young workers, rates for males far exceed those for females, although rates by sex are similar for persons in age groups 35 to 64 years.

Available information about the nature and source of these injuries confirms that they occur in a wide array of industries, including construction, food processing, health-care delivery, and transportation. Hypodermic needles, knives, slicers, and/or choppers account for nearly 22% of all occupational finger injuries. Since these objects are specifically designed and used to puncture or cut, efforts to find measures for preventing these injuries pose a special challenge. These observations indicate the need for descriptive epidemiologic investigations of occupational injuries to formulate appropriate and effective means of prevention.

References

1. CDC. Occupational injury surveillance—United States. MMWR 1981;30:578-9.

TABLE 2. Estimated incidence,* by age and sex,† of patients with occupational finger injuries treated in hospital emergency rooms – United States, 1982

Age of worker (years)	Rates of occupational finger* injury		
	Male	Female	Total
< 20	3.2	1.4	2.4
20-24	2.1	1.0	1.6
25-34	1.1	0.7	0.9
35-44	0.6	0.5	0.6
45-54	0.5	0.4	0.5
55-59	0.4	0.4	0.4
60-64	0.4	0.3	0.4
≥ 65	0.3	0.2	0.2
Overall rates†	**1.0**	**0.6**	**0.8**

*Injuries per 100 "person work years" of exposure; 2,000 person-hours constitutes "1 person work year." Source for monthly employment in person-hours is Bureau of Labor Statistics, *Employment and Earnings* (3).

†Sex-specific totals exclude an estimated 1,000 treated occupational finger injuries sustained by employees of unspecified sex.

Finger Injuries — Continued

2. CDC. Surveillance of occupational injuries treated in hospital emergency rooms—United States. MMWR 1983;32:89-90.
3. Bureau of Labor Statistics. Employment and earnings series. Washington, D.C.: U.S. Department of Labor, 1982;29.

TABLE 3. Most frequent finger injuries among patients with occupational injuries treated in hospital emergency rooms, by source and nature of injury — United States, 1982

Rank	Source of injury	Nature of injury	Estimated no. of cases	Percentage
1	Knife	Laceration	85,900	10.4
2	Hypodermic needle	Puncture	77,200	9.4
3	Industrial equipment	Laceration	43,700	5.3
4	Metal part	Laceration	29,000	3.5
5	Slicer or chopper	Laceration	16,000	1.9
6	Industrial equipment	Contusion, abrasion	15,700	1.9
7	Motor vehicle	Laceration	13,000	1.6
8	Industrial equipment	Fracture	12,300	1.5
9	Construction material, not elsewhere classified	Laceration	8,800	1.1
10	Glass piece or part, unknown origin	Laceration	8,400	1.0
Subtotal			310,200	37.7
All other finger injuries			513,143	62.3
Total			**823,343**	**100.0**

Epidemiologic Notes and Reports

Mycobacterium chelonei Infections Following Eye Surgery — Texas

In December 1982, the Texas Department of Health (TDH) received reports that two patients from different parts of the state had *Mycobacterium chelonei* eye infections following dacryo-cysto-rhinostomy (DCR) and implantation of silicon tubing from a canaliculus intubation set. After the report of these cases in *Texas Preventable Disease News* in May 1983, two additional cases of *M. chelonei* eye infections were reported.

Case 1: In April 1981, a 52-year-old woman from southern Texas with chronic tearing of both eyes of several years' duration underwent DCR on the left eye and opening of the punctum on the right. Adequate tear drainage was immediately achieved in the left eye; tearing on the right eventually resumed. On September 16, 1982, she underwent a DCR on the right side and implantation of a Guibor* silicon tube. Anesthesia included 10% cocaine and 2% xylocaine. An ointment composed of dexamethazone, neomycin, and polymyxin B was applied to the incision and the eye after surgery.

Before surgery, the patient frequently had "puffy eyelids," reportedly related to allergic sinusitis. Therefore, when she developed puffy eyelids after surgery, they were attributed to sinusitis, and as a result, a specimen for culture was not obtained until November 12, 1982. The culture yielded *M. chelonei* subspecies *abscessus* susceptible to kanamycin, amikacin,

Mycobacterium chelonei *Infections – Continued*

cefoxitin, and minocycline. The infection resolved after treatment with amikacin, and the tube was removed on May 9, 1983.

Case 2: An 89-year-old woman from central Texas had recurrent dacryocystitis of 3 years' duration in the left eye. Repeated cultures of the eye yielded *Staphylococcus aureus*. The patient had undergone DCRs in April 1979 and August 1981 to relieve chronic staphylococcal conjunctivitis and dacryocystitis. On May 15, 1982, she underwent a revision of the previous DCR under general anesthesia; the brand name of the implanted tube was not recorded. The patient was discharged with prescriptions for dicloxacillin, tobramycin, and bacitracin ointment. In early November, purulent drainage from the left eye developed. A specimen for culture taken November 10 yielded *M. chelonei* subspecies *abscessus* which was susceptible to kanamycin, amikacin, and cefoxitin. The infection resolved following treatment with topical tobramycin and oral erythromycin. The implanted material has not been removed.

Case 3: A 78-year-old woman from northeastern Texas had a history of chronic conjunctivitis and bilateral occluded lacrimal ducts. Cultures of the lid margins and conjunctivae yielded *Staphylococcus epidermidis*. On March 1, 1983, she underwent a bilateral DCR under

(Continued on page 597)

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

Disease	45th Week Ending			Cumulative, 45th Week Ending		
	November 12, 1983	November 13, 1982	Median 1978-1982	November 12, 1983	November 13, 1982	Median 1978-1982
Aseptic meningitis	245	228	215	10,477	8,272	7,303
Encephalitis: Primary (arthropod-borne & unspec.)	15	26	28	1,507	1,368	1,056
Post-infectious	-	1	2	66	70	190
Gonorrhea: Civilian	17,240	15,904	19,202	778,113	828,957	870,298
Military	580	580	580	21,091	22,977	23,905
Hepatitis: Type A	423	484	488	18,892	19,734	24,470
Type B	408	435	422	19,663	18,702	15,598
Non A, Non B	60	47	N	2,886	2,081	N
Unspecified	130	162	218	6,799	7,465	8,984
Legionellosis	9	19	N	604	525	N
Leprosy	5	7	2	208	181	181
Malaria	8	15	15	696	931	931
Measles: Total*	1	27	51	1,366	1,511	12,673
Indigenous	1	N	N	1,105	N	N
Imported	-	N	N	261	N	N
Meningococcal infections: Total	40	65	53	2,387	2,632	2,333
Civilian	40	65	52	2,372	2,618	2,316
Military	-	-	-	15	14	17
Mumps	66	62	132	2,891	4,694	7,748
Pertussis	29	72	30	1,986	1,526	1,486
Rubella (German measles)	14	15	19	887	2,150	3,484
Syphilis (Primary & Secondary): Civilian	548	503	540	28,073	28,482	23,542
Military	2	9	5	342	387	272
Toxic-shock syndrome	5	N	N	334	N	N
Tuberculosis	416	474	475	20,204	21,977	23,533
Tularemia	4	2	2	274	233	196
Typhoid fever	3	7	11	394	345	453
Typhus fever, tick-borne (RMSF)	7	5	6	1,132	936	1,014
Rabies, animal	58	107	94	5,237	5,514	5,514

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1983		Cum. 1983
Anthrax	-	Plague	36
Botulism: Foodborne (Mich. 2, Md. 1)	17	Poliomyelitis: Total	5
Infant	53	Paralytic	5
Other	2	Psittacosis (Mass. 1)	103
Brucellosis	159	Rabies, human	2
Cholera	1	Tetanus (Oreg. 1)	65
Congenital rubella syndrome	20	Trichinosis	31
Diphtheria	3	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	43
Leptospirosis (Mo. 1)	42		

*There were no cases of internationally imported measles reported for this week.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 12, 1983 and November 13, 1982 (45th week)

Reporting Area	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy	Malaria
		Primary	Post-infectious			A	B	NA,NB	Unspecified			
	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1982	1983	1983	1983	1983	1983	Cum. 1983	Cum. 1983
UNITED STATES	245	1,507	66	778,113	828,957	423	408	60	130	9	208	696
NEW ENGLAND	12	60	-	20,275	19,960	2	20	4	7	2	3	34
Maine	-	-	-	990	1,034	-	-	1	-	-	-	1
N.H.	-	5	-	631	678	-	1	-	-	-	2	2
Vt	-	1	-	384	371	-	1	-	-	-	-	1
Mass.	3	30	-	8,540	8,963	1	5	-	6	-	-	14
R.I.	-	1	-	1,112	1,327	-	-	-	-	-	-	4
Conn.	9	23	-	8,618	7,587	1	13	3	1	2	1	12
MID ATLANTIC	24	113	6	98,446	104,701	28	37	3	11	-	25	95
Upstate N.Y.	8	31	-	16,291	17,202	5	13	-	4	-	-	28
N.Y. City	7	10	-	39,231	42,915	15	3	-	2	-	24	25
N.J.	9	17	1	18,714	19,105	8	21	3	5	-	-	24
Pa	U	55	5	24,210	25,479	U	U	U	U	U	1	18
E.N. CENTRAL	38	535	20	110,810	117,880	28	42	2	6	4	6	52
Ohio	4	182	9	29,476	31,292	5	14	1	2	3	1	9
Ind	-	177	1	10,904	14,043	1	3	-	-	-	-	7
Ill	-	17	7	30,173	33,763	7	5	1	-	-	2	16
Mich	34	108	-	30,163	28,308	15	20	-	4	1	3	15
Wis	-	51	3	10,094	10,474	-	-	-	-	-	-	5
W.N. CENTRAL	9	144	10	36,124	39,162	28	19	1	2	2	6	27
Minn	-	48	1	5,131	5,681	4	3	-	-	-	4	8
Iowa	2	56	-	4,067	4,134	-	4	-	-	-	-	3
Mo	2	29	-	17,243	18,621	2	7	1	2	2	1	5
N. Dak	-	4	-	395	510	-	-	-	-	-	-	2
S. Dak	-	1	2	915	1,029	21	-	-	-	-	-	1
Nebr	5	4	-	2,410	2,321	-	4	-	-	-	-	2
Kans	-	2	7	5,963	6,866	1	1	-	-	-	1	6
S. ATLANTIC	60	210	15	202,214	218,203	19	85	11	7	-	12	117
Del	-	1	-	3,694	3,591	-	2	-	-	-	-	1
Md	7	21	-	26,075	27,238	4	9	5	1	-	1	23
D.C.	2	-	-	13,864	13,027	-	3	-	-	-	-	16
Va	3	50	2	18,391	17,512	-	11	2	1	-	1	28
W. Va	2	45	-	2,228	2,432	-	1	-	-	-	-	3
N.C.	11	45	-	31,480	34,908	-	6	-	2	-	2	3
S.C.	3	5	-	18,772	20,887	-	10	-	-	-	-	6
Ga	3	7	1	41,019	42,953	2	19	-	-	-	1	9
Fla	29	36	12	46,691	55,655	13	24	4	3	-	7	28
E.S. CENTRAL	26	65	1	65,459	71,808	21	28	1	1	-	-	14
Ky.	19	15	-	7,752	9,804	17	4	-	1	-	-	2
Tenn.	4	18	-	26,749	28,334	2	13	1	-	-	-	-
Ala.	3	24	-	20,271	20,840	-	10	-	-	-	-	7
Miss.	-	8	1	10,687	12,830	2	1	-	-	-	-	5
W.S. CENTRAL	12	147	2	110,252	113,695	115	36	1	47	1	30	59
Ark.	-	9	-	8,627	9,345	1	3	-	2	-	-	1
La.	2	17	-	21,693	20,508	5	3	1	-	-	1	8
Okla.	5	29	1	12,618	12,549	15	4	-	6	1	-	10
Tex.	5	92	1	67,314	71,293	94	26	-	39	-	29	40
MOUNTAIN	6	71	4	24,983	28,101	42	18	7	4	-	12	25
Mont.	-	2	-	1,035	1,178	1	-	-	-	-	-	-
Idaho	-	1	-	1,115	1,329	10	-	-	-	-	-	2
Wyo.	-	2	-	659	841	3	1	1	-	-	-	1
Colo.	4	43	-	6,991	7,474	7	6	1	-	-	2	9
N. Mex.	-	2	-	3,056	3,882	5	-	-	-	-	-	5
Ariz.	2	11	4	7,103	7,378	8	7	1	4	-	9	5
Utah	-	10	-	1,200	1,387	1	2	3	-	-	1	3
Nev.	-	-	-	3,824	4,632	7	2	1	-	-	-	-
PACIFIC	58	162	8	109,550	115,447	140	123	30	45	-	114	273
Wash.	4	13	1	8,269	9,969	4	5	4	3	-	15	14
Oreg.	-	-	4	5,862	6,853	27	8	2	-	-	1	11
Calif.	49	141	3	90,497	93,418	109	108	24	42	-	65	245
Alaska	-	-	-	2,871	2,975	-	1	-	-	-	-	-
Hawaii	5	8	-	2,051	2,232	-	1	-	-	-	33	3
Guam	U	-	-	103	123	U	U	U	U	U	-	2
P.R.	-	1	1	2,365	2,336	1	10	-	7	-	-	2
V.I.	-	-	-	249	243	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	388	U	U	U	U	U	-	-

U Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 12, 1983 and November 13, 1982 (45th week)

Reporting Area	Measles (Rubeola)					Menin-gococcal Infections	Mumps			Pertussis			Rubella		
	Indigenous		Imported*		Total										
	1983	Cum. 1983	1983	Cum. 1983	Cum. 1982	Cum. 1983	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982
UNITED STATES	1	1,105	-	261	1,511	2,387	66	2,891	4,694	29	1,986	1,526	14	887	2,150
NEW ENGLAND	-	5	-	15	14	127	3	130	175	-	67	50	-	15	18
Maine	-	-	-	-	-	9	1	21	41	-	5	4	-	-	-
N.H.	-	-	-	3	3	6	-	24	18	-	9	4	-	4	10
Vt.	-	-	-	-	2	10	-	15	7	-	8	2	-	5	-
Mass.	-	4	-	4	3	40	1	38	72	-	35	24	-	6	2
R.I.	-	-	-	-	-	9	1	16	16	-	5	11	-	-	1
Conn.	-	1	-	8	6	53	-	16	21	-	5	5	-	-	5
MID ATLANTIC	-	74	-	42	164	400	7	242	307	1	345	417	-	142	103
Upstate N.Y.	-	5	-	11	112	127	4	96	81	-	114	241	-	30	49
N.Y. City	-	43	-	27	42	73	2	35	47	1	53	39	-	86	35
N.J.	-	26	-	1	6	68	1	45	51	-	19	22	-	3	18
Pa.	U	-	U	3	4	132	U	66	128	U	159	115	U	23	1
E.N. CENTRAL	-	648	-	58	77	427	23	1,302	2,399	7	414	322	3	121	194
Ohio	-	72	-	15	1	127	2	554	1,602	6	144	88	-	2	2
Ind.	-	402	-	4	2	50	8	46	40	1	55	22	2	25	29
Ill.	-	172	-	33	24	127	-	149	286	-	113	148	-	51	71
Mich.	-	2	-	5	50	77	13	473	350	-	39	26	1	17	49
Wis.	-	-	-	1	-	46	-	80	121	-	63	38	-	26	43
W.N. CENTRAL	-	1	-	7	49	143	1	159	600	3	122	78	-	41	60
Minn.	-	1	-	-	-	25	-	28	450	3	47	34	-	9	6
Iowa	-	-	-	-	-	17	1	41	45	-	6	8	-	-	-
Mo.	-	-	-	1	2	66	-	21	11	-	15	16	-	-	38
N. Dak.	-	-	-	-	-	4	-	1	-	-	2	-	-	-	-
S. Dak.	-	-	-	-	-	4	-	-	1	-	8	6	-	-	1
Nebr.	-	-	-	-	3	5	-	4	1	-	2	1	-	-	-
Kans.	-	-	-	6	44	22	-	64	92	-	42	13	-	32	15
S. ATLANTIC	-	173	-	31	130	497	11	213	284	3	227	255	-	97	90
Del.	-	-	-	-	-	11	-	8	12	-	5	6	-	-	1
Md.	-	6	-	4	3	49	2	43	30	-	17	67	-	3	34
D.C.	-	-	-	-	1	5	-	-	-	-	-	1	-	-	-
Va.	-	10	-	13	14	74	1	34	38	-	50	28	-	3	12
W. Va.	-	-	-	-	3	2	4	53	98	-	9	10	-	-	3
N.C.	-	-	-	1	1	100	1	13	20	1	28	45	-	10	2
S.C.	-	-	-	4	-	49	3	14	17	1	14	16	-	1	1
Ga.	-	8	-	-	-	77	-	48	23	-	61	38	-	13	16
Fla.	-	149	-	9	108	130	N	-	46	1	43	44	-	67	21
E.S. CENTRAL	-	1	-	5	9	140	2	56	60	-	34	49	2	19	47
Ky.	-	-	-	1	1	29	-	21	20	-	14	5	2	18	29
Tenn.	-	-	-	-	6	48	2	29	23	-	9	26	-	-	2
Ala.	-	1	-	4	2	41	-	2	9	-	5	5	-	1	-
Miss.	-	-	-	-	-	22	-	4	8	-	6	13	-	-	16
W.S. CENTRAL	1	40	-	35	153	251	7	244	214	11	435	95	1	124	117
Ark.	-	5	-	8	-	19	-	2	7	2	22	3	-	-	1
La.	1	1	-	25	2	48	-	45	6	-	12	21	-	13	1
Okla.	-	1	-	-	30	32	N	-	-	7	310	6	-	-	3
Tex.	-	33	-	2	121	152	7	197	201	2	91	65	1	111	112
MOUNTAIN	-	1	-	17	29	104	2	161	105	-	215	67	-	33	83
Mont.	-	-	-	3	-	21	-	6	5	-	1	1	-	6	5
Idaho	-	1	-	10	-	8	-	8	4	-	15	12	-	8	6
Wyo.	-	-	-	-	1	2	-	3	2	-	6	3	-	4	7
Colo.	-	-	-	3	8	34	1	47	18	-	133	19	-	1	6
N. Mex.	-	-	-	-	-	7	N	-	-	-	14	7	-	-	6
Ariz.	-	-	-	1	17	19	1	84	49	-	24	21	-	6	16
Utah	-	-	-	-	3	12	-	8	20	-	22	4	-	7	25
Nev.	-	-	-	-	-	1	-	5	7	-	-	-	-	1	12
PACIFIC	-	162	-	51	886	298	10	384	550	4	127	193	8	295	1,438
Wash.	-	1	-	20	42	44	-	43	76	-	16	29	-	12	38
Oreg.	-	8	-	2	16	51	N	-	-	1	9	27	-	14	6
Calif.	-	152	-	27	822	194	9	307	443	3	95	109	8	267	1,381
Alaska	-	-	-	2	1	2	1	15	11	-	4	-	-	1	5
Hawaii	-	1	-	-	5	7	-	19	20	-	3	28	-	1	8
Guam	U	1	U	1	6	1	U	1	5	U	-	-	U	-	2
P.R.	-	94	-	-	175	11	1	124	90	-	13	21	1	7	12
V.I.	-	-	-	5	-	-	-	-	4	-	-	-	-	2	2
Pac. Trust Terr.	U	-	U	-	1	-	U	-	6	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 III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 12, 1983 and November 13, 1982 (45th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1983	Cum. 1982	1983	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983
UNITED STATES	28,073	28,482	5	416	20,204	274	394	1,132	5,237
NEW ENGLAND	604	514	-	12	616	4	17	6	36
Maine	19	7	-	-	32	-	-	-	8
N.H.	21	5	-	-	31	-	-	1	5
Vt.	3	4	-	1	12	-	-	-	2
Mass.	384	347	-	5	327	3	13	2	14
R.I.	19	22	-	-	50	1	1	-	1
Conn.	158	129	-	6	164	-	3	3	6
MID ATLANTIC	3,591	3,844	-	77	3,622	1	69	26	218
Upstate N.Y.	268	407	-	21	619	1	10	6	70
N.Y. City	2,134	2,269	-	38	1,415	-	25	2	-
N.J.	713	563	-	18	757	-	28	8	24
Pa.	476	605	U	U	831	-	6	10	124
E.N. CENTRAL	1,439	1,672	1	55	2,748	4	60	80	449
Ohio	391	268	1	9	434	-	18	41	59
Ind.	106	181	-	9	307	-	4	14	30
Ill.	660	880	-	21	1,173	1	27	16	232
Mich.	204	257	-	14	689	1	10	7	19
Wis.	78	86	-	2	145	2	1	2	109
W.N. CENTRAL	337	480	1	9	615	83	11	61	736
Minn.	128	116	-	1	136	-	2	-	128
Iowa	21	29	-	-	53	-	-	-	180
Mo.	123	262	-	5	301	57	8	32	94
N. Dak.	2	7	1	-	6	-	-	1	77
S. Dak.	11	2	-	-	35	8	-	5	119
Nebr.	15	14	-	1	21	8	-	3	62
Kans.	37	50	-	2	63	10	1	20	76
S. ATLANTIC	7,703	7,794	2	68	4,071	13	55	473	1,893
Del.	31	21	-	2	55	-	-	4	5
Md.	515	428	2	13	324	5	8	39	708
D.C.	331	413	-	-	164	-	3	-	137
Va.	514	544	-	12	430	1	15	63	581
W. Va.	24	28	-	-	123	-	2	12	111
N.C.	755	632	-	5	611	6	4	204	26
S.C.	493	488	-	-	381	-	2	80	36
Ga.	1,353	1,624	-	14	729	1	2	65	191
Fla.	3,687	3,616	-	22	1,254	-	19	6	98
E.S. CENTRAL	1,890	1,969	-	59	1,816	18	10	106	342
Ky.	156	119	-	8	473	1	3	22	78
Tenn.	512	553	-	22	539	12	2	49	183
Ala.	745	742	-	6	459	-	2	24	81
Miss.	477	555	-	23	345	5	3	11	-
W.S. CENTRAL	7,210	7,481	-	58	2,429	113	53	365	942
Ark.	171	186	-	10	297	69	2	43	153
La.	1,497	1,627	-	28	342	5	3	1	34
Okla.	180	161	-	4	226	31	2	226	96
Tex.	5,362	5,507	-	16	1,564	8	46	95	659
MOUNTAIN	584	724	-	12	542	32	18	13	227
Mont.	7	5	-	-	42	5	1	6	66
Idaho	7	25	-	-	27	2	-	2	16
Wyo.	12	16	-	-	11	5	-	2	11
Colo.	142	188	-	4	77	10	1	-	32
N. Mex.	158	170	-	4	99	3	1	-	13
Ariz.	148	200	-	4	222	1	13	1	36
Utah	21	21	-	-	33	5	1	1	10
Nev.	89	99	-	-	31	1	1	1	43
PACIFIC	4,715	4,004	1	66	3,745	6	101	2	394
Wash.	163	150	-	-	205	2	4	-	2
Oreg.	126	96	-	9	163	2	3	-	1
Calif.	4,344	3,646	1	52	3,106	2	91	2	376
Alaska	12	15	-	-	65	-	-	-	15
Hawaii	70	97	-	5	206	-	3	-	-
Guam	-	1	U	U	5	-	-	-	-
P.R.	820	724	-	14	412	-	-	-	47
V.I.	17	27	-	-	2	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending November 12, 1983 (45th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	600	412	131	33	10	14	46
Boston, Mass.	172	108	42	9	6	7	24
Bridgeport, Conn.	51	33	14	2	2	-	6
Cambridge, Mass.	21	17	2	2	-	-	1
Fall River, Mass.	23	20	2	1	-	-	-
Hartford, Conn.	57	34	17	5	-	1	1
Lowell, Mass.	23	17	5	1	-	-	1
Lynn, Mass.	10	8	1	1	-	-	-
New Bedford, Mass.	25	20	4	1	-	-	-
New Haven, Conn.	34	27	3	2	-	2	5
Providence, R.I.	53	37	11	4	-	1	4
Somerville, Mass.	9	9	-	-	-	-	-
Springfield, Mass.	46	33	12	1	-	-	-
Waterbury, Conn.	24	15	6	-	2	1	1
Worcester, Mass.	52	34	12	4	-	2	3
MID. ATLANTIC	2,482	1,681	538	147	52	64	99
Albany, N.Y.	45	26	14	1	1	3	-
Allentown, Pa.	14	11	3	-	-	-	-
Buffalo, N.Y.	124	89	19	7	6	3	3
Camden, N.J.	39	22	10	3	-	4	-
Elizabeth, N.J.	22	16	5	-	1	-	1
Erie, Pa.†	48	35	13	-	-	-	3
Jersey City, N.J.	40	30	6	4	-	-	-
N.Y. City, N.Y.	1,382	926	297	91	31	37	55
Newark, N.J.	50	19	18	5	2	6	2
Paterson, N.J.	30	17	10	1	1	1	2
Philadelphia, Pa.†	273	174	71	19	5	4	19
Pittsburgh, Pa.†	47	32	11	3	-	1	2
Reading, Pa.	29	24	3	2	-	-	-
Rochester, N.Y.	87	66	13	4	2	2	7
Schenectady, N.Y.	24	20	3	1	-	-	2
Scranton, Pa.†	25	22	2	-	1	-	1
Syracuse, N.Y.	96	71	20	1	1	3	-
Trenton, N.J.	52	35	13	3	1	-	-
Utica, N.Y.	21	15	5	1	-	-	2
Yonkers, N.Y.	34	31	2	1	-	-	-
E.N. CENTRAL	2,217	1,385	545	139	81	67	66
Akron, Ohio	41	24	14	2	1	-	-
Canton, Ohio	29	20	8	1	-	-	1
Chicago, Ill	707	438	181	44	22	22	18
Cincinnati, Ohio	132	88	28	7	4	5	8
Cleveland, Ohio	138	76	43	6	8	5	2
Columbus, Ohio	92	54	21	5	10	2	3
Dayton, Ohio	91	60	20	3	4	4	-
Detroit, Mich.	233	131	59	28	9	6	6
Evansville, Ind.	29	18	8	-	2	1	1
Fort Wayne, Ind.	61	40	13	5	1	2	6
Gary, Ind.	17	11	3	2	-	1	-
Grand Rapids, Mich.	44	28	11	3	1	1	-
Indianapolis, Ind.	172	111	47	6	5	3	3
Madison, Wis.	41	25	9	5	2	-	3
Milwaukee, Wis.	140	95	31	8	3	3	2
Peoria, Ill	27	11	6	1	2	7	2
Rockford, Ill.	26	18	3	2	2	1	2
South Bend, Ind.	43	27	10	3	3	-	3
Toledo, Ohio	99	70	19	4	2	4	4
Youngstown, Ohio	55	40	11	4	-	-	2
W.N. CENTRAL	634	418	132	30	18	34	28
Des Moines, Iowa	36	23	9	-	1	3	3
Duluth, Minn.	21	18	2	-	1	-	-
Kansas City, Kans.	30	16	8	2	2	2	2
Kansas City, Mo.	87	53	21	6	1	4	6
Lincoln, Nebr.	47	33	8	1	1	4	1
Minneapolis, Minn.	66	41	14	3	4	4	1
Omaha, Nebr.	83	53	17	6	3	4	4
St. Louis, Mo.	134	92	26	7	2	7	5
St. Paul, Minn.	65	46	12	3	2	2	2
Wichita, Kans.	65	43	15	2	1	4	4
S. ATLANTIC	1,083	626	301	75	33	48	47
Atlanta, Ga.	166	89	47	13	2	15	4
Baltimore, Md.	220	131	57	13	9	10	8
Charlotte, N.C.	58	37	14	-	2	5	6
Jacksonville, Fla.	68	33	21	8	3	3	6
Miami, Fla.	103	56	28	11	6	2	2
Norfolk, Va.	40	16	15	3	1	5	4
Richmond, Va.	79	38	29	7	3	2	4
Savannah, Ga.	46	29	11	4	2	-	5
St. Petersburg, Fla.	85	71	12	2	-	-	3
Tampa, Fla.	55	33	14	4	1	3	2
Washington, D.C.	117	68	33	9	4	3	3
Wilmington, Del.	46	25	20	1	-	-	-
E.S. CENTRAL	743	432	196	53	21	12	35
Birmingham, Ala.	99	63	23	8	3	2	3
Chattanooga, Tenn.	43	-	10	2	1	1	1
Knoxville, Tenn.	69	45	19	3	1	1	4
Louisville, Ky.	124	62	42	13	4	3	7
Memphis, Tenn.	183	124	44	9	6	-	14
Mobile, Ala.	88	53	20	10	3	2	5
Montgomery, Ala.	37	24	9	3	1	-	-
Nashville, Tenn.	100	61	29	5	2	3	1
W.S. CENTRAL	1,107	624	290	88	54	51	44
Austin, Tex.	58	39	9	6	3	1	2
Baton Rouge, La.	70	38	22	4	5	1	5
Corpus Christi, Tex.	42	26	10	2	1	3	2
Dallas, Tex.	181	97	52	14	11	7	1
El Paso, Tex.	37	22	8	3	1	3	2
Fort Worth, Tex.	93	50	31	4	6	2	5
Houston, Tex.	246	119	69	33	14	11	7
Little Rock, Ark.	42	31	8	2	-	1	4
New Orleans, La.	102	53	22	7	4	16	2
San Antonio, Tex.	136	83	37	9	3	4	10
Shreveport, La.	45	30	11	2	2	-	-
Tulsa, Okla.	55	36	11	2	4	2	4
MOUNTAIN	574	376	124	34	23	17	26
Albuquerque, N.Mex.	73	37	22	8	3	3	4
Colo. Springs, Colo.	35	23	6	5	1	-	3
Denver, Colo.	101	65	21	5	4	6	5
Las Vegas, Nev.	82	50	24	5	2	1	1
Ogden, Utah	15	7	4	3	1	-	-
Phoenix, Ariz.	114	83	22	3	5	1	3
Pueblo, Colo.	17	9	8	-	-	-	1
Salt Lake City, Utah	61	41	8	4	4	4	-
Tucson, Ariz.	76	61	9	1	3	2	9
PACIFIC	1,701	1,175	310	128	43	44	83
Berkeley, Calif.	23	17	2	2	-	2	-
Fresno, Calif.	57	39	9	4	1	4	5
Glendale, Calif.	32	27	3	1	1	-	1
Honolulu, Hawaii	49	34	9	3	2	1	3
Long Beach, Calif.	108	71	28	7	-	2	6
Los Angeles, Calif.	480	324	89	47	15	4	15
Oakland, Calif.	46	33	6	5	1	1	3
Pasadena, Calif.	26	20	3	1	-	2	1
Portland, Oreg.	123	83	26	7	6	1	5
Sacramento, Calif.	59	40	8	5	3	3	7
San Diego, Calif.	129	85	29	8	3	4	5
San Francisco, Calif.	133	97	19	9	2	6	3
San Jose, Calif.	140	90	36	10	4	-	15
Seattle, Wash.	160	109	24	13	4	10	4
Spokane, Wash.	59	44	11	3	-	1	4
Tacoma, Wash.	77	62	8	3	1	3	6
TOTAL ††	11,141	7,129	2,567	727	335	351	474

* 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 4 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.

Mycobacterium chelonei *Infections – Continued*

general anesthesia. Silastic tubing had been purchased in large quantities directly from the manufacturer and sterilized at the hospital where the surgery was performed. No irrigants or flushing solutions were used, although methylene blue was injected into the canaliculi for dilatation. After surgery, Afrin* nasal spray, and Neosporin* and Maxitol* ointments were used. Recovery was uneventful until April 17, when a profuse discharge was noted. Cultures yielded *M. chelonei* subspecies *abscessus* susceptible to kanamycin, amikacin, erythromycin, and cefoxitin. After treatment with topical amikacin and removal of the tubes, the discharge cleared.

Case 4: A 60-year-old man from central Texas had a history of a cataract and epithelial edema in the left eye. On April 13, 1983, extra-capsular cataract extraction, lens implant, corneal transplant, and peripheral iridectomy were performed on the left eye under general anesthesia. The McGhan 3M Implens 30* was received sterile from the supplier. The donor cornea had been cultured previously, and no growth had occurred within 48 hours. Only sterile filtered solutions were used during surgery. After surgery, AK-pred*, AK sporin*, Tobrex*, and Timoptic* were administered to the eye. On June 8, mucus was noted to be covering the suture area, and on June 9, an ulcerated area was noted. A specimen taken for culture at this time was negative after 48 hours. By July 5, infiltrative keratitis developed at the graft junction. A specimen taken for culture at this time grew *M. chelonei* subspecies *abscessus*. The infection resolved following topical amikacin therapy.

Detailed examination of the medical records of the four patients failed to reveal any common medications or devices. No similar infections had been noted among other patients undergoing eye surgery in the four hospitals. Review of records from the TDH Mycobacteriology Laboratory for 1981 and 1982 did not reveal any additional eye cultures positive for *M. chelonei*, nor did review of records from the mycobacteriology labortories at the National Jewish Hospital in Denver or the University of Texas at Tyler. During 1981 and 1982, CDC's mycobacteriology laboratory received two isolates of *M. chelonei* from two individuals who had undergone cataract extraction in Georgia.

Reported by W Dansby, AB Morgan, MD, Seton Hospital, Austin, WN Gilhum, MD, V Rial, Knapp Memorial Methodist Hospital, MF Butler, Medical Plaza Hospital, JL Bussey, MD, Ophthalmology Associates, Fort Worth, JD Broderick, MD, G Charns, Medical City Hospital, Dallas; JE Steadham, Bureau of Laboratories, TL Gustafson, MD, Acting State Epidemiologist, Texas Dept of Health; Div of Field Svcs, Epidemiology Program Office, Respiratory and Special Pathogens Epidemiology Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: *M. chelonei* are rapidly growing nontuberculous mycobacteria that are widely present in the environment. Recently, their role in human illness has been recognized with increasing frequency in many different clinical settings (*1*). Ocular infections with *M. chelonei* are rare, but cases of keratitis and orbital granuloma following trauma or surgery have been reported (*2,3*). However, the incidence of such infections is unknown.

Although all the cases reported here occurred in one state over a limited period of time, followed similar operative procedures, and involved a single *M. chelonei* subspecies, the epidemiologic investigation failed to identify a common vehicle or source of infection. While it is possible that a common factor was present and not uncovered by the investigation, this suggests that these cases were sporadic in nature and that such infections may be more common than previously recognized.

Physicians should be alert to the possible existence of ocular mycobacterial infections following surgery or trauma and should be aware that routine culture methods may not yield a

*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.

Mycobacterium chelonei *Infections – Continued*

positive result before they are discarded. Therefore, if a nontuberculous mycobacterial infection is suspected, specimens should be examined with stains for acid-fast organisms, and cultures for nontuberculous mycobacteria should be obtained. Treatment, which should be guided by antimicrobial susceptibility testing of the mycobacterial isolate, may require a combination of antimicrobial agents.

References

1. Wallace RJ, Swenson JM, Silcox VA, Good RC, Tschen JA, Stone MS. Spectrum of disease due to rapidly growing mycobacteria. Rev Infect Dis 1983;5:657-79.
2. Meisler DM, Friedlaender MH, Okumoto M. *Mycobacterium chelonei* keratitis. Am J Ophthalmol 1982;94:398-401.
3. Smith RE, Salz JJ, Moors R, Silverstein D, Lewis W. *Mycobacterium chelonei* and orbital granuloma after tear duct probing. Am J Ophthalmol 1980;89:139-41.

Current Trends

Human *Salmonella* Isolates — United States, 1982

In 1982, 36,705 salmonellae isolates (including *Salmonella typhi*) from humans were reported to CDC. This represents an increase of 3% over the 35,625 isolates reported in 1981. The increase was not confined to one state or region; North Dakota reported a 117% increase (108 to 234) from 1981; Oklahoma, a 55% increase (173 to 269); Rhode Island, a 49% increase (145 to 216); Wisconsin, a 41% increase (738 to 1,042); Washington, a 38% increase (566 to 781); California, a 36% increase (3,337 to 4,536); and Massachusetts, a 27% increase (1,922 to 2,446).

The 10 most frequently isolated serotypes comprised almost 70% of total isolates (Table 4). Notable increases from 1981 were reported in three of these serotypes: *S. thompson* increased 84% (364 to 670); *S. enteritidis* increased 27% (2,554 to 3,248); and *S. heidelberg* increased 25% (2,049 to 2,566). Increases were also reported in some less frequently isolated serotypes: *S. meleagridis* increased 372% (32 to 151); *S. alachua* increased 226% (27 to 88); *S. haardt* increased 134% (53 to 124); and *S. mbandaka* increased 76% (110 to 194).

TABLE 4. The 10 *Salmonella* serotypes most frequently isolated from humans — United States, 1982

Serotype	Number of isolates	Percentage of total	Median age of persons from whom isolates were obtained (years)
Typhimurium*	12,545	34.2	10
Enteritidis	3,248	8.9	23
Heidelberg	2,566	7.0	5
Newport	2,140	5.8	17
Infantis	1,181	3.2	9
Agona	1,083	3.0	7
Montevideo	856	2.3	21
Saint-paul	787	2.1	19
Thompson	670	1.8	22
Oranienburg	591	1.6	17
Subtotal	25,667	69.9	
Total	**36,705**		

*Includes *S. typhimurium* var. Copenhagen.

Human Salmonella — *Continued*

For some serotypes, increases clustered in one or more states. An increase in *S. mbandaka* and *S. alachua* from Minnesota, Oregon, and Washington was due to infected infants from India adopted into American families. Outbreaks of *S. enteritidis* and *S. meleagridis* were reported in Massachusetts, but no vehicles were identified. Increases in *S. thompson* were reported in California, Hawaii, Kansas, and Massachusetts. An outbreak of *S. thompson* in California was associated with gravy served at a chicken fast-food outlet; and in Kansas, an outbreak occurred in a prison system, but no vehicle was identified. Outbreaks caused by *S. thompson* also occurred in Florida and Massachusetts, but no specific vehicles were implicated. Increases of sporadic cases of *S. haardt* were reported in California, New York, and Virginia. Increases in *S. heidelberg* were not confined to a single state or region.

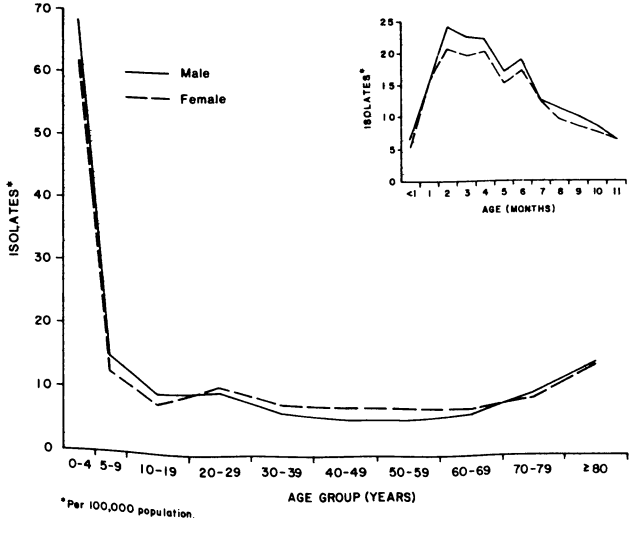
Age data were reported for 81% of the isolates (Figure 1). The rate was highest for 2- to 4-month-old infants, decreased abruptly among age groups of early childhood, and then remained relatively constant through the adult years. The rate of *Salmonella* isolation was slightly higher among males than among females in the under-20-year age group; it was slightly higher among females than among males in the 20- to 69-year age group. This is consistent with data from previous years. During the past 15 years, the median age of all persons from whom isolates were obtained has continued to increase from a median of 6 years in 1968 to 14 years in 1982.

In 1982, 21 of 492 reported *S. typhi* isolates were from carriers; 98, from patients; and the remaining 373, undesignated. The carriers' median age was 60, while that of the new patients was 23.5

Reported by Statistical Svcs Activity, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: This report is based on the *Salmonella* surveillance activity conducted by the Association of State and Territorial Epidemiologists and by CDC. It is a passive laboratory-based system that receives weekly reports from the states and the District of Columbia and regular summaries from the U.S. Department of Agriculture. The reports do not distinguish between clinical and subclinical infections or between chronic and convalescent carriers. Many factors affect whether an infection will be reported; however, these data permit comparison

FIGURE 1. *Salmonella* **isolation rates,* by age and sex of patient — United States, 1982**



*Per 100,000 population.

Human Salmonella — *Continued*

with past and future tabulations and have provided information for epidemiologic investigations and a crude index of the effectiveness of various public health measures.

The number of reported *Salmonella* isolations has been steadily increasing since 1977, but the 1982 increase (3%) was much less than that in 1981 (19%). The gradual increase in the last few years in the median age of all persons from whom isolates are obtained may indicate a shift in age-specific rates of exposure to contaminated vehicles.

In many outbreaks, the cause was a relatively uncommon serotype, which points to the importance of serotyping *Salmonella*. Outbreaks caused by common serotypes are less likely to be recognized. Recently, application of molecular biologic techniques, such as plasmid profile analysis, to epidemiologic studies has provided additional means of identifying outbreaks caused by common serotypes.

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

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, or 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.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE / CENTERS FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333
OFFICIAL BUSINESS

Postage and Fees Paid
U.S. Department of HHS
HHS 396

S 6HCRH3MCDJ73 8129
JOSEPH MC DADE PHD
LEGIONNAIRE ACTIVITY
LEPROSY & RICKETTSIAL BR
VIROLOGY DIV, CID
7-85

HHS Publication No. (CDC) 83-8017