



MORBIDITY AND MORTALITY WEEKLY REPORT

213 Firearm-Related Deaths – Louisiana and Texas, 1970–1990
221 Leadership Development Survey of State Health Officers – United States, 1988

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Firearm-Related Deaths – Louisiana and Texas, 1970–1990

In 1990, firearm-related injuries surpassed motor-vehicle crashes as the leading cause of death from injuries in both Louisiana and Texas, and from 1979 through 1987, these states ranked third and fifth, respectively, for age-adjusted firearm-related death rates* (1). Because firearm-related injuries are a major cause of death in Louisiana and Texas, the Louisiana Disability Prevention Program, Louisiana Office of Public Health, and the Injury Control Program, Epidemiology Division, Texas Department of Health, used death certificates to examine patterns in firearm-related mortality. This report summarizes the analysis of death certificate data for firearm-related mortality in these two states.

Louisiana

In Louisiana, firearm-related deaths have been the leading cause of injury-related mortality for 4 of the 5 years from 1986 through 1990. From 1970 through 1990, motor-vehicle-related death rates declined by 30% (from 32.4 per 100,000 population to 22.6 per 100,000) while the rate for firearm-related deaths fluctuated (Figure 1). Firearm-related death rates—including homicide and suicide—increased most for black males (42%) from 1970 through 1990 (from 54.1 per 100,000 to 76.7 per 100,000). Although the overall firearm-related death rate did not increase as dramatically among white males (16% during 1970–1990), the firearm-related suicide rate for white males increased 47%.

From 1985 through 1990, 5647 persons died as a result of firearm-related injuries; of these deaths, 2677 (47%) were suicides, 2591 (46%) were homicides, 321 (6%) were classified as unintentional, 19 (0.3%) resulted from legal intervention, and 39 (0.7%) were of unknown intent. In 1990, males were 5.5 times more likely to die from

*In both state analyses, a firearm-related death was defined as any death with the underlying cause listed as codes E922.0–E922.9, E955.0–E955.4, E965.0–E965.4, E970, or E985.0–E985.4 in the *International Classification of Diseases (ICD)*, 8th and 9th revisions; a motor-vehicle-related death was defined as any death with the underlying cause listed as codes E810.0–E825.0 in the ICD, 8th and 9th revisions.

Firearm-Related Deaths – Continued

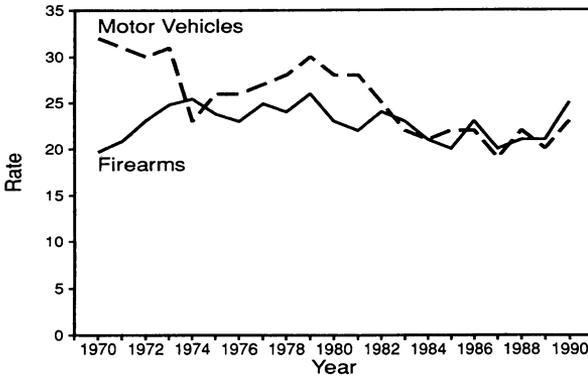
firearm-related injuries than were females (43.7 per 100,000 and 7.9 per 100,000, respectively); blacks were 2.2 times more likely to die from firearm-related injuries than were whites.

Texas

During 1990, firearm-related injuries surpassed motor-vehicle crashes as the leading cause of injury-related mortality in Texas (2), the first state to report this pattern to CDC. From 1964 through 1989, deaths resulting from motor-vehicle crashes had been the leading cause of injury mortality in Texas. Although death rates for motor-vehicle crashes decreased by 42% from 1970 through 1990 (from 32.5 per 100,000 population to 18.8 per 100,000), the firearm-related death rate remained relatively constant (Figure 2).

From 1985 through 1990, 19,184 persons died from firearm-related injuries; of these deaths, 9286 (48%) were suicides, 8581 (45%) were homicides, 1028 (5%) were

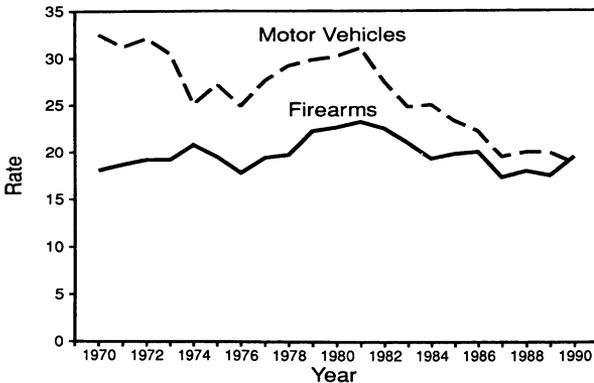
FIGURE 1. Rates of firearm- and motor-vehicle-related deaths* – Louisiana, 1970–1990



*Per 100,000 population.

Source: Vital records tapes, Louisiana Department of Health and Hospitals.

FIGURE 2. Rates of firearm- and motor-vehicle-related deaths* – Texas, 1970–1990



*Per 100,000 population.

Source: Bureau of Vital Statistics, Texas Department of Health.

Firearm-Related Deaths – Continued

classified as unintentional, 114 (1%) resulted from legal intervention, and 175 (1%) were of unknown intent (2). Males were five times more likely to die from firearm-related injuries than were females (31.3 per 100,000 versus 6.2 per 100,000). Age-specific rates were highest for persons aged 25–34 years (28.9 per 100,000). Blacks were 1.9 times more likely to die from firearm-related injuries than were Hispanics or whites (32.3 per 100,000 versus 17.4 per 100,000 and 16.8 per 100,000, respectively). The firearm-related death rate was highest for black males (57.1 per 100,000).

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Editorial Note: The trends that led to the emergence of firearm-related deaths as the leading cause of injury-related mortality in Louisiana and Texas are similar to those for the United States. Since 1966, the death rate for motor-vehicle crashes[†] in the United States has declined substantially (3) and has been associated with a combination of interventions, including the construction of safer highways and vehicles, reductions in the levels of alcohol-impaired driving, lower speed limits, and increased use of safety belts, motorcycle helmets, and child passenger restraint devices (4). In comparison, during 1970–1990, the firearm-related death rate has fluctuated; however, these rates have been higher than at any time since the 1920s (5).

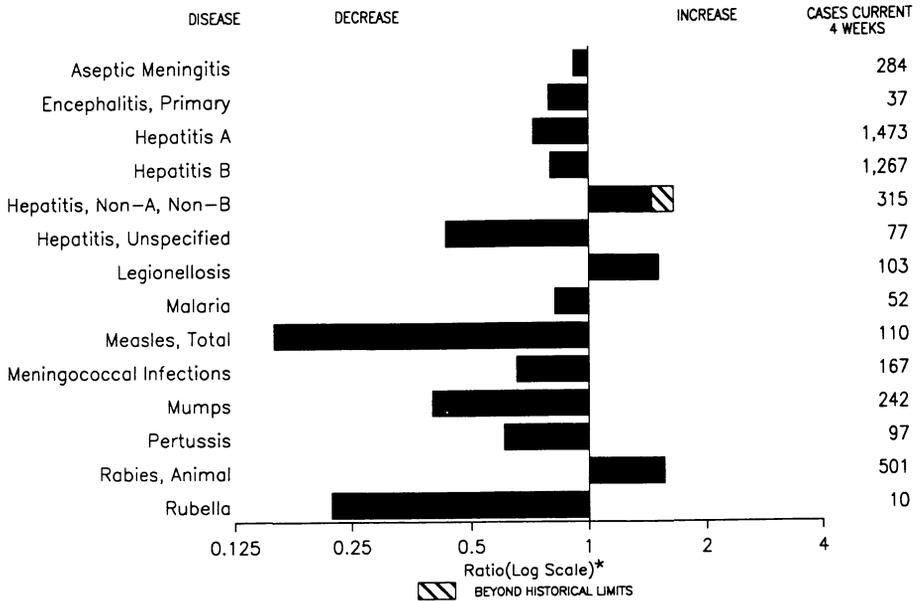
States, local communities, and school systems have employed a variety of strategies to prevent firearm-related injuries and deaths. An important element of many of these strategies is to inhibit, restrict, or reduce immediate access to firearms in the general population or in specific locations. For example, in 1976, the District of Columbia banned the purchase, sale, transfer, or possession of handguns by civilians. An evaluation of this regulation found that it was associated with a 25% reduction in firearm-related homicides, a 23% reduction in firearm-related suicides, and an estimated 47 lives saved per year (6). In some states and localities, firearms are prohibited from being carried in public; in Detroit and in Massachusetts, legislation that increased the penalty for violating such laws reduced the occurrence of firearm-related homicides (7,8). In some school systems, methods used to deter students from bringing firearms on school grounds include random locker searches, walk-throughs with metal detectors, and policies requiring that students use only clear plastic or mesh bookbags so that weapons cannot be readily hidden (9).

Community efforts to prevent firearm-related deaths should use other measures in addition to reducing access to firearms. Suicide may be prevented by improved identification and referral of persons at increased risk (e.g., those suffering from clinical depression or who exhibit suicidal behavior). Efforts to prevent homicide may include reduction of the incidence of interpersonal violence through behavioral and other interventions (e.g., conflict resolution training and mentoring programs) (10). The reduction of mortality from motor-vehicle crashes in Louisiana and Texas illustrates how public health approaches can be used to control and prevent injury. The application of such approaches to firearm-related injury holds the potential for decreasing the morbidity and mortality associated with this problem.

(Continued on page 221)

[†]Measured as deaths per 100 million vehicle miles of travel.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending March 28, 1992, with historical data — United States



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

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending March 28, 1992 (13th Week)

	Cum. 1992		Cum. 1992
AIDS	12,190	Measles: imported	30
Anthrax	-	indigenous	227
Botulism: Foodborne	7	Plague	-
Infant	14	Poliomyelitis, Paralytic*	-
Other	-	Psittacosis	11
Brucellosis	3	Rabies, human	4
Cholera	17	Syphilis, primary & secondary	8,545
Congenital rubella syndrome	3	Syphilis, congenital, age < 1 year	-
Diphtheria	1	Tetanus	4
Encephalitis, post-infectious	21	Toxic shock syndrome	72
Gonorrhea	120,743	Trichinosis	2
<i>Haemophilus influenzae</i> (invasive disease)	409	Tuberculosis	4,110
Hansen Disease	27	Tularemia	16
Leptospirosis	6	Typhoid fever	69
Lyme Disease	921	Typhus fever, tickborne (RMSF)	25

*Nine suspected cases of poliomyelitis were reported in 1991; 4 of the 8 suspected cases in 1990 were confirmed, and all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending March 28, 1992, and March 30, 1991 (13th Week)

Reporting Area	AIDS	Aseptic Meningi- tis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionel- losis	Lyme Disease
			Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied		
			Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992		
UNITED STATES	12,190	1,062	119	21	120,743	143,059	4,129	3,417	849	150	316	921
NEW ENGLAND	425	87	8	-	2,671	3,817	164	156	18	17	21	61
Maine	13	6	-	-	28	31	17	8	2	-	2	-
N.H.	12	4	2	-	-	77	13	13	4	-	3	5
Vt.	3	3	1	-	5	16	2	3	1	-	1	1
Mass.	247	31	5	-	966	1,554	80	107	8	17	10	17
R.I.	26	43	-	-	217	289	37	12	3	-	5	24
Conn.	124	-	-	-	1,455	1,850	15	13	-	-	-	14
MID. ATLANTIC	2,637	138	8	3	8,844	17,797	378	536	112	6	105	711
Upstate N.Y.	437	53	-	-	1,245	2,871	114	110	67	2	43	499
N.Y. City	1,233	18	-	-	2,963	6,879	86	36	1	-	1	-
N.J.	595	4	-	-	673	2,714	63	171	33	-	18	74
Pa.	372	63	8	3	3,963	5,333	115	219	11	4	43	138
E.N. CENTRAL	1,235	157	38	3	20,088	26,236	494	441	53	9	71	21
Ohio	269	54	18	-	7,197	8,109	115	77	34	-	39	18
Ind.	144	15	1	-	2,234	2,836	141	95	-	2	4	3
Ill.	523	22	5	-	7,118	6,908	74	22	5	1	2	-
Mich.	249	63	13	3	2,922	6,635	37	156	3	6	17	-
Wis.	50	3	1	-	617	1,748	127	91	11	-	9	-
W.N. CENTRAL	371	66	3	4	6,104	7,306	488	198	79	5	11	20
Minn.	35	3	1	-	751	758	155	10	2	1	-	-
Iowa	28	15	-	2	491	492	10	9	-	-	2	6
Mo.	198	20	-	-	3,677	4,412	104	157	75	4	1	13
N. Dak.	-	1	-	-	-	18	16	1	-	-	1	-
S. Dak.	2	2	-	1	52	106	120	-	-	-	-	-
Nebr.	14	6	-	1	3	517	41	10	-	-	7	1
Kans.	94	19	2	-	1,130	1,003	42	11	2	-	-	-
S. ATLANTIC	2,795	238	23	7	45,912	42,308	276	606	71	18	49	43
Del.	29	9	3	-	403	565	7	57	-	1	5	16
Md.	373	36	6	-	4,160	3,907	62	106	12	5	8	5
D.C.	192	3	-	-	2,123	2,746	5	32	-	-	6	-
Va.	179	49	4	2	4,696	4,217	26	48	7	4	5	17
W. Va.	18	-	1	-	222	308	2	19	-	4	-	1
N.C.	177	36	8	-	5,949	8,030	21	101	31	-	9	1
S.C.	120	5	-	-	2,807	3,304	9	15	-	-	12	-
Ga.	343	23	-	-	14,194	10,852	25	75	5	-	-	1
Fla.	1,364	77	1	5	11,358	8,379	119	153	16	4	4	2
E.S. CENTRAL	385	68	5	-	11,414	12,767	65	277	277	1	13	12
Ky.	48	40	4	-	1,029	1,341	20	25	-	-	7	6
Tenn.	116	10	-	-	3,444	4,881	29	222	273	-	5	6
Ala.	169	14	-	-	4,124	3,245	7	30	4	1	1	-
Miss.	52	4	1	-	2,817	3,300	9	-	-	-	-	-
W.S. CENTRAL	1,072	46	4	1	12,056	16,469	236	229	13	20	2	7
Ark.	58	7	1	-	2,212	1,817	22	23	1	-	-	1
La.	221	4	-	-	1,727	3,301	23	34	-	1	-	-
Okla.	44	-	1	1	1,326	1,596	54	55	11	2	2	5
Tex.	749	35	2	-	6,791	9,755	137	117	1	17	-	1
MOUNTAIN	341	29	5	1	2,424	2,914	590	152	41	19	21	-
Mont.	2	-	1	-	19	20	24	14	4	-	2	-
Idaho	7	1	-	-	30	40	15	21	1	-	1	-
Wyo.	1	-	-	-	11	33	-	3	6	-	1	-
Colo.	131	10	2	1	750	794	159	32	13	12	2	-
N. Mex.	33	5	2	-	231	276	51	27	1	3	1	-
Ariz.	88	10	-	-	859	1,112	282	22	8	1	10	-
Utah	30	-	-	-	51	96	37	2	4	3	-	-
Nev.	49	3	-	-	473	543	22	31	4	-	4	-
PACIFIC	2,929	233	25	2	11,230	13,445	1,438	822	185	55	23	46
Wash.	132	-	-	-	945	1,181	133	61	25	1	2	1
Oreg.	71	-	-	-	387	485	94	70	19	1	-	-
Calif.	2,665	198	22	1	9,417	11,385	1,175	688	140	52	20	45
Alaska	6	2	3	-	203	198	4	2	1	1	-	-
Hawaii	55	33	-	1	278	196	32	1	-	-	1	-
Guam	-	-	-	-	34	-	3	-	-	2	-	1
P.R.	109	38	-	-	15	138	4	59	1	3	1	-
V.I.	2	-	-	-	26	163	5	2	-	-	-	-
Amer. Samoa	-	-	-	-	10	12	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	22	2	-	-	-	*	-	-

N: Not notifiable

U: Unavailable

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

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending March 28, 1992, and March 30, 1991 (13th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total		1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	1992	Cum. 1992	Cum. 1991
		1992	Cum. 1992	1992	Cum. 1992										
UNITED STATES	158	14	227	2	30	2,293	639	42	686	16	268	541	4	41	216
NEW ENGLAND	4	-	2	-	5	8	41	-	-	7	32	62	-	4	1
Maine	-	-	-	-	-	-	3	-	-	-	2	3	-	-	-
N.H.	1	-	-	-	-	-	3	-	-	5	13	11	-	-	1
Vt.	-	-	-	-	-	4	1	-	-	-	-	1	-	-	-
Mass.	3	-	2	-	3	-	19	-	-	1	16	41	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-
Conn.	-	-	-	-	2	4	15	-	-	1	1	6	-	-	-
MID. ATLANTIC	51	2	58	-	6	1,172	60	1	49	-	38	63	-	3	128
Upstate N.Y.	8	-	-	-	1	47	27	1	23	-	16	36	-	2	121
N.Y. City	23	2	24	-	1	125	5	-	4	-	-	-	-	-	-
N.J.	15	-	33	-	1	450	14	-	7	-	8	3	-	1	-
Pa.	5	-	1	-	3	550	14	-	15	-	14	24	-	-	7
E.N. CENTRAL	7	3	6	-	2	55	97	10	76	-	19	104	-	5	7
Ohio	1	-	2	-	1	1	23	3	25	-	5	24	-	-	-
Ind.	1	3	4	-	-	-	3	-	3	-	7	20	-	-	1
Ill.	1	-	-	-	-	-	24	40	21	-	3	26	-	5	3
Mich.	3	-	-	-	-	-	25	24	7	25	-	1	20	-	3
Wis.	1	-	-	-	1	5	7	-	2	-	3	14	-	-	-
W.N. CENTRAL	9	-	5	-	-	7	28	-	16	-	19	46	-	1	4
Minn.	3	-	3	-	-	2	5	-	1	-	2	20	-	-	3
Iowa	2	-	-	-	-	2	3	-	4	-	1	4	-	-	-
Mo.	3	-	1	-	-	-	8	-	9	-	11	15	-	-	1
N. Dak.	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	-	3	-	1	-	2	4	-	-	-
Kans.	1	-	1	-	-	3	9	-	1	-	-	1	-	1	-
S. ATLANTIC	32	6	54	-	3	165	122	18	335	2	39	31	-	3	-
Del.	1	-	-	-	-	11	2	-	-	-	-	-	-	-	-
Md.	12	-	1	-	2	55	12	-	29	-	14	5	-	-	-
D.C.	2	-	-	-	-	-	-	-	2	-	-	-	-	1	-
Va.	6	-	4	-	1	14	21	-	18	-	2	4	-	-	-
W. Va.	-	-	-	-	-	-	10	-	11	-	-	6	-	-	-
N.C.	4	6	15	-	-	-	24	-	68	-	6	7	-	-	-
S.C.	-	-	-	-	-	12	10	2	44	-	8	-	-	-	-
Ga.	2	-	-	-	-	-	15	-	18	-	2	6	-	-	-
Fla.	5	-	34	-	-	73	28	16	145	2	7	3	-	2	-
E.S. CENTRAL	4	-	65	-	1	4	54	-	18	-	2	18	-	2	-
Ky.	-	-	65	-	-	-	27	-	-	-	-	-	-	-	-
Tenn.	1	-	-	-	1	4	12	-	12	-	-	10	-	2	-
Ala.	3	-	-	-	-	-	15	-	4	-	2	8	-	-	-
Miss.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
W.S. CENTRAL	2	-	-	-	-	5	36	7	77	2	10	13	-	-	1
Ark.	-	-	-	-	-	5	8	-	4	1	4	-	-	-	1
La.	-	-	-	-	-	-	4	2	8	-	-	7	-	-	-
Okla.	2	-	-	-	-	-	6	-	1	1	6	6	-	-	-
Tex.	-	-	-	-	-	-	18	5	64	-	-	-	-	-	-
MOUNTAIN	8	-	1	-	-	164	33	3	34	1	35	78	-	-	2
Mont.	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	1	5	-	1	-	8	14	-	-	-
Wyo.	-	-	1	-	-	-	2	-	-	-	-	3	-	-	-
Colo.	5	-	-	-	-	1	5	-	4	-	12	31	-	-	-
N. Mex.	2	-	-	-	-	78	2	N	N	1	10	12	-	-	1
Ariz.	1	-	-	-	-	72	6	3	23	-	-	8	-	-	-
Utah	-	-	-	-	-	4	1	-	3	-	5	10	-	-	-
Nev.	-	-	-	-	-	8	5	-	3	-	-	-	-	-	1
PACIFIC	41	3	36	2	13	713	168	3	81	4	74	126	4	23	73
Wash.	1	-	-	-	7	4	25	1	5	1	13	26	-	-	-
Oreg.	5	1	2	-	-	7	28	N	N	1	6	21	-	1	-
Calif.	32	2	26	2†	5	700	107	2	74	2	51	55	4	20	72
Alaska	-	-	8	-	1	-	4	-	-	-	-	5	-	-	-
Hawaii	3	-	-	-	-	2	4	-	2	-	4	19	-	2	1
Guam	-	U	1	U	3	-	-	U	2	U	-	-	U	-	-
P.R.	-	-	5	-	-	1	2	-	2	U	5	6	-	-	-
V.I.	-	U	-	U	-	2	-	U	8	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	24	-	U	-	U	25	-	U	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-

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

N: Not notifiable U: Unavailable †International ‡Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending March 28, 1992, and March 30, 1991 (13th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992
UNITED STATES	8,545	10,543	72	4,110	4,610	16	69	25	1,602
NEW ENGLAND	173	277	4	81	129	-	10	2	168
Maine	-	-	-	18	16	-	-	-	-
N.H.	-	3	3	-	-	-	-	-	-
Vt.	-	1	-	-	1	-	-	-	-
Mass.	76	140	1	35	53	-	7	1	-
R.I.	13	14	-	10	16	-	-	1	-
Conn.	84	119	-	18	43	-	3	-	168
MID. ATLANTIC	1,150	1,778	11	792	1,059	-	25	1	447
Upstate N.Y.	68	103	4	-	75	-	4	-	317
N.Y. City	660	885	-	580	679	-	8	-	-
N.J.	54	285	-	43	197	-	11	-	70
Pa.	368	505	7	169	108	-	2	1	60
E.N. CENTRAL	1,032	1,029	21	407	535	-	2	4	23
Ohio	154	155	7	82	77	-	1	3	1
Ind.	65	26	2	38	30	-	-	-	-
Ill.	503	396	3	230	304	-	-	-	4
Mich.	177	323	9	39	94	-	1	-	1
Wis.	133	129	-	18	30	-	-	1	17
W.N. CENTRAL	329	184	9	84	135	3	-	1	328
Minn.	22	19	2	22	23	-	-	-	98
Iowa	7	18	3	6	23	-	-	-	42
Mo.	253	107	1	34	50	3	-	1	2
N. Dak.	-	-	1	1	3	-	-	-	14
S. Dak.	-	1	-	8	11	-	-	-	15
Nebr.	1	1	2	2	4	-	-	-	2
Kans.	46	38	-	11	21	-	-	-	155
S. ATLANTIC	2,518	3,202	9	881	789	3	7	12	367
Del.	55	39	2	5	7	-	-	-	71
Md.	194	266	1	69	71	2	1	-	139
D.C.	129	162	-	39	46	-	1	-	5
Va.	155	267	1	92	76	1	-	-	43
W. Va.	5	4	-	16	24	-	1	-	10
N.C.	614	498	2	129	94	-	-	10	2
S.C.	315	394	1	87	91	-	-	-	27
Ga.	560	788	1	179	163	-	-	-	65
Fla.	491	784	1	265	217	-	4	2	5
E.S. CENTRAL	1,312	1,147	-	232	377	5	-	-	25
Ky.	31	23	-	87	77	2	-	-	14
Tenn.	292	461	-	4	119	3	-	-	-
Ala.	651	380	-	108	100	-	-	-	11
Miss.	338	283	-	33	81	-	-	-	-
W.S. CENTRAL	1,558	1,949	-	305	414	5	1	3	94
Ark.	254	69	-	27	42	2	-	2	10
La.	616	616	-	8	20	-	-	-	-
Okla.	71	41	-	25	15	3	-	1	69
Tex.	617	1,223	-	245	337	-	1	-	15
MOUNTAIN	122	149	5	124	118	-	1	1	29
Mont.	2	1	-	-	-	-	-	-	1
Idaho	1	3	1	7	2	-	1	-	-
Wyo.	-	1	-	-	2	-	-	-	13
Colo.	18	21	2	5	6	-	-	-	-
N. Mex.	16	8	-	14	5	-	-	-	1
Ariz.	49	112	1	58	77	-	-	-	14
Utah	2	3	1	19	13	-	-	1	-
Nev.	34	-	-	21	13	-	-	-	-
PACIFIC	351	828	13	1,204	1,054	-	23	1	121
Wash.	20	42	-	75	65	-	2	-	-
Oreg.	13	25	-	26	26	-	-	-	-
Calif.	305	758	13	1,072	890	-	20	1	113
Alaska	1	2	-	12	22	-	-	-	8
Hawaii	12	1	-	19	51	-	1	-	-
Guam	1	-	-	10	-	-	-	-	-
P.R.	51	101	-	40	46	-	-	-	12
V.I.	15	30	-	1	1	-	-	-	-
Amer. Samoa	-	-	-	-	1	-	-	-	-
C.N.M.I.	2	-	-	8	4	-	1	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending
March 28, 1992 (13th 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	578	406	110	35	9	18	40	S. ATLANTIC	1,420	899	276	169	40	32	67
Boston, Mass.	153	105	26	11	3	8	13	Atlanta, Ga.	165	89	37	30	5	4	4
Bridgeport, Conn.	40	29	8	3	-	-	-	Baltimore, Md.	245	149	52	29	9	6	21
Cambridge, Mass.	20	15	4	1	-	-	-	Charlotte, N.C.	97	62	21	7	4	3	1
Fall River, Mass.	21	17	2	1	-	-	-	Jacksonville, Fla.	114	78	17	14	3	2	8
Hartford, Conn.	47	28	13	4	1	1	2	Miami, Fla.	149	95	35	13	6	-	-
Lowell, Mass.	24	18	4	1	-	-	-	Norfolk, Va.	58	31	15	10	1	1	5
Lynn, Mass.	14	11	2	1	-	-	-	Richmond, Va.	87	58	13	9	3	2	5
New Bedford, Mass.	24	19	5	-	-	-	-	Savannah, Ga.	46	32	6	5	1	2	5
New Haven, Conn.	59	46	8	4	1	-	4	St. Petersburg, Fla.	78	57	7	7	2	5	-
Providence, R.I.	40	33	5	2	-	-	-	Tampa, Fla.	188	140	33	9	1	3	14
Somerville, Mass.	11	4	5	1	1	-	-	Washington, D.C.	165	88	35	33	5	4	4
Springfield, Mass.	36	21	11	4	-	-	-	Wilmington, Del.	28	20	5	3	-	-	-
Waterbury, Conn.	29	22	5	1	-	-	-	E.S. CENTRAL	848	565	147	74	22	40	67
Worcester, Mass.	60	38	12	1	3	6	7	Birmingham, Ala.	132	78	26	17	4	7	6
MID. ATLANTIC	2,786	1,821	534	305	68	58	141	Chattanooga, Tenn.	62	44	9	7	1	1	11
Albany, N.Y.	58	41	9	5	2	1	3	Knoxville, Tenn.	88	56	22	8	1	1	8
Allentown, Pa.	18	17	1	-	-	-	-	Louisville, Ky.	106	78	16	8	1	3	6
Buffalo, N.Y.	123	77	26	15	3	2	6	Memphis, Tenn.	175	97	38	15	8	17	15
Camden, N.J.	50	34	4	6	3	3	6	Mobile, Ala.	88	66	15	3	3	1	12
Elizabeth, N.J.	26	19	6	1	-	-	-	Montgomery, Ala.	75	60	9	4	-	2	1
Erie, Pa.‡	47	36	10	1	-	-	-	Nashville, Tenn.	122	86	12	12	4	8	8
Jersey City, N.J.	69	42	12	13	2	-	-	W.S. CENTRAL	1,642	954	334	195	86	72	122
New York City, N.Y.	1,450	880	302	197	36	35	57	Austin, Tex.	62	37	17	7	-	1	3
Newark, N.J.	68	29	17	16	6	-	-	Baton Rouge, La.	32	20	6	3	2	1	1
Paterson, N.J.	14	8	3	1	1	1	2	Corpus Christi, Tex.	21	12	7	1	-	1	-
Philadelphia, Pa.	395	288	68	25	7	7	22	Dallas, Tex.	198	111	44	26	7	10	2
Pittsburgh, Pa.‡	89	64	16	4	3	2	6	El Paso, Tex.	63	40	10	9	1	3	5
Reading, Pa.	43	31	9	2	1	-	-	Ft. Worth, Tex.	116	76	23	5	4	8	12
Rochester, N.Y.	127	94	18	11	1	3	11	Houston, Tex.	616	291	137	100	53	35	66
Schenectady, N.Y.	26	20	5	-	-	1	1	Little Rock, Ark.	61	46	9	2	1	3	5
Scranton, Pa.‡	28	23	3	-	-	-	-	New Orleans, La.	74	40	15	11	4	3	-
Syracuse, N.Y.	92	72	14	2	2	2	7	San Antonio, Tex.	213	142	39	22	8	2	14
Trenton, N.J.	24	15	5	3	-	-	-	Shreveport, La.	90	64	12	8	3	3	9
Utica, N.Y.	19	14	3	1	1	-	-	Tulsa, Okla.	96	75	15	1	3	2	5
Yonkers, N.Y.	20	17	3	-	-	-	-	MOUNTAIN	799	546	138	75	23	17	79
E.N. CENTRAL	2,224	1,376	435	225	108	80	133	Albuquerque, N.M.	75	50	12	7	3	3	6
Akron, Ohio	56	42	9	4	1	-	-	Colo. Springs, Colo.	44	29	9	4	2	-	4
Canton, Ohio	37	31	5	-	-	-	-	Denver, Colo.	113	68	19	16	5	5	13
Chicago, Ill.	525	225	110	112	61	17	20	Las Vegas, Nev.	114	76	24	9	3	2	6
Cincinnati, Ohio	154	108	26	9	7	4	19	Ogden, Utah	25	20	3	1	-	1	3
Cleveland, Ohio	147	90	34	9	5	9	4	Phoenix, Ariz.	150	84	33	25	5	3	15
Columbus, Ohio	179	115	40	20	2	2	6	Pueblo, Colo.	41	36	4	-	-	1	9
Dayton, Ohio	108	77	19	5	2	5	9	Salt Lake City, Utah	89	65	12	7	4	1	10
Detroit, Mich.	234	126	60	22	12	14	5	Tucson, Ariz.	148	118	22	6	1	1	13
Evansville, Ind.	44	34	10	-	-	-	-	PACIFIC	1,974	1,333	340	195	70	35	132
Fort Wayne, Ind.	52	40	8	-	1	3	3	Berkeley, Calif.	15	13	1	1	-	-	1
Gary, Ind.	22	9	8	2	2	1	-	Fresno, Calif.	104	63	16	13	6	6	11
Grand Rapids, Mich.	55	37	11	2	2	3	7	Glendale, Calif.	26	23	1	1	1	-	6
Indianapolis, Ind.	197	131	37	18	3	8	17	Honolulu, Hawaii	64	47	11	4	2	-	5
Madison, Wis.	U	U	U	U	U	U	U	Long Beach, Calif.	84	53	15	9	5	2	8
Milwaukee, Wis.	135	99	14	10	3	9	10	Los Angeles, Calif.	541	357	104	49	23	8	23
Peoria, Ill.	49	34	12	2	1	-	-	Pasadena, Calif.	36	28	6	1	1	-	3
Rockford, Ill.	44	29	8	3	3	1	4	Portland, Oreg.	145	110	21	7	3	4	7
South Bend, Ind.	29	24	2	1	-	2	7	Sacramento, Calif.	156	102	27	17	7	3	9
Toledo, Ohio	107	85	17	2	1	2	7	San Diego, Calif.	156	106	25	21	4	-	14
Youngstown, Ohio	50	40	5	4	1	-	-	San Francisco, Calif.	173	106	31	28	3	4	5
W.N. CENTRAL	723	521	121	40	18	23	36	San Jose, Calif.	174	114	25	22	11	2	15
Des Moines, Iowa	U	U	U	U	U	U	U	Santa Cruz, Calif.	24	22	2	-	-	-	3
Duluth, Minn.	24	19	3	2	1	-	-	Seattle, Wash.	135	92	25	15	1	2	6
Kansas City, Kans.	26	18	3	3	1	1	1	Spokane, Wash.	54	39	10	2	1	2	7
Kansas City, Mo.	106	67	25	4	5	5	4	Tacoma, Wash.	87	58	20	5	2	2	9
Lincoln, Nebr.	30	21	3	2	3	1	1	TOTAL	12,994 [†]	8,421	2,435	1,313	444	375	817
Minneapolis, Minn.	221	170	31	14	2	4	23								
Omaha, Nebr.	86	59	19	3	2	3	3								
St. Louis, Mo.	121	86	17	7	4	7	-								
St. Paul, Minn.	68	50	11	5	-	2	4								
Wichita, Kans.	41	31	9	-	1	-	-								

*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

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Leadership Development Survey of State Health Officers — United States, 1988

In 1988, the Institute of Medicine (IOM)—in its report, *The Future of Public Health*—recommended that public health education efforts increase emphasis on managerial and leadership skills (1). To identify the highest priority managerial and leadership knowledge, skills, and abilities (KSAs) needed by new state and territorial health officers, the Public Health Foundation (PHF), the Association of State and Territorial Health Officials (ASTHO), and CDC surveyed state health officers. This report presents the findings of this survey and describes a new leadership development option for state health officers.

For this survey, a state health officer was defined as the chief public health official of a state as specified by law or as designated by the chief executive of each state. A work group with representatives from the PHF, ASTHO, the National Association of County Health Officials, the U.S. Conference of Local Health Officers, and CDC developed a questionnaire that addressed 78 potential managerial and leadership KSAs. These KSAs were divided into eight general competency areas: 1) policy development and program planning (eight KSAs); 2) agency (office) management (15); 3) interpersonal skills (six); 4) personnel management (11); 5) communications skills (12); 6) financial planning and management (17); 7) public image (working with the community) (five); and 8) legal issues (four). The PHF mailed the questionnaire to state and territorial health officers (in the 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and American Samoa).

Each state health officer was asked to score each KSA from one (low) to five (high) on the KSA's importance to the job (IJ); his or her perception of a new health officer's initial ability (IA); and his or her opinion of the desired ability (DA) for someone in that

Leadership Development Survey – Continued

job (2). KSAs were ranked by the mean IJ scores. For KSAs ranked in the highest 25%, a composite score was calculated for each KSA (i.e., composite score = IJ × [DA-IA]); these KSAs were then ranked by their composite scores to determine the highest priority skill needs.

Completed questionnaires were returned by 38 (69%) health officers. Twenty-nine (76%) of the respondents were physicians; of the remaining nine respondents, the highest degrees held were master's degrees in areas other than public health (five), master's degrees in public health (two), and bachelor's degrees (two). Twenty-seven (71%) reported >10 years' experience in public health; 19 (50%) had ≤3 years in their current position. The likelihood of participation in the survey did not appear to be associated with geographic distribution, nature of state relations with local health departments, annual health department expenditures, years of public health experience, tenure in current job, or highest level of education.

Overall, health officers identified as most important those KSAs in the competency areas of public image, interpersonal skills, and policy development and program planning. KSAs that ranked in the highest 25% of KSAs for importance included all five of the public image KSAs, four of the interpersonal skills, and four representing policy development and program planning.

Agency management KSAs and communications skills KSAs were of intermediate importance; four agency management KSAs and three communications skills KSAs ranked in the highest 25% of all KSAs. In comparison, financial planning and management KSAs and personnel management KSAs scored relatively low in importance; none of the 28 KSAs in these areas ranked in the highest 25%. Average composite scores for all KSAs ranged from 2.4 to 10.4. Average composite scores for KSAs most important to the job ranged from 4.9 to 10.4 and, for the highest 10 KSAs, 7.6 to 10.4 (Table 1).

Reported by: Public Health Foundation. Association of State and Territorial Health Officials. Public Health Practice Program Office, CDC.

Editorial Note: The IOM report addressed basic issues regarding public health leadership at the national, state, and local levels (1); effective leadership and management in public health at all levels are essential to achieve the national health objectives for the year 2000 (3). In 1989, state health officers concurred with the IOM perspective that public health agencies should engage in outreach activities to their communities and develop effective networks (4). In particular, state and territorial health officers targeted as high priorities the needs for building constituencies, working with legislative and community leaders, and communicating health information through the media.

During 1992, to address the needs for management and leadership skills in public health, CDC and a consortium of schools of public health in California have offered the first annual Public Health Leadership Institute (5). The institute is a 1-year educational and training experience for 50 practicing state and local public health leaders that includes a personal management and leadership assessment, the use of self-study packets, participation in computer conferences with other scholars, and attendance at a 5-day workshop.

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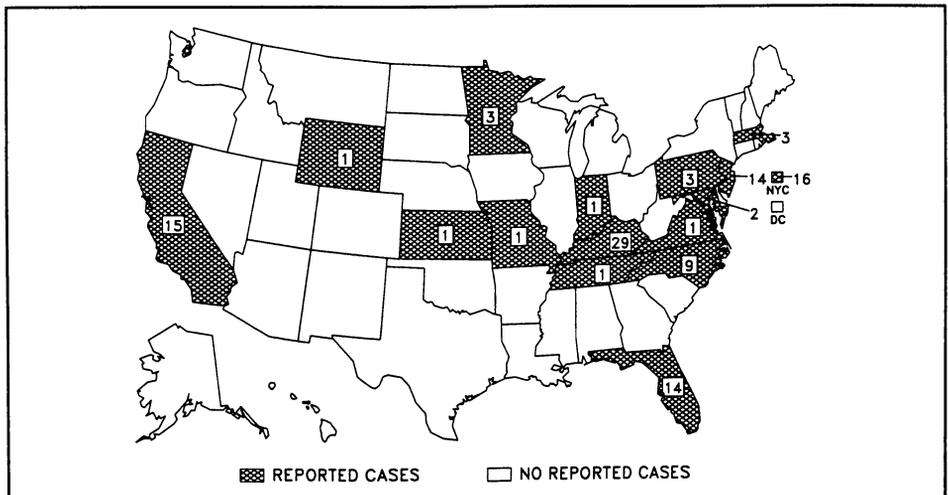
TABLE 1. Ranking of highest 10 knowledge, skills, and abilities (KSAs) for new state and territorial health officers* – United States, Leadership Development Survey of State Health Officers, 1988†

KSA	Ranking	
	No. respondents	Mean composite score
Working with the legislature	30	10.4
Diagnosing organizational ineffectiveness and taking appropriate measures for planned change	32	9.3
Specifying department mission and objectives	34	8.9
Identifying and evaluating department resources	34	8.7
Identifying and working with community leaders	31	8.6
Establishing and maintaining relationships with constituent groups	31	8.4
Delegating to others	33	8.1
Translating legislative mandates into organizational plans and programs	32	7.8
Effectively communicating health information to the public through the media	30	7.7
Conveying department mission and establishing commitment	33	7.6

*Ranking by mean composite scores for KSAs in the highest 25% for importance to job. Composite score = $IJ \times (DA - IA)$, where IJ = importance to job; IA = perceived initial ability of a new health officer; and DA = desired ability for someone in that job. Scores for each of the three variables (IJ , DA , IA) ranged from one (low) to five (high) and the total score potentially could range from a negative score to +20.0.

†Unweighted sample size = 38 state health officers.

Reported cases of measles, by state – United States, weeks 9–12, 1992



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