

5. Motor Vehicle Indicators

In 1999, motor vehicle crashes (MVCs) were the cause of more than 42,000 deaths¹ and more than four million emergency department visits.² Among persons ages 1 to 34, MVC injuries are the leading cause of death in the United States.¹ In all age groups, MVC injuries are the leading cause of years of potential life lost (YPLL) and deaths from unintentional injuries.¹

Alcohol-impaired driving increases the risk of death and is a *major* public health concern in the United States. In 1999, 38% of traffic fatalities were alcohol-related; either the driver or an affected person (e.g., a pedestrian or a bicyclist) had a blood alcohol concentration of at least 0.01 g/dL.³ In 1993, about 1.5 million arrests were made for impaired driving. That same year there were over 120 million episodes of alcohol-impaired driving among adults in the United States; nearly 10 million of these episodes involved underage youth 18 to 20 years of age.⁴

Failure to use a safety belt or child restraint is another major risk factor for fatalities and injuries to motor vehicle occupants. It is estimated that among front seat occupants, lap/shoulder belt use reduces the risk for fatal injury by approximately 45% and the risk for moderate to critical injury by 45% to 50%. Child safety seat use reduces the likelihood of fatal injury by an estimated 71% for infants and 54% for toddlers.³

For 1999 only, MVC fatalities are not displayed because they would not be comparable among states. As mentioned in the Methods section of the Introduction, the change from

ICD-9 to ICD-10 coding for death data produced an artificial change in rates for certain conditions. In the comparability study performed by the National Center for Health Statistics (NCHS), the rate for MVC-related deaths appeared lower when ICD-10 coding was used. The initial comparability ratio was 0.8527. The reason for this 15% decrease was that, in ICD-10, it must be explicit that the injury involved a “motor” vehicle. In ICD-9, in the absence of the term “motor” or when a vehicle crash was reported as occurring on a highway or road, the assumption was to classify the crash as involving a motor vehicle. The ICD-10 convention does not allow this assumption and classifies such crashes as involving unspecified vehicles. However, as a result of previously mentioned initial results, NCHS decided that, for U.S. data, if the crash occurred on a highway or road, classification to MVC is appropriate.⁵ While this adjustment was made to the 1999 national data set, and NCHS recommended these adjustments to all state and territorial Vital Registrars for state death data sets, some states elected not to re-open their 1999 death files to make this adjustment. As this report used state-based data sets, there would have been an artificial variation in rates among states of 15%, confusing the true picture. To view state MVC death rates calculated from the corrected national death data files, go to the WISQARS website.¹

Figures 5a, 5b, and 5c present data from 22 states on hospitalizations for MVC. The rate varied almost 2.6 times from the lowest state rate (43.4 per 100,000) to the highest (110.5 per 100,000). Rates are higher for males than females,

and the highest rates are generally found among 15 to 24 year olds, and those over 75 years of age. Overall, MVC hospitalizations occur at three to eight times the rate of MVC deaths (calculated from the national death data files).

Information about two motor vehicle-related risk behaviors are available for 1999, “driving after perhaps having too much to drink” is available from the Behavioral Risk Factor Surveillance System (BRFSS), and “high school students reporting always using safety belts” from the Youth Risk Behavior Survey (YRBS). Questions about seat belt use were not asked on the BRFSS questionnaires in 1999. Figures 5d, 5e, and 5f present data showing that between 2.6% and 9% of adults in the participating states reported driving after perhaps having had too much to drink in the past month. Figures 5g and 5h present data on self-reported safety belt use among high school students (YRBS) in 1999. The highest reported use of safety belts in high school students was 50.5%. In all but four of the 14 states with weighted YRBS data, fewer than 40% of high school students reported using safety belts. Males reported a higher rate of both risk behaviors than females.

References

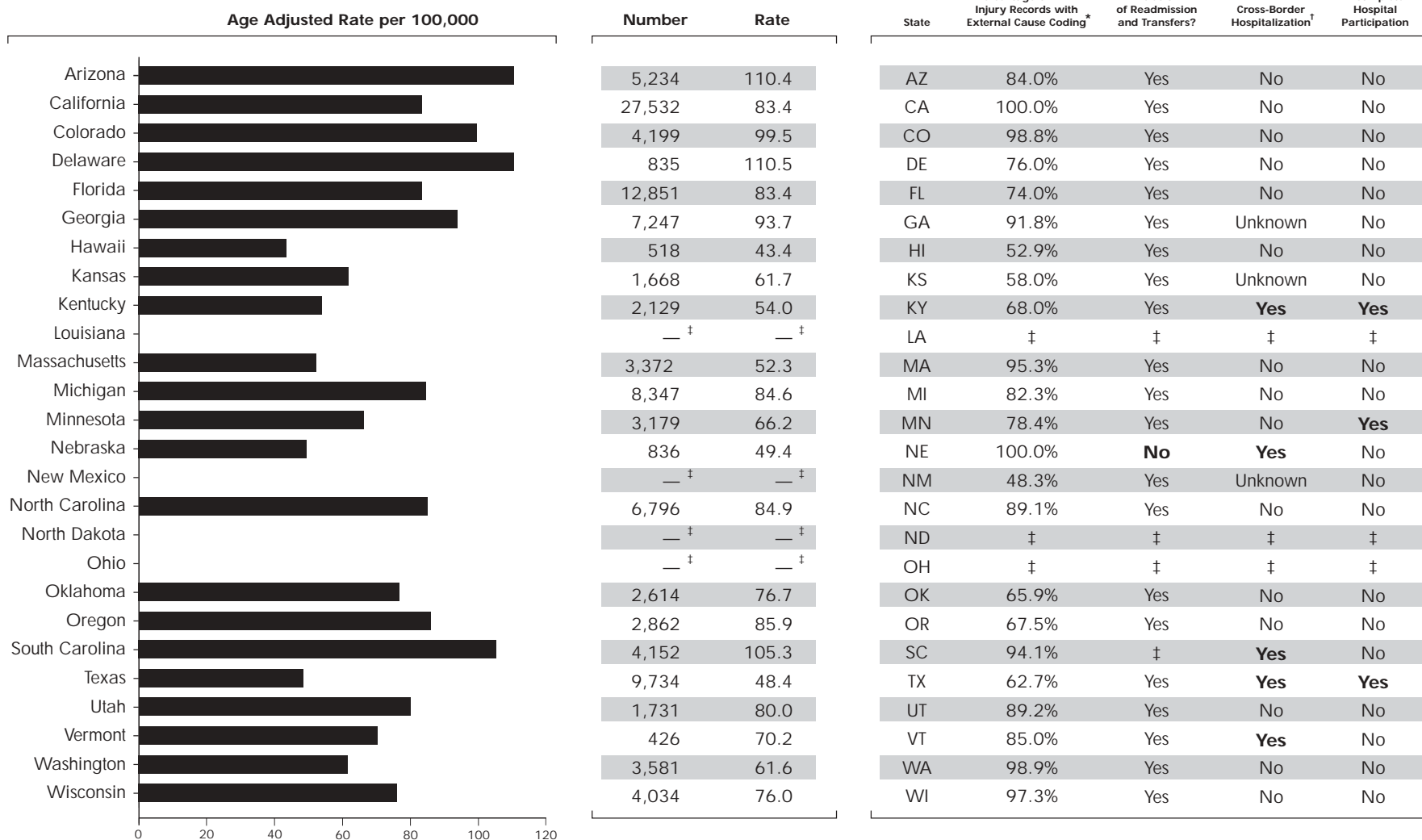
1. Centers for Disease Control and Prevention. Web-based injury statistics query and reporting system (WISQARS) [Online]. 2001. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (producer). [accessed 2001 Jul 28]. Available from URL: www.cdc.gov/ncipc/wisqars.
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Motor Vehicle Indicators Figures

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FIGURE 5a.

Motor Vehicle Indicator: Motor Vehicle Traffic and Non-Traffic Hospitalizations (Overall), 1999



* Incompleteness can lead to bias.

† Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

‡ No data available.

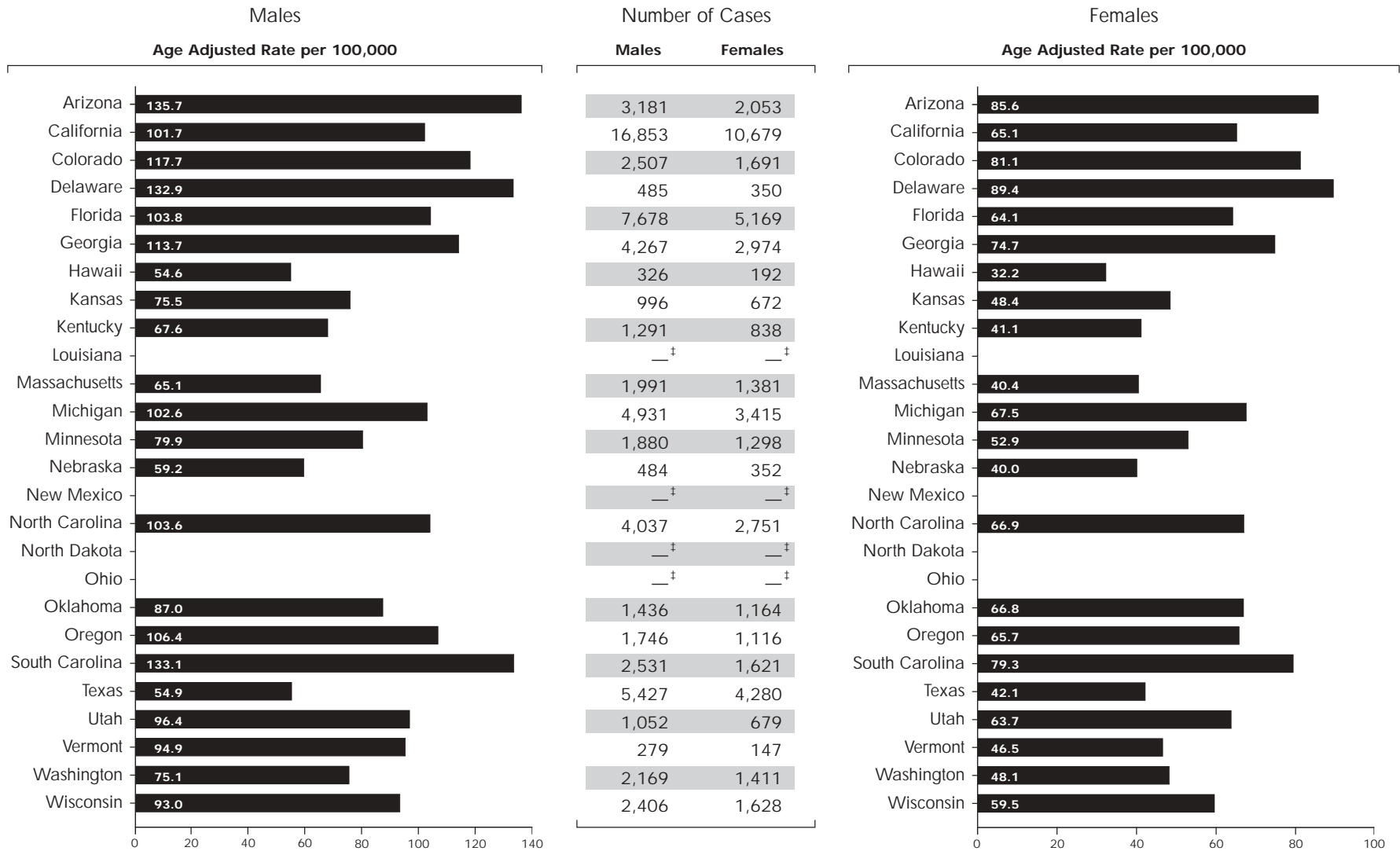
§ Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 5b.

Motor Vehicle Indicator: Motor Vehicle Traffic and Non-Traffic Hospitalizations by Sex, 1999



[†] No data available.

^{||} Rates are suppressed if fewer than 20 cases were reported.

[¶] Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 5c.

Motor Vehicle Indicator: Motor Vehicle Traffic and Non-Traffic Hospitalizations by Age**, 1999

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	32	41.7	153	49.5	396	53.6	1,324	197.9	940	149.5	858	116.6	581	98.8	306	76.0	283	83.0	297	134.0	64	97.1
CA	67	13.3	663	33.2	6,125	121.1	4,722	100.8	4,517	88.3	3,491	62.4	2,215	53.9	1,998	81.9	1,714	88.8	1,536	118.8	484	114.1
CO	7	— [‡]	58	24.8	272	44.7	1,063	176.8	727	110.0	762	105.5	539	91.5	293	88.3	208	92.9	205	148.4	65	138.6
DE	— [‡]	— [‡]	8	— [‡]	43	42.1	223	224.6	145	128.1	135	103.7	103	106.1	55	87.0	52	95.5	54	161.1	15	— [‡]
FL	24	12.1	194	25.7	839	42.7	2,729	147.7	2,192	111.0	2,048	88.1	1,498	74.6	1,030	68.9	920	63.5	996	94.1	381	118.6
GA	23	19.3	149	32.3	583	51.1	1,746	157.2	1,308	108.5	1,189	88.9	853	83.3	537	85.3	417	99.5	306	119.3	136	159.4
HI	— [‡]	— [‡]	18	— [‡]	42	25.9	113	67.9	78	53.1	94	47.4	67	40.4	37	35.6	30	34.1	32	56.6	6	— [‡]
KS	— [‡]	— [‡]	39	26.6	125	32.2	456	114.5	219	64.3	273	63.9	164	47.9	123	56.0	109	62.2	109	85.6	50	96.8
KY	5	— [‡]	46	22.3	133	24.9	574	99.5	365	67.3	357	55.7	220	40.6	144	38.6	145	54.2	119	70.8	21	36.6
LA	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
MA	— [‡]	— [‡]	34	10.6	163	20.2	743	84.1	544	54.1	582	57.1	392	47.9	252	50.9	259	58.6	297	99.2	105	87.1
MI	23	17.3	137	25.4	604	42.0	1,944	145.3	1,360	94.8	1,452	90.6	1,024	77.6	608	73.0	567	87.8	472	108.7	154	107.2
MN	— [‡]	— [‡]	42	16.3	214	29.7	859	125.6	490	77.8	535	65.8	363	57.9	190	48.2	207	71.2	207	98.4	70	82.9
NE	— [‡]	— [‡]	7	— [‡]	53	21.4	236	93.7	123	59.6	110	42.1	89	41.3	68	48.2	59	51.9	64	79.7	26	75.8
NM	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
NC	24	22.1	118	27.9	407	37.0	1,610	145.1	1,238	101.8	1,119	88.3	776	73.7	475	67.2	497	94.2	437	135.5	95	92.0
ND	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
OH	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
OK	6	— [‡]	60	32.5	202	41.4	717	142.2	397	95.1	397	78.1	289	65.8	174	54.5	177	74.3	150	97.9	45	78.7
OR	8	— [‡]	63	35.9	196	42.4	675	147.3	443	104.3	482	91.5	387	79.2	223	74.0	167	76.5	154	96.0	64	113.7
SC	11	— [‡]	81	39.9	257	47.8	992	178.0	772	137.8	705	112.0	505	96.1	308	88.2	260	97.0	200	126.0	61	130.6
TX	44	13.2	236	18.1	738	23.5	2,574	84.6	1,647	59.4	1,481	45.4	1,062	41.6	670	41.4	624	56.3	476	70.6	182	77.9
UT	9	— [‡]	43	25.3	155	40.8	558	137.5	262	79.5	237	76.0	155	67.4	109	80.0	82	83.0	86	134.1	35	168.5
VT	— [‡]	— [‡]	— [‡]	— [‡]	21	24.5	114	136.2	63	82.7	68	67.4	49	54.0	32	57.3	37	91.8	31	117.6	6	— [‡]
WA	7	— [‡]	62	19.4	230	26.7	900	112.1	590	69.8	599	61.4	429	53.1	273	56.8	199	58.0	198	84.6	93	113.8
WI	6	— [‡]	51	19.2	252	32.9	1,064	104.7	666	96.8	635	73.2	434	62.3	275	61.1	266	76.2	292	117.9	93	98.2

‡ No data available.

‡ Rates are suppressed if fewer than 20 cases were reported.

‡ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

FIGURE 5d.
**Motor Vehicle Indicator: Percentage of Adults Reporting
Driving After Perhaps Having Too Much to Drink, in the Past Month, 1999,
Behavioral Risk Factor Surveillance System**

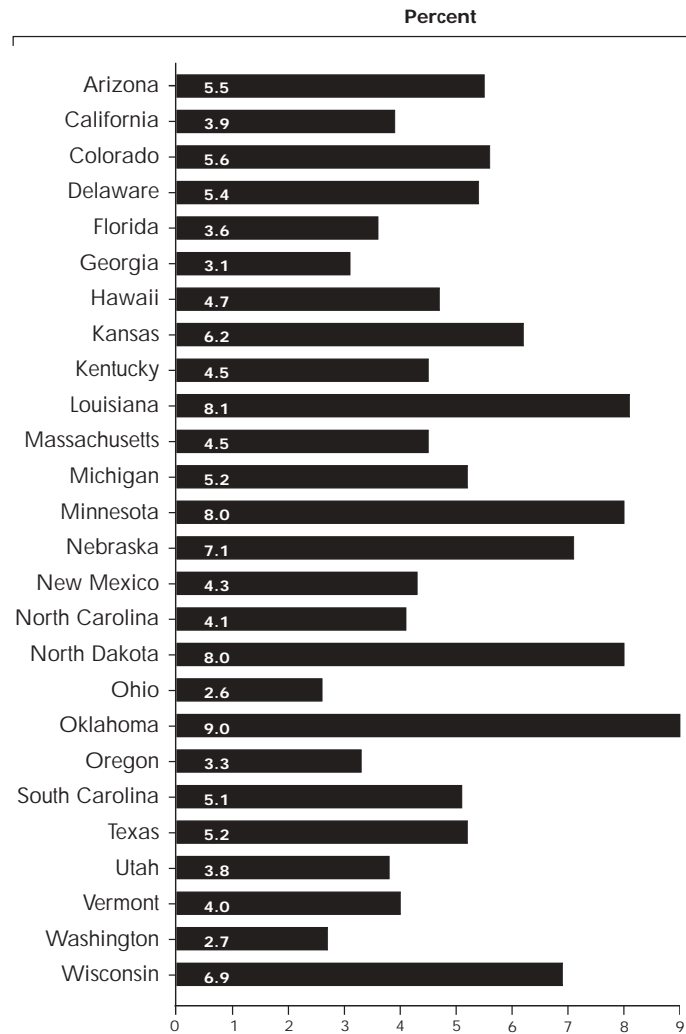
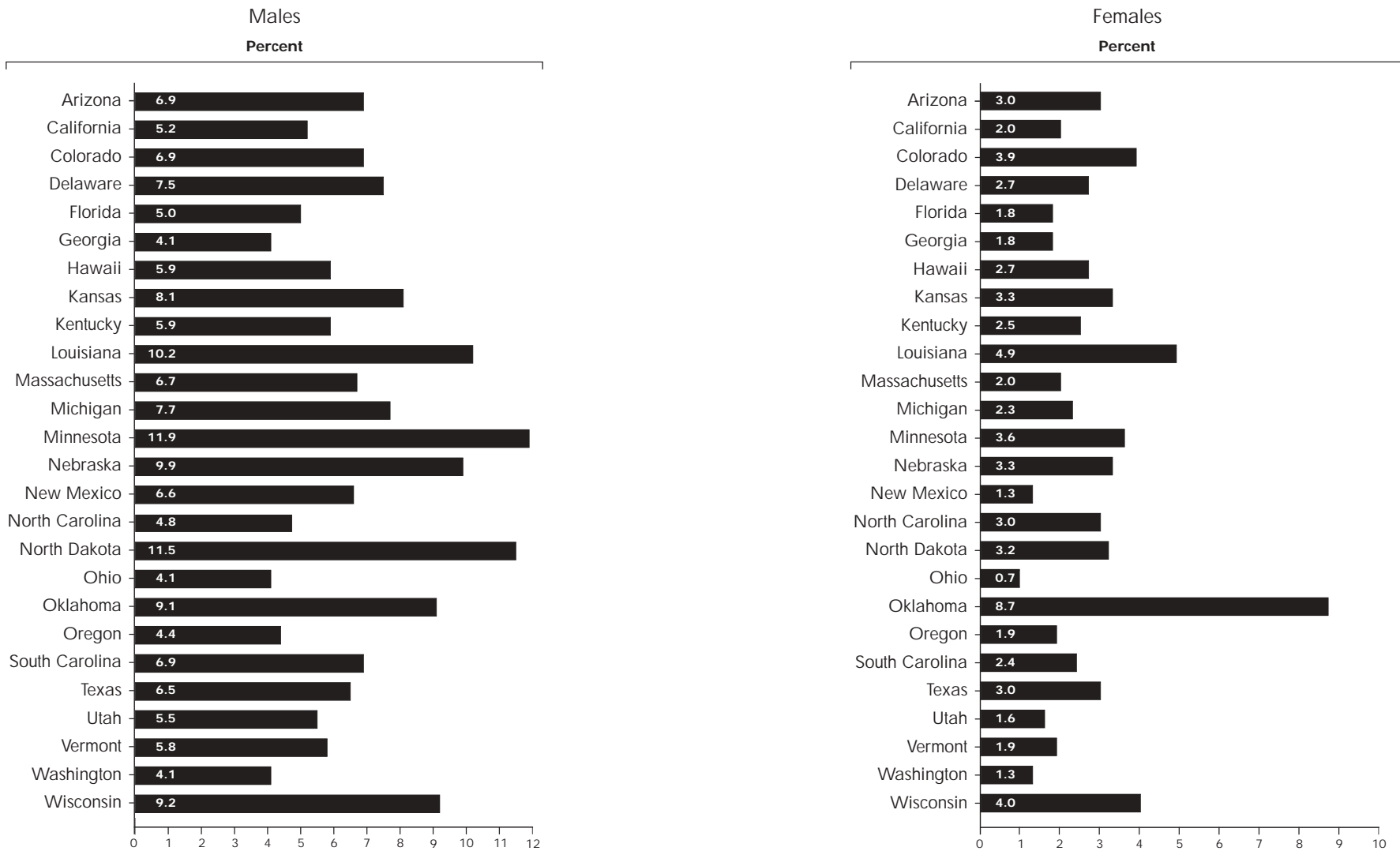


FIGURE 5e.

Motor Vehicle Indicator: Percentage of Adults Reporting Driving After Perhaps Having Too Much to Drink, in the Past Month, by Sex, 1999, Behavioral Risk Factor Surveillance System



† No data available.

‡ Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 5f.

Motor Vehicle Indicator: Percentage of Adults Reporting Driving After Perhaps Having Too Much to Drink, in the Past Month, by Age, 1999, Behavioral Risk Factor Surveillance System**

State	18-24	25-34	35-44	45-54	55-64	65+
	Percent	Percent	Percent	Percent	Percent	Percent
AZ	4.1	9.2	8.9	0.6	11.9	0.6
CA	6.5	5.9	3.5	2.0	1.6	1.9
CO	13.9	6.4	4.1	5.5	2.6	1.4
DE	9.9	9.8	4.4	1.8	5.3	0.3
FL	7.8	7.0	3.1	3.3	0.0	0.8
GA	4.3	4.7	2.9	2.8	0.8	0.0
HI	12.2	3.0	4.9	2.7	2.5	3.8
KS	12.8	8.5	4.3	3.3	2.9	1.6
KY	7.6	5.2	4.3	3.0	3.0	1.7
LA	14.9	8.0	9.0	5.0	4.3	2.0
MA	9.7	6.4	4.3	3.4	1.3	1.2
MI	7.6	10.5	5.5	1.0	2.7	0.9
MN	13.4	10.9	6.6	5.8	7.8	3.6
NE	14.5	7.7	9.6	4.1	1.8	1.3
NM	7.9	3.8	5.3	3.9	2.4	0.9
NC	4.2	8.5	4.1	2.5	0.0	0.0
ND	13.2	10.7	7.9	5.1	3.9	2.9
OH	0.7	2.9	6.0	2.7	0.0	0.0
OK	6.3	9.5	12.6	9.4	8.7	3.0
OR	5.1	5.0	3.4	4.3	0.0	0.0
SC	9.9	8.6	2.1	3.8	0.9	2.6
TX	8.2	7.8	3.9	3.6	3.2	1.5
UT	6.3	7.3	2.4	2.5	0.3	1.7
VT	9.6	5.7	3.1	2.0	0.5	0.9
WA	8.3	2.9	2.6	2.0	1.4	0.5
WI	7.1	10.0	9.3	4.3	6.3	2.4

‡ No data available.

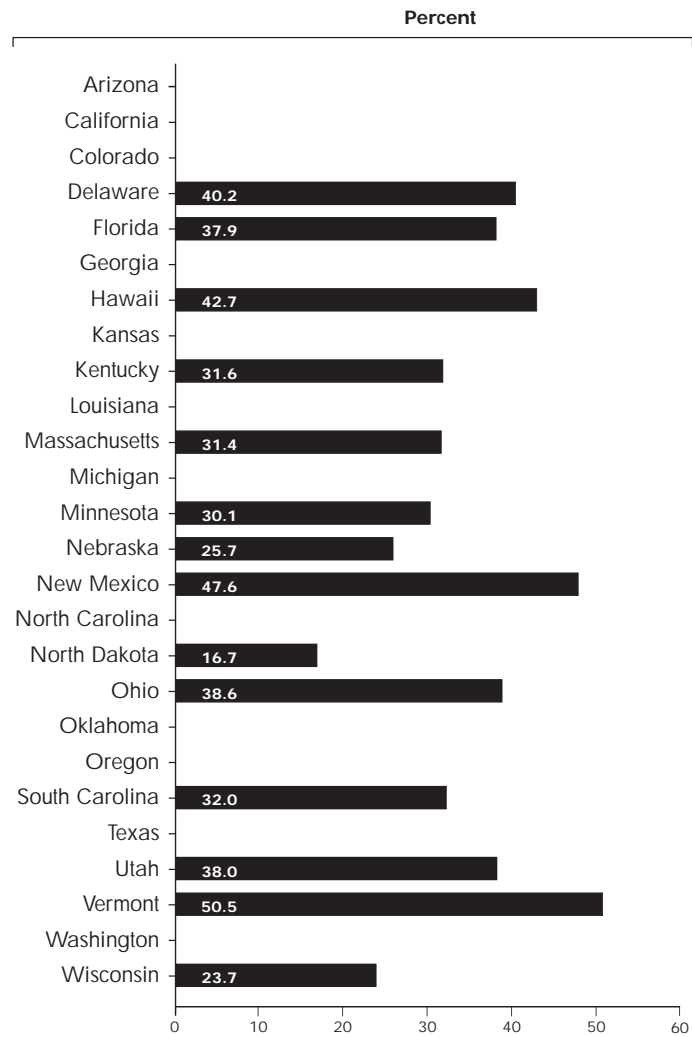
¶ Rates are suppressed if fewer than 20 cases were reported.

¶¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

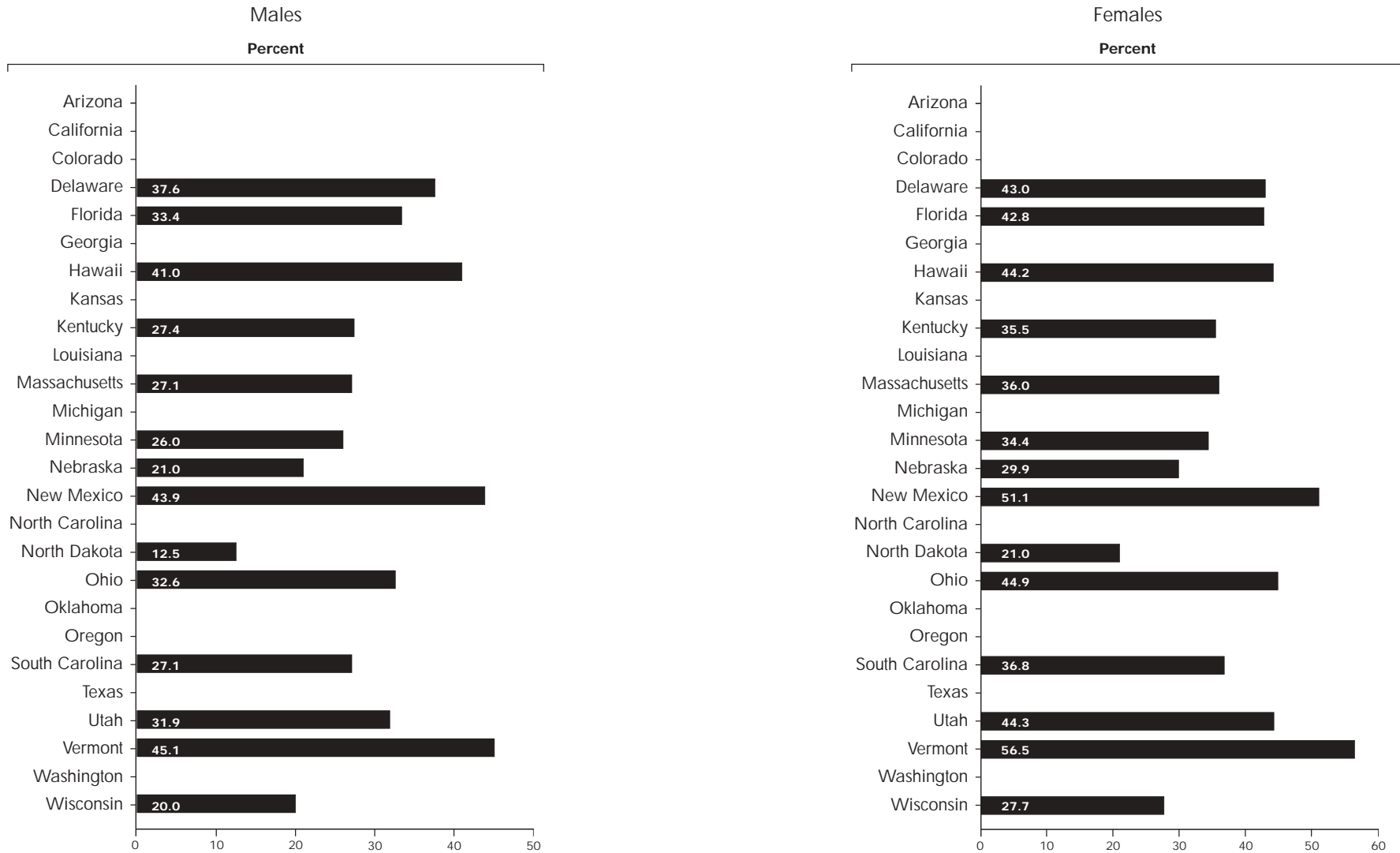
FIGURE 5g.
**Motor Vehicle Indicator: Percentage of High School Students Reporting
Always Using Safety Belts, 1999, Youth Risk Behavior Survey**



Note: No data available for Arizona, California, Colorado, Georgia, Kansas, Louisiana, Michigan, North Carolina, Oklahoma, Oregon, Texas, and Washington.

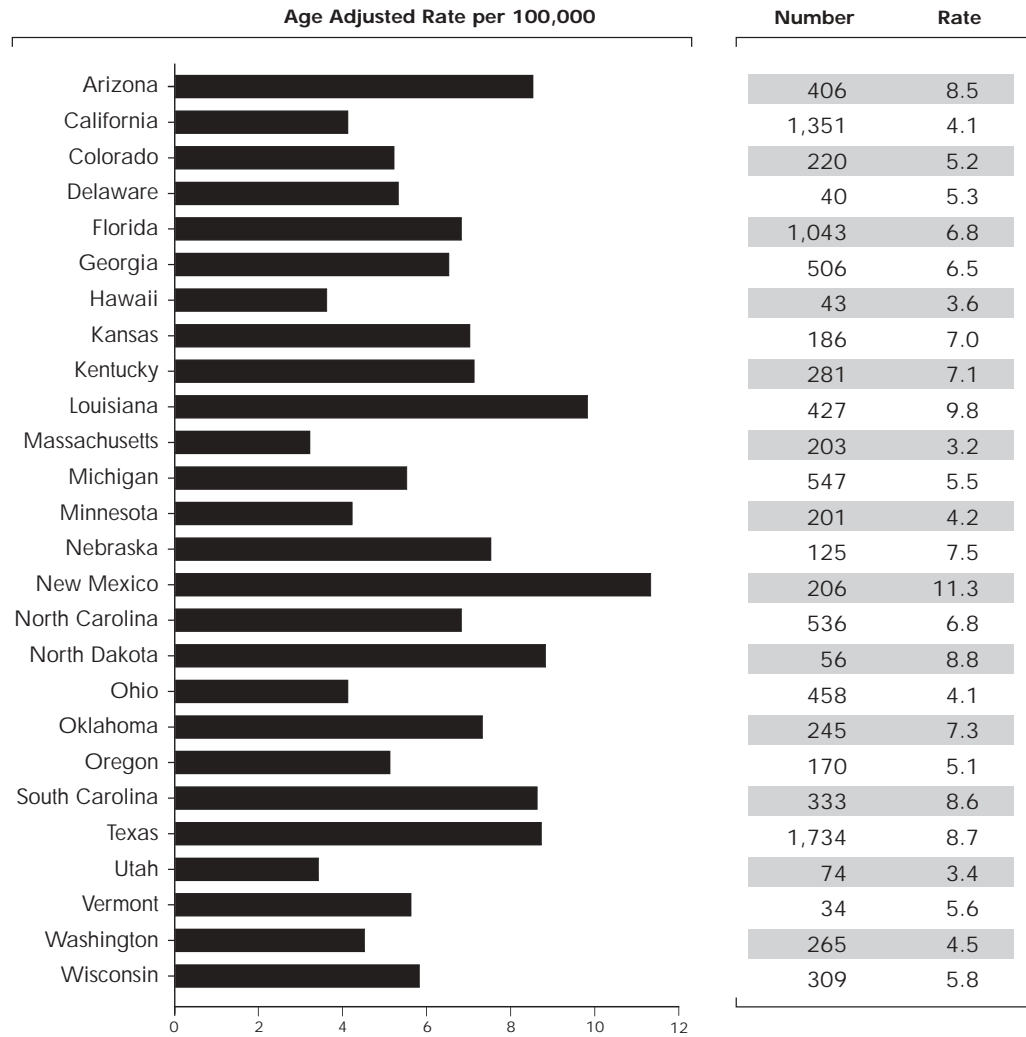
FIGURE 5h.

Motor Vehicle Indicator: Percentage of High School Students Reporting Always Using Safety Belts by Sex, 1999, Youth Risk Behavior Survey



Note: No data available for Arizona, California, Colorado, Georgia, Kansas, Louisiana, Michigan, North Carolina, Oklahoma, Oregon, Texas, and Washington.

FIGURE 5i.
Motor Vehicle Indicator: Alcohol-Related Crash Deaths, 1999



6. Poisoning Indicators

Poisoning is the damaging effect of exposure to a broad range of chemicals (e.g., gases, pesticides, heavy metals, drugs, and a variety of common household substances such as bleach and ammonia). In 1999, 19,741 people died from poisoning in the United States.¹ Drug overdoses, specifically misuse of medications and recreational drugs, caused about three-fourths of these deaths.² Nationally, over 60% of poisonings nationally in 1999 were unintentional, 25% were suicides, less than 1% were homicides, and 13% were of undetermined intent.¹ Rates of poisoning by suicide and homicide have not increased in the past decade. In contrast, the rates of unintentional poisoning deaths and poisoning deaths with undetermined intent have increased since 1990.²

Males have more than two times the risk for poisoning death compared to females. The largest difference is in the category of unintentional poisoning death, where mortality rates among men are more than three times that of women. In suicide poisoning deaths, males have about one and a half times the rate of females. Blacks have the highest mortality from all poisoning (B:W 1.2:1), unintentional poisoning (B:W 1.7:1), and undetermined poisoning (B:W 1.6:1). In suicide poisoning, blacks have lower rates than whites (B:W 1:3.1). Asian American/Pacific Islanders had the lowest rates of poisoning in all categories. Most poisoning deaths (84%) occur among people ages 25 to 54. Poisoning deaths in children under the age of five account for only 0.4% of all poisoning mortality.¹ Since 1960, poisoning deaths of children younger than five years have decreased dramatically. A steep decline occurred after childproof packaging was required on all drugs and medications beginning in 1973.³

Figures 6a, 6b, and 6c present the poisoning-related hospitalization data for 21 states in 1999. Figure 6a illustrates a more than two-fold difference between the lowest and highest rates. Figures 6d, 6e, and 6f present the poisoning death rates for 25 states in 1999. Figure 6d shows a four-and-one-half-fold difference between the lowest and highest rates. Overall, individual state hospitalization rates were four to fifteen times higher than death rates for poisoning-related injuries. Males had higher rates than females in poisoning deaths, while females had higher rates of hospitalization. The highest poisoning mortality rates were among people 35 to 54 years of age. Age-specific rates could not be calculated for many age categories due to small numbers.

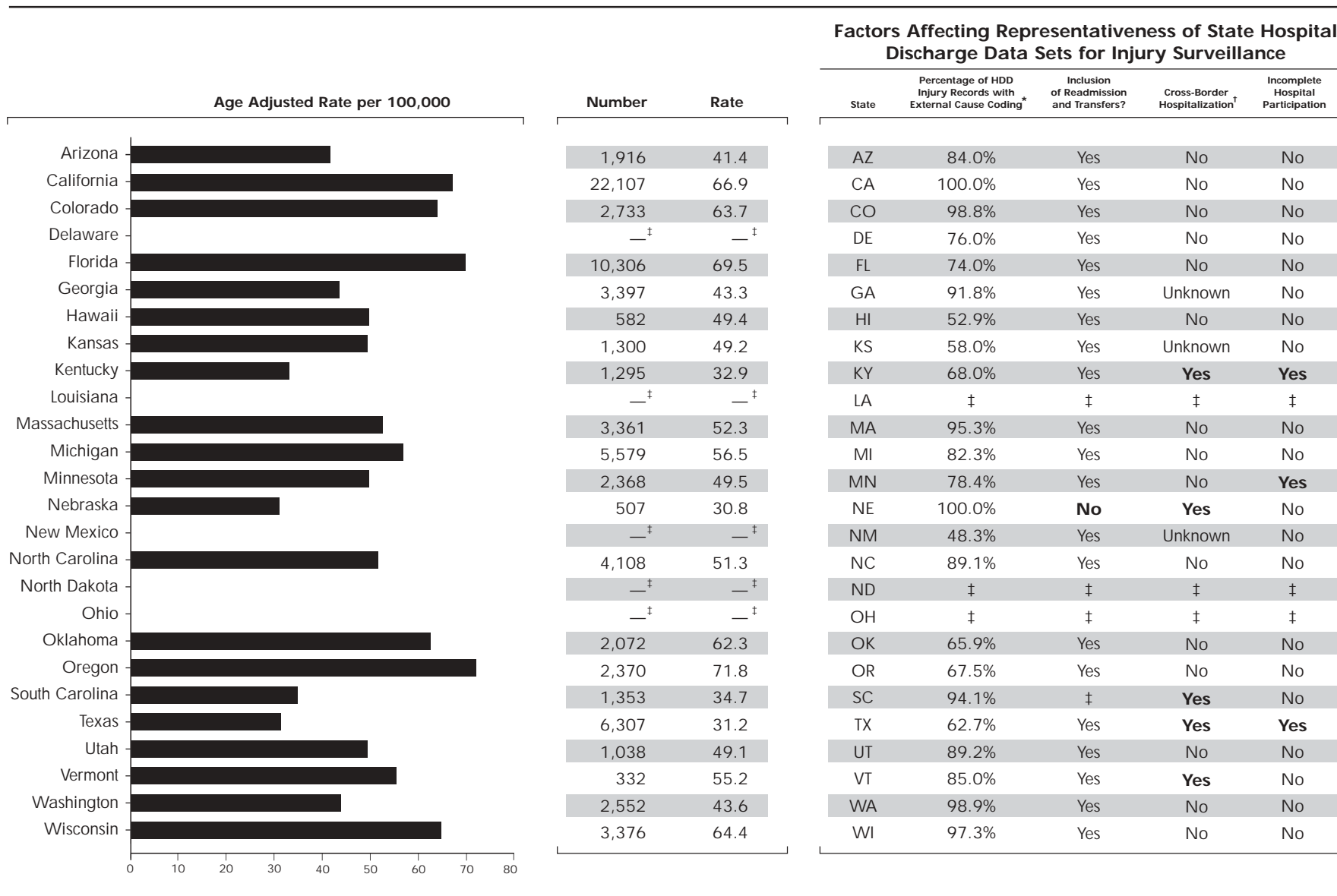
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Poisoning Indicators Figures

- 6a. Poisoning Hospitalizations (Overall), 1999
- 6b. Poisoning Hospitalizations by Sex, 1999
- 6c. Poisoning Hospitalizations by Age, 1999
- 6d. Poisoning Fatalities (Overall), 1999
- 6e. Poisoning Fatalities by Sex, 1999
- 6f. Poisoning Fatalities by Age, 1999

FIGURE 6a.
Poisoning Indicator: Poisoning Hospitalizations (Overall), 1999



* Incompleteness can lead to bias.

† Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

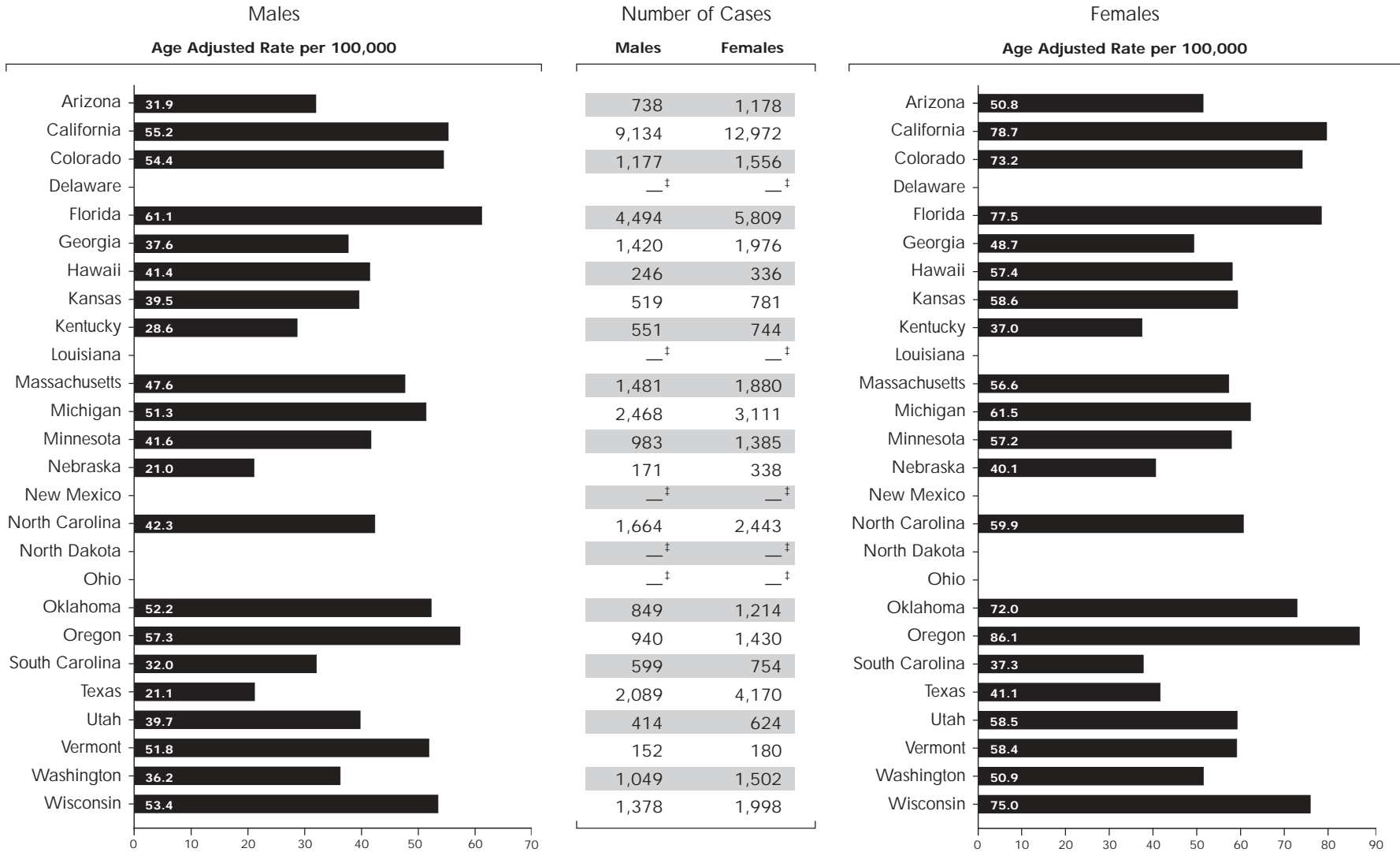
‡ No data available.

§ Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 6b.
Poisoning Indicator: Poisoning Hospitalizations by Sex, 1999



[†] No data available.

^{||} Rates are suppressed if fewer than 20 cases were reported.

[¶] Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 6C.
Poisoning Indicator: Poisoning Hospitalizations by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	—	34	11	74	10	404	60	414	66	507	69	310	53	77	19	47	14	34	15	11	—
CA	73	15	892	45	3,417	68	3,831	82	5,370	105	3,726	67	690	17	1,552	64	1,163	60	1,011	78	382	90
CO	6	—	61	26	96	16	560	93	539	82	692	96	419	71	128	39	99	44	97	70	36	77
DE	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
FL	42	21	385	51	334	17	1,835	99	1,904	96	2,567	111	1,575	78	593	40	465	32	422	40	184	57
GA	16	—	95	21	122	11	575	52	707	59	854	64	506	49	219	35	141	34	122	48	40	47
HI	— [‡]	—	27	42	17	—	137	82	100	68	120	61	94	57	38	37	25	28	23	41	— [‡]	—
KS	— [‡]	—	57	39	65	17	306	77	261	77	309	72	142	41	54	25	42	24	46	36	14	—
KY	8	—	75	36	39	7	241	42	248	46	345	54	167	31	69	19	46	17	49	29	8	—
LA	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
MA	7	—	49	15	68	8	646	73	714	71	881	86	495	61	165	33	135	31	139	46	62	52
MI	22	17	294	55	206	14	963	72	1,001	70	1,398	87	816	62	336	40	228	36	221	51	94	65
MN	— [‡]	—	67	26	125	17	572	84	426	68	545	67	333	53	103	26	85	29	67	32	41	49
NE	— [‡]	—	20	22	25	10	109	43	97	47	114	44	60	28	31	22	25	22	20	25	6	—
NM	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
NC	10	—	162	38	146	13	679	61	844	69	1,028	81	592	56	241	34	212	40	141	44	53	51
ND	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
OH	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
OK	18	—	141	76	69	14	448	89	378	91	482	95	248	57	114	36	69	29	72	47	33	58
OR	5	—	66	2	68	2	445	14	470	15	633	20	375	10	125	4	78	2	75	2	30	1
SC	19	—	122	60	72	13	229	41	216	39	241	38	159	30	107	31	95	36	74	47	19	—
TX	38	11	209	16	292	9	1,611	53	1,202	43	1,257	39	720	28	319	20	318	29	236	35	105	45
UT	5	—	40	24	31	8	258	64	187	57	230	74	149	65	67	49	34	34	25	39	11	—
VT	— [‡]	—	11	—	13	—	73	87	66	87	72	71	60	66	12	—	15	—	7	—	— [‡]	—
WA	9	—	45	14	73	9	439	55	473	56	672	69	401	50	153	32	118	34	114	49	54	66
WI	16	—	181	68	119	16	672	89	637	93	846	98	446	64	152	34	123	35	121	49	63	67

‡ No data available.

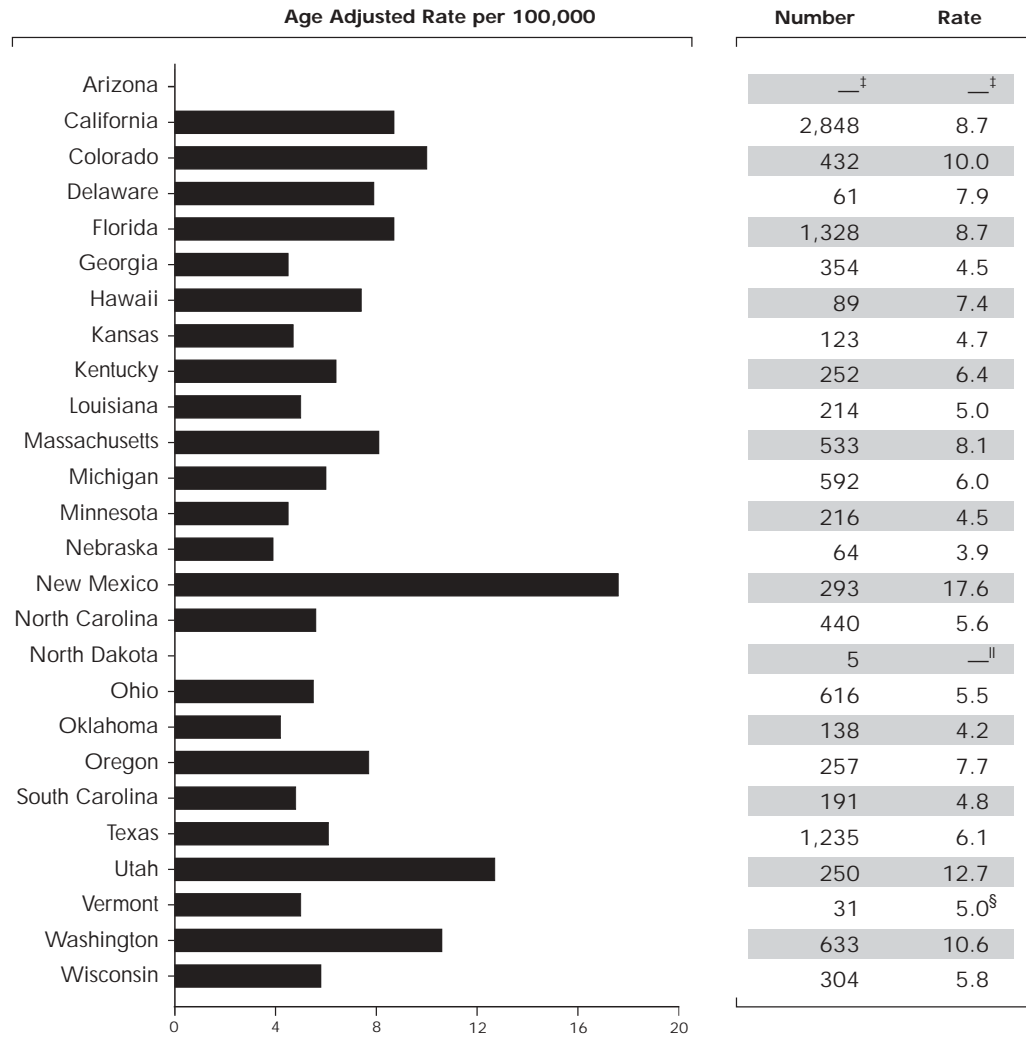
|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

FIGURE 6d.
Poisoning Indicator: Poisoning Fatalities (Overall), 1999



* Incompleteness can lead to bias.

[†] Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

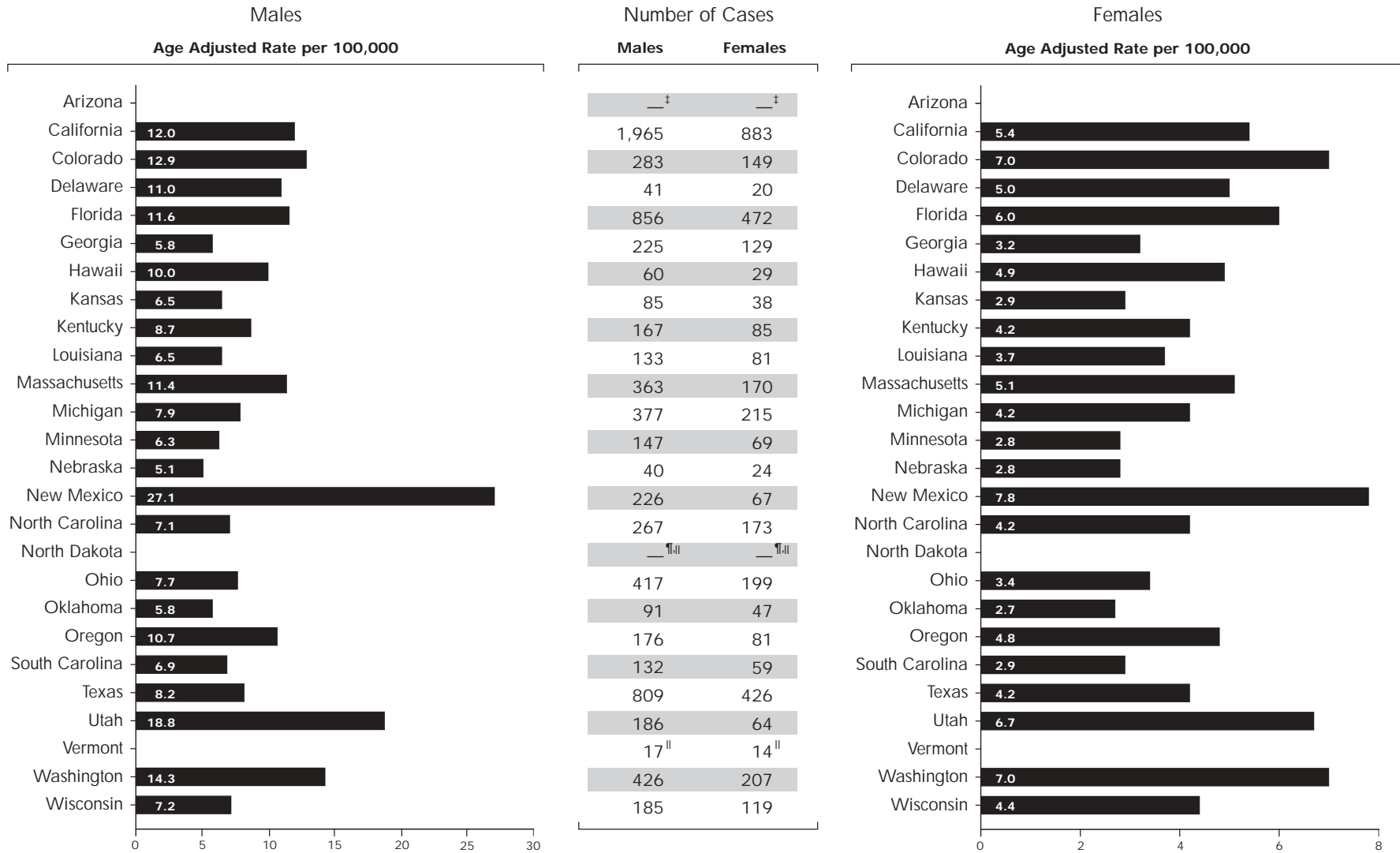
[‡] No data available.

^{\$} Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

^{||} Rates are suppressed if fewer than 20 cases were reported.

[¶] Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 6e.
Poisoning Indicator: Poisoning Fatalities by Sex, 1999



[‡] No data available.

^{||} Rates are suppressed if fewer than 20 cases were reported.

[¶] Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 6f.
Poisoning Indicator: Poisoning Fatalities by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
CA	— [¶]	— [¶]	5	— [¶]	— [¶]	— [¶]	157	3.4	470	9.2	1,002	17.9	809	19.7	237	9.7	85	4	54	4	22	5
CO	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	26	4.3	76	11.5	157	21.7	114	19.4	32	9.6	7	— [¶]	12	— [¶]	5	— [¶]
DE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	6	— [¶]	11	— [¶]	19	— [¶]	14	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
FL	— [¶]	— [¶]	— [¶]	— [¶]	5	— [¶]	120	6.5	226	11.4	448	19.3	298	14.8	85	5.7	59	4	51	5	29	9
GA	5	— [¶]	— [¶]	— [¶]	6	— [¶]	29	2.6	61	5.1	110	8.2	89	8.7	22	3.5	12	— [¶]	11	— [¶]	6	— [¶]
HI	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	14	— [¶]	33	16.6	30	18.1	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
KS	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	18	— [¶]	42	9.8	34	9.9	10	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
KY	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	18	— [¶]	54	10.0	93	14.5	50	9.2	25	6.7	9	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
LA	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	16	— [¶]	49	8.6	68	10.1	51	9.0	17	— [¶]	5	— [¶]	6	— [¶]	— [¶]	— [¶]
MA	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	43	4.9	140	13.9	204	20.0	97	11.8	30	6.1	8	— [¶]	— [¶]	— [¶]	7	— [¶]
MI	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	36	2.7	95	6.6	208	13.0	156	11.8	44	5.3	19	— [¶]	23	5	7	— [¶]
MN	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	22	3.2	26	4.1	78	9.6	48	7.7	16	— [¶]	8	— [¶]	11	— [¶]	6	— [¶]
NE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	13	— [¶]	22	8.4	11	— [¶]	— [¶]	— [¶]	5	— [¶]	5	— [¶]	— [¶]	— [¶]
NM	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	19	— [¶]	52	24.7	117	42.1	80	34.9	16	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
NC	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	31	2.8	64	5.3	161	12.7	110	10.4	36	5.1	12	— [¶]	16	— [¶]	8	— [¶]
ND	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
OH	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	37	2.4	101	6.6	228	12.5	156	10.4	38	3.8	25	3	18	— [¶]	7	— [¶]
OK	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	9	— [¶]	28	6.7	47	9.2	25	5.7	11	— [¶]	— [¶]	— [¶]	10	— [¶]	5	— [¶]
OR	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	13	— [¶]	54	12.7	93	17.6	65	13.3	11	— [¶]	8	— [¶]	7	— [¶]	5	— [¶]
SC	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	19	— [¶]	28	5.0	67	10.7	48	9.1	19	— [¶]	8	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
TX	— [¶]	— [¶]	— [¶]	— [¶]	7	— [¶]	126	4.1	266	10.0	418	12.8	244	9.6	84	5.2	39	4	30	5	15	— [¶]
UT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	24	5.9	48	14.6	92	29.5	66	28.7	11	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
VT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	12	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
WA	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	54	6.7	117	13.8	218	22.4	162	20.1	47	9.8	16	— [¶]	12	— [¶]	— [¶]	— [¶]
WI	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	21	2.8	61	8.9	95	10.9	62	8.9	20	4.4	15	— [¶]	35	7	10	— [¶]

‡ No data available.

¶ Rates are suppressed if fewer than 20 cases were reported.

¶¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

7. Firearm-Related Indicators

Firearm-related injuries are the second leading cause of injury-related death in the United States, accounting for approximately 29,000 deaths in 1999.¹

Both fatal and nonfatal firearm-related injury rates are highest among persons ages 15 to 24 years; black males in that age group have the highest risk. Fatal and nonfatal firearm-related injury rates for Hispanics are generally less than those for blacks, but higher than those for white non-Hispanics. Nationally, the firearm-related death rate for males is six times higher than that of females; the nonfatal firearm-related injury rate for males is eight times higher. The proportion of persons who die from firearm-related injuries increases with age. Of those who survive a gunshot wound and are treated in a hospital emergency department (ED), approximately 55% are hospitalized or transferred, and the other 45% are treated and released. Nationally, the case-fatality rate and hospitalization rate is higher for firearm-related injuries than for any other cause of injury.² This means that a person is more likely to die or be hospitalized for a firearm-related injury than any other injury.

The majority of fatal and nonfatal firearm-related injuries among teenagers and young adults result from violence. In contrast, firearm-related injuries among older adults are predominantly self-inflicted. Although unintentional firearm-related deaths represent less than 4% of all firearm deaths, approximately one-fifth of non-fatal firearm-related injuries treated in U.S. hospital EDs are unintentional.²

In 1994, treatment of gunshot injuries in the United States cost an estimated \$2.3 billion in lifetime medical costs, of which \$1.1 billion was paid by the federal government.³

Nationally, fatal firearm-related injury rates declined 29%, and nonfatal firearm-related injury rates declined 47% during 1993-1998.¹ Although the reasons for these changes are unknown, certain factors may have contributed to the decrease. For example, the decline in assault firearm injuries is consistent with a 27% decrease in violent crime⁴ and a 20% decline in non-firearm homicides during the same period.¹ Possible contributors include improvements in economic conditions; aging of the population; decline of the cocaine market; changes in legislation, sentencing guidelines, and law-enforcement practices; and violence prevention programs.⁵ However, the importance and relative contribution of each of these factors have not been determined.

Figures 7a, 7b, and 7c represent firearm-related hospitalization data submitted by 22 states for 1999. In two states, the number of hospitalization cases was too small to allow calculation of a stable rate. There is an approximately five-fold difference between the lowest and highest rates for hospitalization. Figures 7d, 7e, and 7f represent firearm-related death rates in 25 states in 1999, and illustrate more than a six-fold difference between the lowest and highest rates. In almost all states, the highest rates of firearm death are seen among people ages 15 to 34 years, with a second peak among those over 75. For hospitalizations, the highest rates again are found among those ages 15 to 34 years, but

there is no second peak in the oldest age group. This is probably because fire-arm injuries among the elderly are often self-inflicted and usually lethal. The ratio of hospitalization to death ranges from 0.3:1 to 1.1:1. Firearm fatality and hospitalization rates are much higher for males than females.

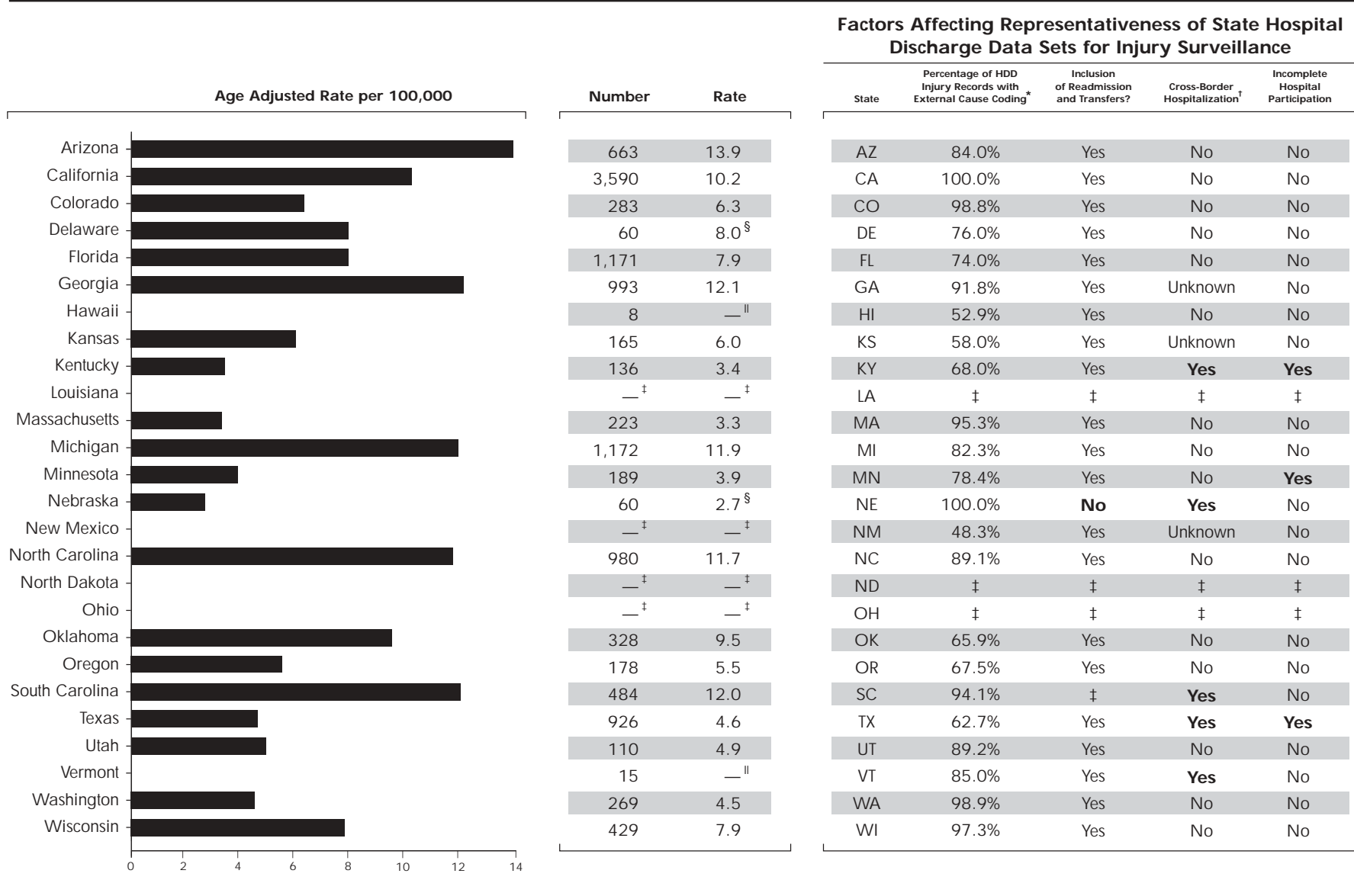
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Firearm-Related Indicators Figures

- 7a. Firearm-Related Hospitalizations (Overall), 1999
- 7b. Firearm-Related Hospitalizations by Sex, 1999
- 7c. Firearm-Related Hospitalizations by Age, 1999
- 7d. Firearm-Related Fatalities (Overall), 1999
- 7e. Firearm-Related Fatalities by Sex, 1999
- 7f. Firearm-Related Fatalities by Age, 1999

FIGURE 7a.
Firearm-Related Indicator: Firearm-Related Hospitalizations (Overall), 1999



* Incompleteness can lead to bias.

† Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

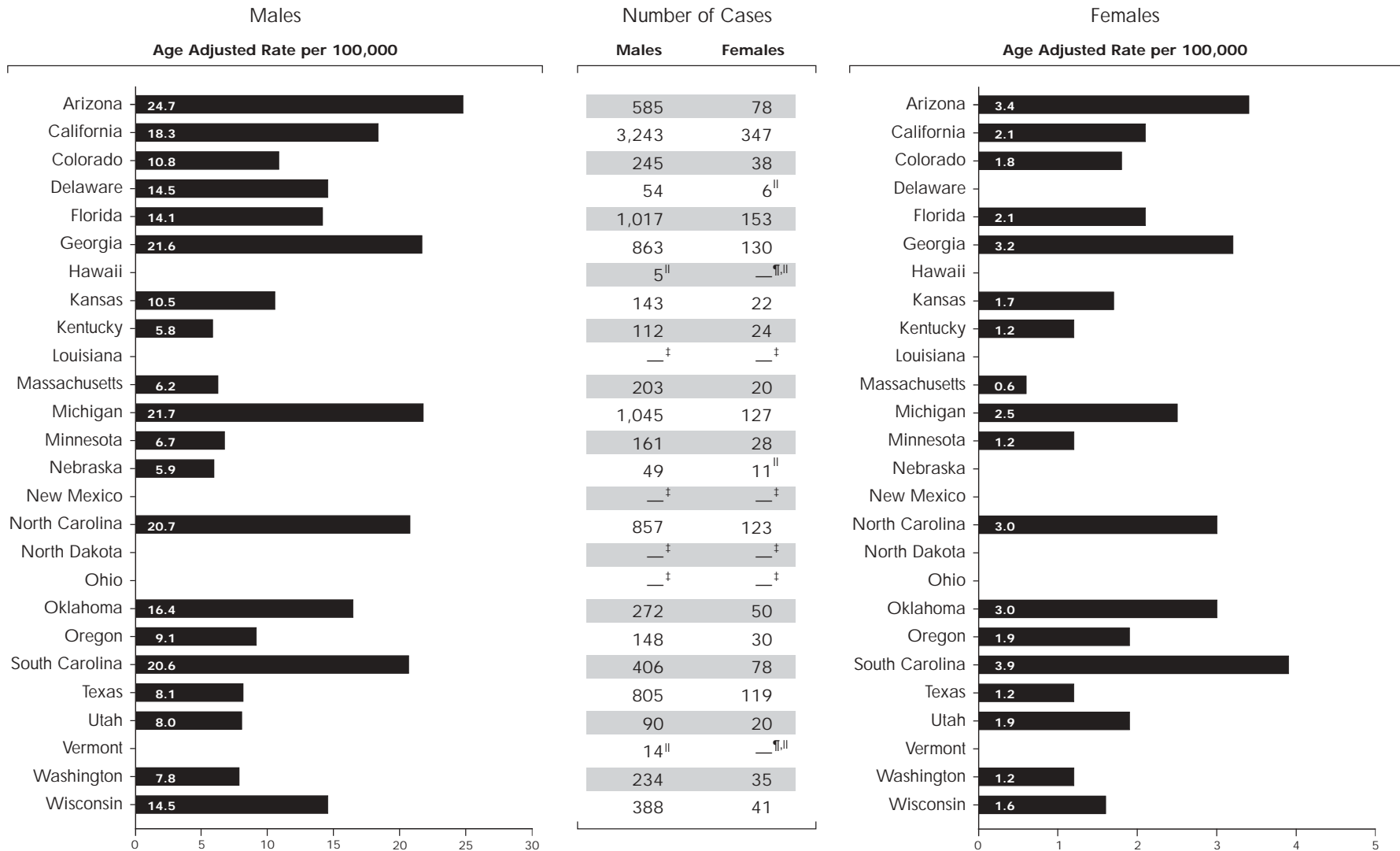
‡ No data available.

§ Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 7b.
Firearm-Related Indicator: Firearm-Related Hospitalizations by Sex, 1999



‡ No data available.

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 7c.
Firearm-Related Indicator: Firearm-Related Hospitalizations by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	—	— [‡]	—	19	—	282	42.1	173	27.5	109	14.8	52	8.8	13	—	6	—	5	—	— [‡]	—
CA	— [‡]	—	11	—	115	2.3	1,821	38.9	848	16.6	466	8.3	178	4.3	77	3.2	33	1.7	33	2.6	7	—
CO	— [‡]	—	— [‡]	—	8	—	123	20.5	78	11.8	34	4.7	19	—	11	—	— [‡]	—	— [‡]	—	— [‡]	—
DE	— [‡]	—	— [‡]	—	— [‡]	—	29	29.2	11	—	12	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
FL	— [‡]	—	— [‡]	—	33	1.7	414	22.4	291	14.7	207	8.9	115	5.7	56	3.7	26	1.8	16	—	9	—
GA	— [‡]	—	7	—	28	2.5	364	32.8	271	22.5	182	13.6	79	7.7	34	5.4	13	—	7	—	6	—
HI	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
KS	— [‡]	—	— [‡]	—	— [‡]	—	84	21.1	34	10.0	24	5.6	— [‡]	—	8	—	— [‡]	—	— [‡]	—	— [‡]	—
KY	— [‡]	—	— [‡]	—	— [‡]	—	34	5.9	27	5.0	35	5.5	20	3.7	9	—	— [‡]	—	— [‡]	—	— [‡]	—
LA	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
MA	— [‡]	—	— [‡]	—	— [‡]	—	118	13.4	58	5.8	33	3.2	7	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
MI	— [‡]	—	— [‡]	—	26	1.8	445	33.3	363	25.3	186	11.6	87	6.6	18	—	12	—	13	—	15	—
MN	— [‡]	—	— [‡]	—	8	—	77	11.3	38	6.0	36	4.4	16	—	5	—	7	—	— [‡]	—	— [‡]	—
NE	— [‡]	—	— [‡]	—	— [‡]	—	31	12.3	16	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
NM	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
NC	— [‡]	—	5	—	17	—	379	34.2	281	23.1	168	13.3	82	7.8	30	4.3	12	—	— [‡]	—	— [‡]	—
ND	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
OH	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
OK	— [‡]	—	— [‡]	—	18	—	118	23.4	69	16.5	65	12.8	26	5.9	8	—	10	—	8	—	— [‡]	—
OR	— [‡]	—	— [‡]	—	7	—	55	12.0	44	10.4	42	8.0	12	—	6	—	— [‡]	—	— [‡]	—	— [‡]	—
SC	— [‡]	—	— [‡]	—	15	—	184	33.0	145	25.9	76	12.1	41	7.8	11	—	8	—	— [‡]	—	— [‡]	—
TX	— [‡]	—	— [‡]	—	34	1.1	384	12.6	231	8.3	132	4.0	71	2.8	35	2.2	18	—	9	—	8	—
UT	— [‡]	—	— [‡]	—	— [‡]	—	38	9.3	27	8.1	26	8.3	7	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
VT	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—	— [‡]	—
WA	— [‡]	—	— [‡]	—	9	—	94	11.7	74	8.8	49	5.0	26	3.2	— [‡]	—	6	—	7	—	— [‡]	—
WI	— [‡]	—	— [‡]	—	26	3.4	218	28.8	94	13.7	42	4.8	30	4.3	9	—	7	—	— [‡]	—	— [‡]	—

‡ No data available.

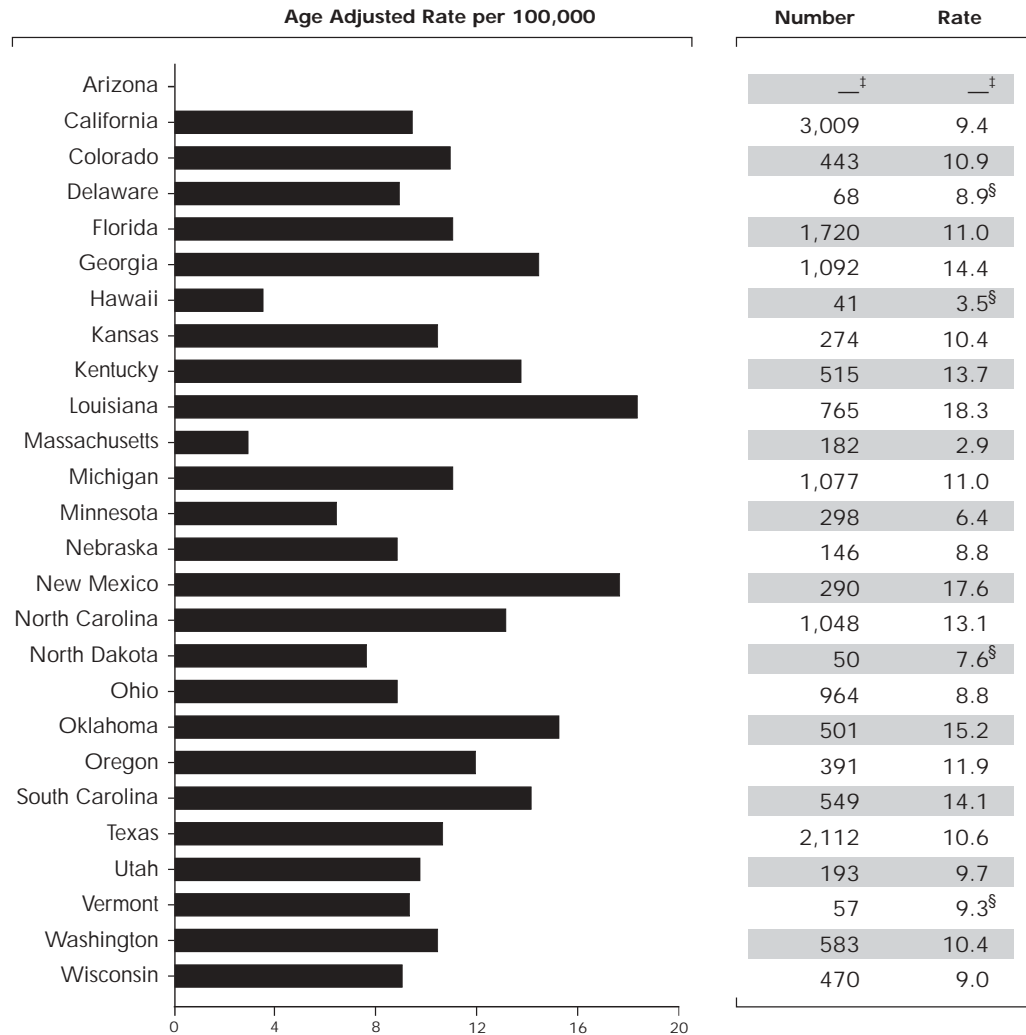
|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

FIGURE 7d.
Firearm-Related Indicator: Firearm-Related Fatalities (Overall), 1999



* Incompleteness can lead to bias.

† Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

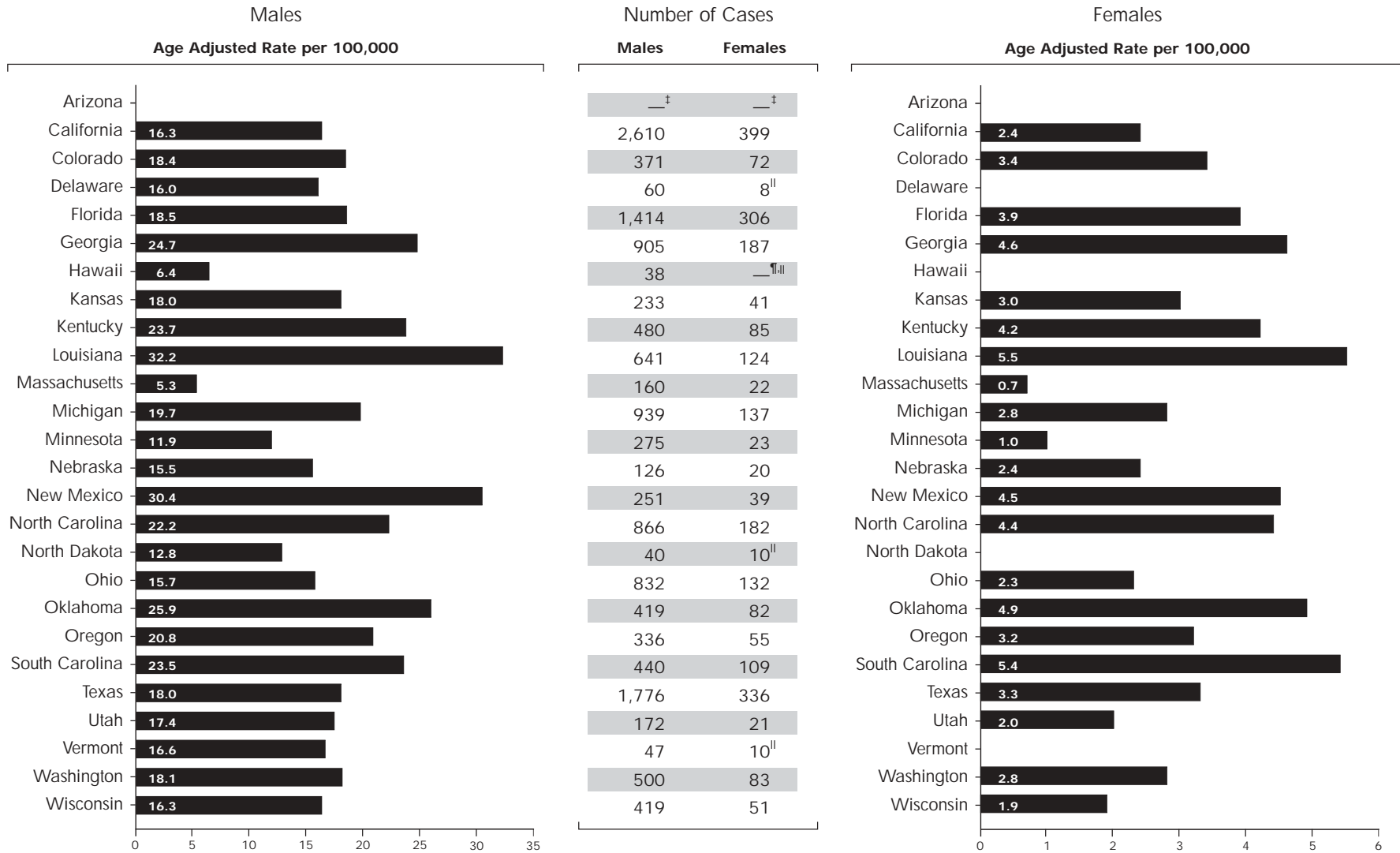
‡ No data available.

§ Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 7e.
Firearm-Related Indicator: Firearm-Related Fatalities by Sex, 1999



[‡] No data available.

^{||} Rates are suppressed if fewer than 20 cases were reported.

^{¶||} Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 7f.
Firearm-Related Indicator: Firearm-Related Fatalities by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
CA	— [¶]	— [¶]	8	— [¶]	41	0.8	808	17.2	586	11.5	487	8.7	389	9.5	211	8.6	209	10.8	194	15.0	76	17.9
CO	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	90	15.0	91	13.8	82	11.4	67	11.4	35	10.6	33	14.7	25	18.1	8	— [¶]
DE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	10	— [¶]	16	— [¶]	18	— [¶]	12	— [¶]	8	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
FL	— [¶]	— [¶]	— [¶]	— [¶]	22	1.1	281	15.2	306	15.5	322	13.9	249	12.4	154	10.3	176	12.2	155	14.6	47	14.6
GA	— [¶]	— [¶]	— [¶]	— [¶]	16	— [¶]	229	20.6	279	23.1	204	15.2	124	12.1	94	14.9	75	17.9	59	23.0	9	— [¶]
HI	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	11	— [¶]	6	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
KS	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	73	18.3	56	16.4	44	10.3	33	9.6	25	11.4	15	— [¶]	18	— [¶]	7	— [¶]
KY	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	81	14.0	107	19.7	114	17.8	69	12.7	45	12.1	41	15.3	35	20.8	18	— [¶]
LA	— [¶]	— [¶]	5	— [¶]	15	— [¶]	182	26.1	182	31.8	140	20.7	100	17.6	50	13.0	43	15.5	37	22.0	11	— [¶]
MA	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	42	4.8	31	3.1	35	3.4	24	2.9	25	5.0	— [¶]	— [¶]	17	— [¶]	— [¶]	— [¶]
MI	— [¶]	— [¶]	— [¶]	— [¶]	15	— [¶]	262	19.6	286	19.9	181	11.3	132	10.0	76	9.1	61	9.4	42	9.7	20	13.9
MN	— [¶]	— [¶]	— [¶]	— [¶]	6	— [¶]	72	10.5	50	7.9	63	7.7	39	6.2	21	5.3	19	— [¶]	24	11.4	— [¶]	— [¶]
NE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	43	17.1	27	13.1	25	9.6	20	9.3	15	— [¶]	8	— [¶]	8	— [¶]	— [¶]	— [¶]
NM	— [¶]	— [¶]	— [¶]	— [¶]	5	— [¶]	81	30.8	55	26.1	53	19.1	37	16.1	19	— [¶]	16	— [¶]	18	— [¶]	6	— [¶]
NC	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	240	21.6	231	19.0	200	15.8	148	14.0	83	11.7	75	14.2	47	14.6	11	— [¶]
ND	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	13	— [¶]	12	— [¶]	7	— [¶]	— [¶]	— [¶]	6	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
OH	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	191	12.2	186	12.1	181	9.9	121	8.1	81	8.2	90	11.4	76	14.2	26	14.7
OK	— [¶]	— [¶]	5	— [¶]	7	— [¶]	120	23.8	96	23.0	90	17.7	65	14.8	44	13.8	31	13.0	34	22.2	7	— [¶]
OR	— [¶]	— [¶]	— [¶]	— [¶]	7	— [¶]	62	13.5	53	12.5	77	14.6	62	12.7	32	10.6	43	19.7	41	25.6	13	— [¶]
SC	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	113	20.3	109	19.5	118	18.8	75	14.3	60	17.2	35	13.1	21	13.2	5	— [¶]
TX	— [¶]	— [¶]	— [¶]	— [¶]	46	1.5	471	15.5	410	14.8	413	12.7	301	11.8	161	10.0	159	14.3	118	17.5	29	12.4
UT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	48	11.8	39	11.8	41	13.2	23	10.0	19	— [¶]	17	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
VT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	10	— [¶]	9	— [¶]	12	— [¶]	10	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	6	— [¶]	— [¶]	— [¶]
WA	— [¶]	— [¶]	— [¶]	— [¶]	7	— [¶]	122	15.2	96	11.4	104	10.7	91	11.3	47	9.8	51	14.9	47	20.1	17	— [¶]
WI	— [¶]	— [¶]	— [¶]	— [¶]	13	— [¶]	131	17.3	79	11.5	76	8.8	72	10.3	35	7.8	32	9.2	17	— [¶]	15	— [¶]

‡ No data available.

¶ Rates are suppressed if fewer than 20 cases were reported.

¶¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

8. Homicide Indicators

Homicide is the fourteenth leading cause of death overall in the United States, and it is the second most common cause of death among people ages 15 to 24 years. In 1999, 16,889 people were killed in homicides. Firearms were used in 64.1% of these homicides. The next most commonly reported mechanism (11.1%), was cutting and stabbing with sharp instruments, such as knives.¹

Figure 8a presents the homicide data for 25 states in 1999 and illustrates a more than four-fold difference between the lowest and highest rates. Males are three times more likely than females (Figure 8b) to die from homicide. The highest rates are seen among people ages 15 to 34 years (Figure 8c).

Black males ages 20 to 24 have the highest homicide rate of any group in the United States: 110.6 per 100,000 in 1999.¹ Homicide rates are lowest for Asian Americans, with whites having only slightly higher rates. Rates for Native Americans are three times higher than those of Asian Americans, and rates for blacks are more than six times higher than those of Asian Americans.¹

Homicide rates are higher in the southern United States than in the northern part of the country, and rates in metropolitan areas are higher than elsewhere. Homicide is associated with high urbanization and socioeconomic deprivation.² These factors are thought to underlie the observed variation in risk by race.

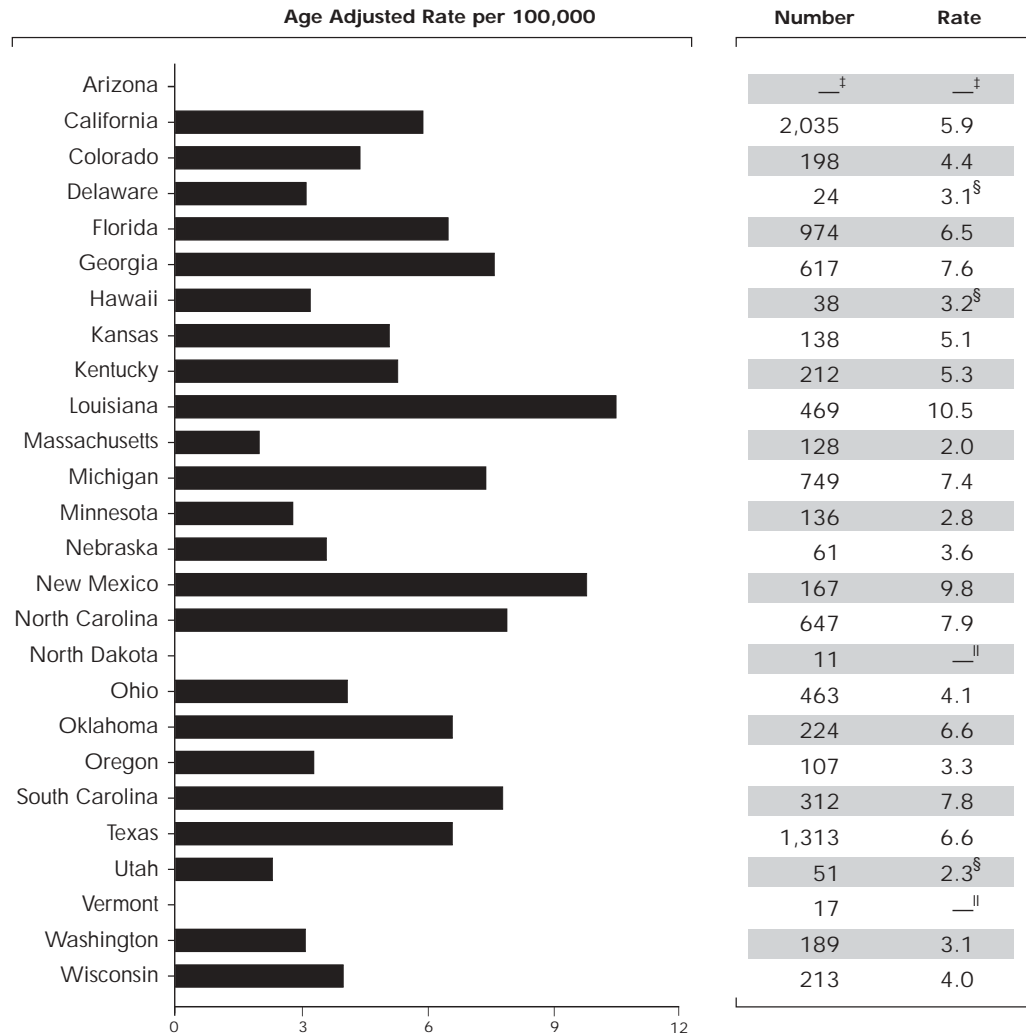
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Homicide Indicators Figures

- 8a. Homicide (Overall), 1999
- 8b. Homicide by Sex, 1999
- 8c. Homicide by Age, 1999

FIGURE 8a.
Homicide Indicator: Homicide (Overall), 1999



* Incompleteness can lead to bias.

† Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

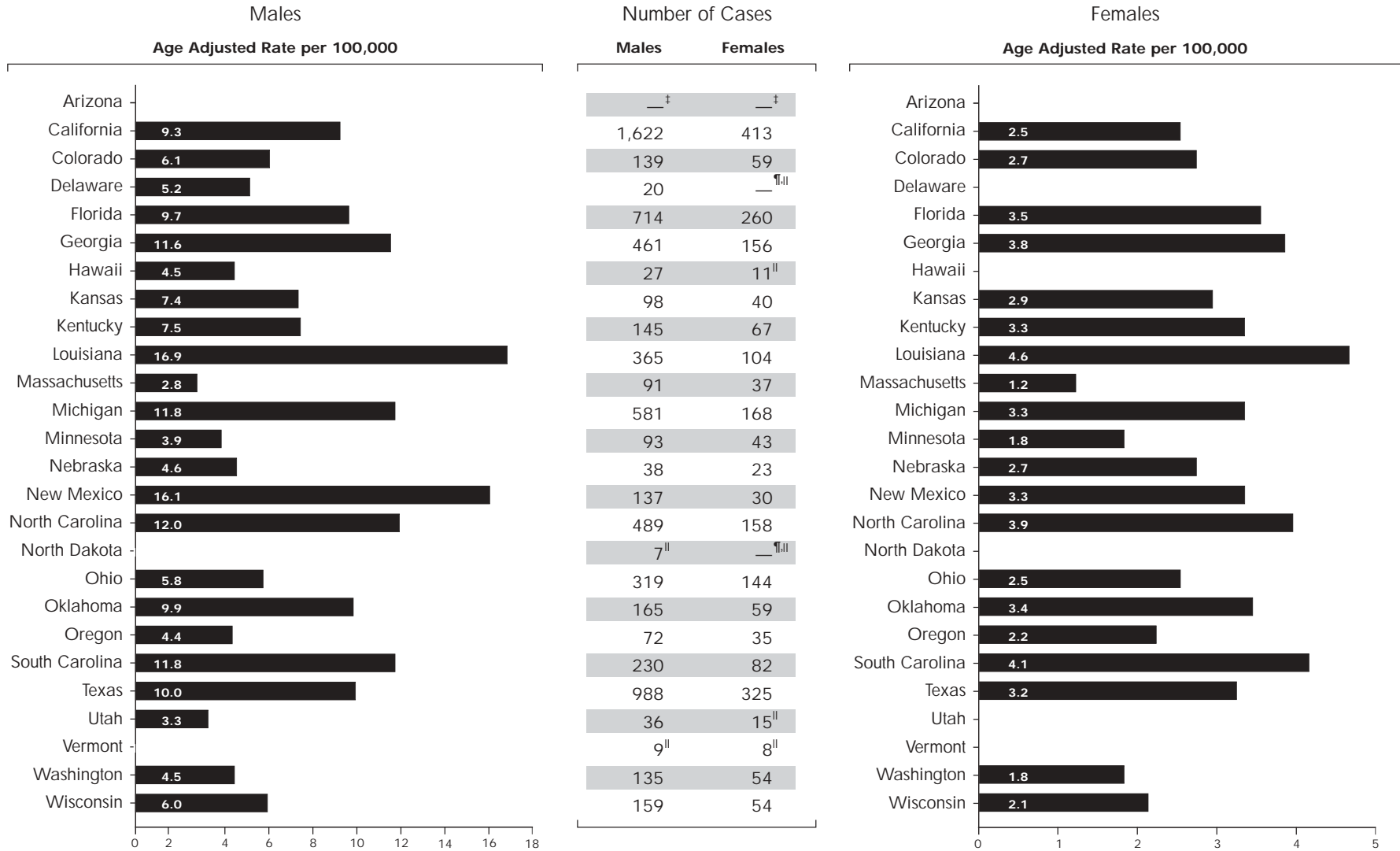
‡ No data available.

§ Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 8b.
Homicide Indicator: Homicide by Sex, 1999



[‡] No data available.

^{||} Rates are suppressed if fewer than 20 cases were reported.

[¶] Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 8C.
Homicide Indicator: Homicide by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
CA	30	6.0	44	2.2	57	1.1	712	15.2	475	9.3	338	6.0	207	5.0	74	3.0	55	2.8	32	0.6	11	— [‡]
CO	— [¶]	— [¶]	7	— [¶]	9	— [¶]	57	9.5	52	7.9	39	5.4	18	— [¶]	9	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
DE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	5	— [¶]	11	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
FL	19	— [¶]	24	3.2	25	1.3	230	12.4	235	11.9	212	9.1	102	5.1	56	3.7	31	2.1	30	2.8	6	— [¶]
GA	11	— [¶]	14	— [¶]	17	— [¶]	165	14.9	181	15.0	116	8.7	64	6.3	29	4.6	11	— [¶]	7	— [¶]	— [¶]	— [¶]
HI	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	7	— [¶]	31	15.6	22	13.3	10	— [¶]	— [¶]	— [¶]	11	— [¶]	— [¶]	— [¶]
KS	— [¶]	— [¶]	5	— [¶]	5	— [¶]	39	9.8	35	10.3	23	5.4	9	— [¶]	10	— [¶]	— [¶]	— [¶]	5	— [¶]	— [¶]	— [¶]
KY	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	50	8.7	56	10.3	35	5.5	23	4.2	18	— [¶]	10	— [¶]	7	— [¶]	— [¶]	— [¶]
LA	8	— [¶]	6	— [¶]	11	— [¶]	140	20.1	128	22.4	89	13.2	52	9.2	15	— [¶]	12	— [¶]	8	— [¶]	— [¶]	— [¶]
MA	— [¶]	— [¶]	— [¶]	— [¶]	5	— [¶]	40	4.5	34	3.4	24	2.4	11	— [¶]	7	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
MI	18	— [¶]	15	— [¶]	12	— [¶]	212	15.8	217	15.1	131	8.2	74	5.6	29	3.5	21	3.3	11	— [¶]	9	— [¶]
MN	— [¶]	— [¶]	7	— [¶]	7	— [¶]	36	5.3	26	4.1	29	3.6	11	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
NE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	21	8.3	10	— [¶]	13	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
NM	7	— [¶]	— [¶]	— [¶]	7	— [¶]	48	18.2	36	17.1	32	11.5	22	9.6	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
NC	10	— [¶]	10	— [¶]	9	— [¶]	178	16.0	161	13.2	146	11.5	72	6.8	28	4.0	25	4.7	7	— [¶]	— [¶]	— [¶]
ND	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
OH	11	— [¶]	12	— [¶]	9	— [¶]	124	7.9	111	7.3	95	5.2	46	3.1	23	2.3	14	— [¶]	14	— [¶]	— [¶]	— [¶]
OK	7	— [¶]	6	— [¶]	— [¶]	— [¶]	64	12.7	46	11.0	33	6.5	22	5.0	23	7.2	8	— [¶]	9	— [¶]	— [¶]	— [¶]
OR	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	26	5.7	33	7.8	20	3.8	13	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
SC	— [¶]	— [¶]	8	— [¶]	10	— [¶]	80	14.4	80	14.3	66	10.5	36	6.9	16	— [¶]	8	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
TX	28	8.4	38	2.9	49	1.6	350	11.5	310	11.2	265	8.1	149	5.8	59	3.6	38	3.4	16	— [¶]	11	— [¶]
UT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	12	— [¶]	18	— [¶]	6	— [¶]	6	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
VT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
WA	— [¶]	— [¶]	7	— [¶]	10	— [¶]	57	7.1	37	4.4	39	4.0	20	2.5	6	— [¶]	7	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
WI	8	— [¶]	7	— [¶]	7	— [¶]	85	11.2	46	6.7	35	4.0	15	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]

‡ No data available.

¶ Rates are suppressed if fewer than 20 cases were reported.

¶¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

9. Suicide Indicators

Suicide is a major public health problem in the United States, claiming the lives of approximately 30,000 people each year.¹ In 1999 and 2000, suicide was the 11th leading cause of death overall in the United States, the second leading cause of death among adults ages 25 to 34 years, and the third leading cause of death for adolescents and young adults ages 15 to 24 years.² Although suicide rates are highest among persons age 65 and older,¹ the rate of suicide among adolescents and young adults nearly tripled between 1952 and 1994.¹ Overall, males are four times more likely than females to die from suicide.¹ In addition to the human toll, the economic costs of suicide are enormous. One study estimated the total economic burden of suicide in the United States to be \$111.3 billion in 1995.³

Completed suicides are not the only public health concern. Suicidal ideation, planning, and attempts also have a major public health impact. In 1999, there were an estimated 671,000 hospital emergency department visits for suicide attempts in the United States.⁴ Because one of the strongest risk factors for suicide is a previous attempt, surveillance of such attempts can help identify high risk groups and target prevention strategies.⁵ The comparative epidemiology of suicidal ideation and behavior shows some important differences. For example, the suicide rate for males is higher than for females, but studies of suicidal thoughts and suicide attempts routinely show females with higher rates.⁵

Figures 9a, 9b, and 9c display suicide attempt injury hospitalization data in 21 states. Figures 9d, 9e, and 9f show suicide data from 25 states in 1999, illustrating a more than

two-fold difference between the lowest and highest rates. Hospitalization was 1.8 to 5.0 times more common than death. Males show a higher rate of suicide, while females have a higher rate of hospitalization for suicide attempts. Suicide attempts resulting in hospitalization, that did not have an injury coded in the principal diagnostic field, are not counted in the case definition for hospitalization for a suicide attempt. Therefore, not all hospitalizations related to suicide attempts are represented in these figures.

Figures 9g and 9h present Youth Risk Behavior Survey data on self-reported suicide attempts among high school students in 14 states. Female high school students report a higher rate of suicide attempts than males.

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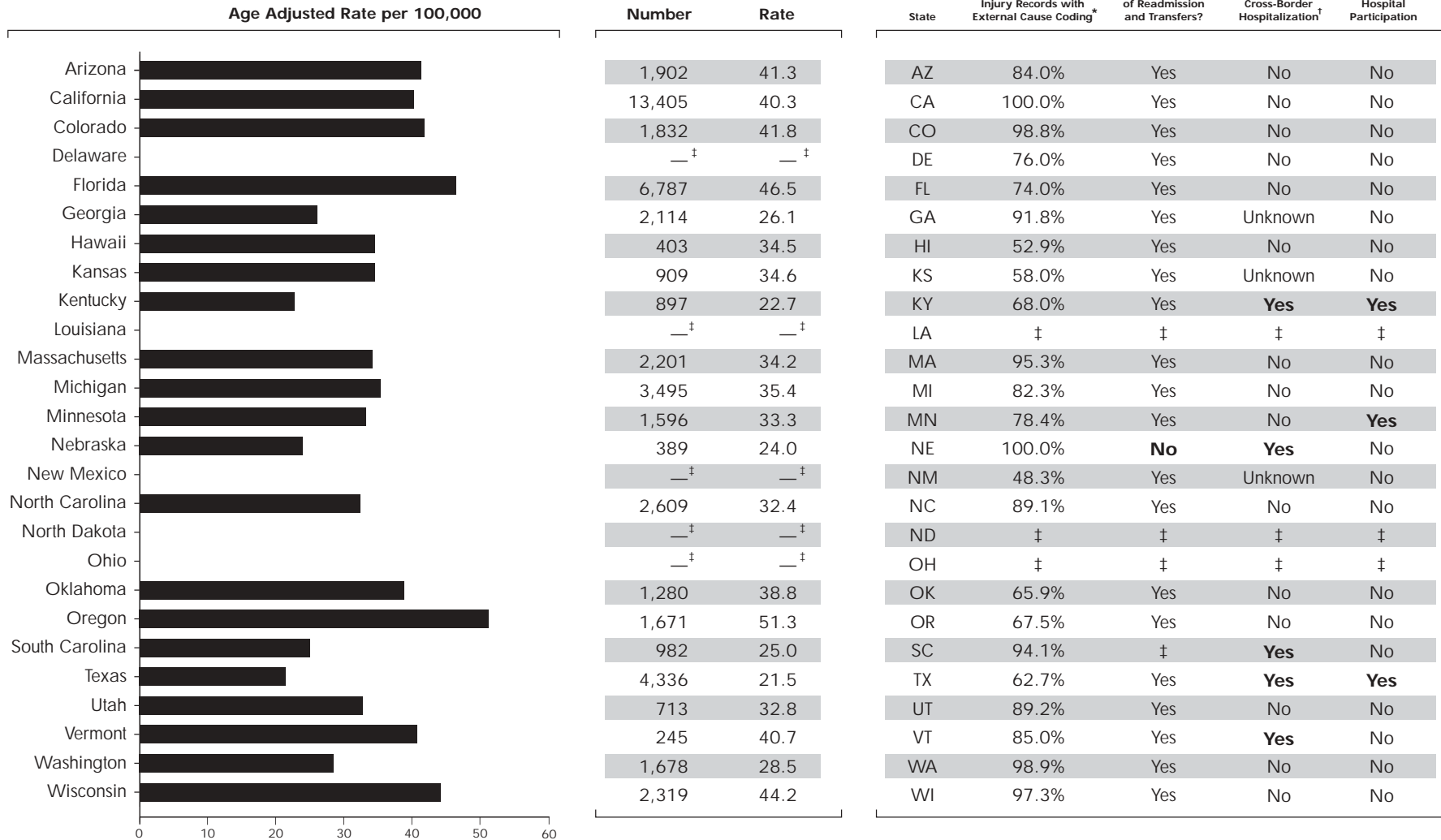
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Suicide Indicators Figures

- 9a. Suicide Attempt Hospitalizations (Overall), 1999
- 9b. Suicide Attempt Hospitalizations by Sex, 1999
- 9c. Suicide Attempt Hospitalizations by Age, 1999
- 9d. Suicide (Overall), 1999
- 9e. Suicide by Sex, 1999
- 9f. Suicide by Age, 1999
- 9g. Percentage of High School Students Reporting Suicide Attempt
During Past 12 Months, 1999, Youth Risk Behavior Survey
- 9h. Percentage of High School Students Reporting Suicide Attempt
During Past 12 Months by Sex, 1999, Youth Risk Behavior Survey

FIGURE 9a.
Suicide Indicator: Suicide Attempt Hospitalizations (Overall), 1999



* Incompleteness can lead to bias.

† Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

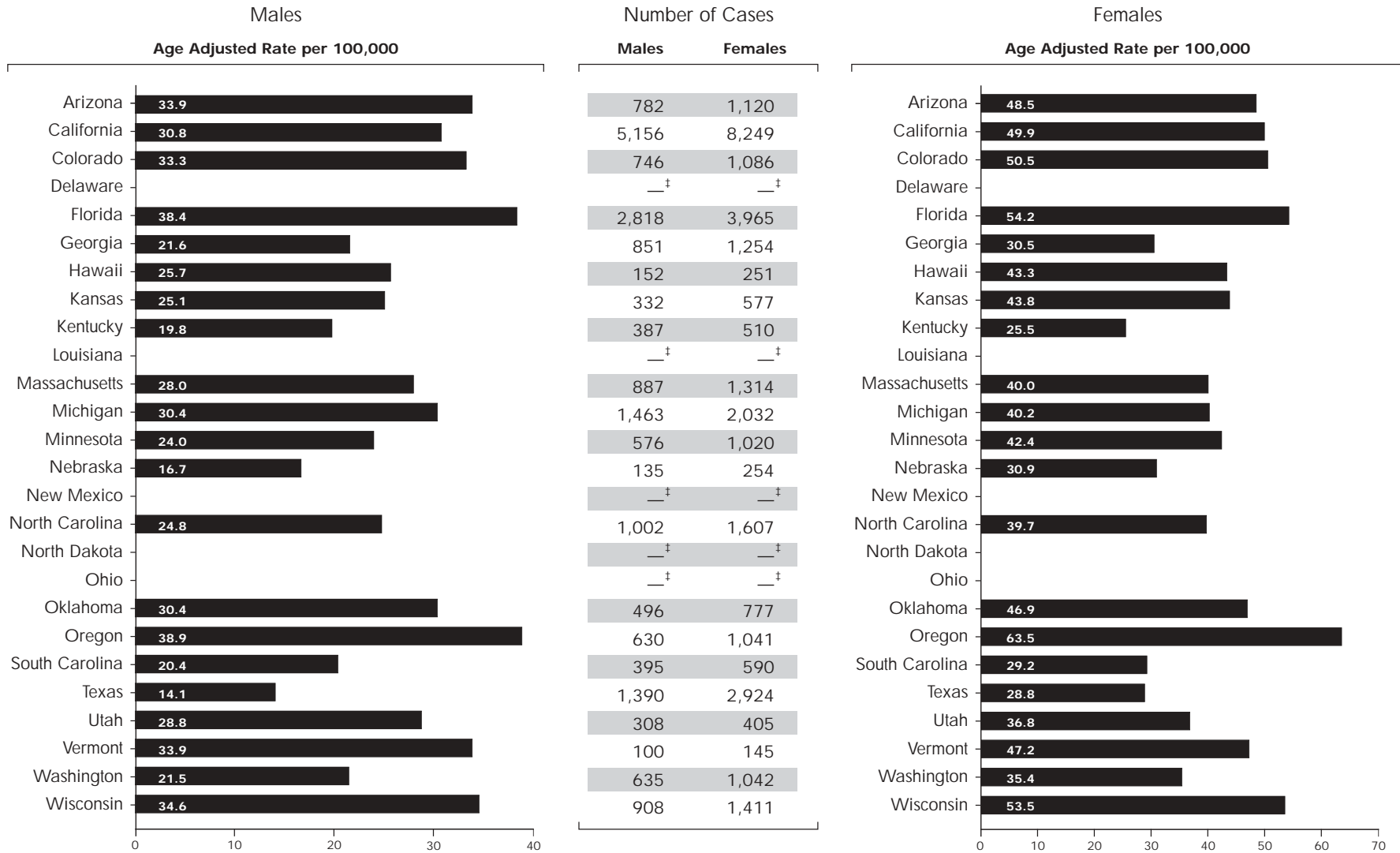
‡ No data available.

§ Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 9b.
Suicide Indicator: Suicide Attempt Hospitalizations by Sex, 1999



‡ No data available.

|| Rates are suppressed if fewer than 20 cases were reported.

¶ Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 9C.
Suicide Indicator: Suicide Attempt Hospitalizations by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	— [‡]	— [‡]	— [‡]	66	8.9	438	65.5	441	70.1	499	67.8	301	51.2	75	18.6	42	12.3	30	13.5	10	— [‡]
CA	— [‡]	— [‡]	— [‡]	— [‡]	2,803	55.4	2,828	60.4	3,644	71.2	2,221	39.7	401	9.8	738	30.2	384	19.9	288	22.3	95	22.4
CO	— [‡]	— [‡]	— [‡]	— [‡]	59	9.7	449	74.7	422	63.9	476	65.9	290	49.2	69	20.8	32	14.3	23	16.6	12	— [‡]
DE	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
FL	— [‡]	— [‡]	— [‡]	— [‡]	219	11.1	1,326	71.8	1,442	73.0	1,913	82.3	1,067	53.1	348	23.3	210	14.5	189	17.9	72	22.4
GA	— [‡]	— [‡]	— [‡]	— [‡]	81	7.1	469	42.2	560	46.5	563	42.1	286	27.9	88	14.0	39	9.3	17	— [‡]	— [‡]	— [‡]
HI	— [‡]	— [‡]	— [‡]	— [‡]	15	— [‡]	117	70.3	83	56.5	76	38.3	66	39.8	25	24.1	9	— [‡]	11	— [‡]	— [‡]	— [‡]
KS	— [‡]	— [‡]	— [‡]	— [‡]	51	13.2	247	62.0	215	63.1	240	56.2	106	30.9	29	13.2	8	— [‡]	11	— [‡]	— [‡]	— [‡]
KY	— [‡]	— [‡]	22	10.7	25	4.7	216	37.4	205	37.8	255	39.8	106	19.6	45	12.1	13	— [‡]	7	— [‡]	— [‡]	— [‡]
LA	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
MA	— [‡]	— [‡]	— [‡]	— [‡]	42	5.2	490	55.4	523	52.0	607	59.5	338	41.3	92	18.6	51	11.5	47	15.7	11	— [‡]
MI	— [‡]	— [‡]	— [‡]	— [‡]	133	9.2	789	59.0	804	56.0	965	60.2	523	39.6	150	18.0	66	10.2	50	11.5	15	— [‡]
MN	— [‡]	— [‡]	— [‡]	— [‡]	81	11.2	505	73.9	340	54.0	365	44.9	206	32.8	52	13.2	21	7.2	21	10.0	— [‡]	— [‡]
NE	— [‡]	— [‡]	— [‡]	— [‡]	20	8.1	91	36.1	95	46.0	103	39.4	48	22.3	15	— [‡]	8	— [‡]	9	— [‡]	— [‡]	— [‡]
NM	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
NC	— [‡]	— [‡]	— [‡]	— [‡]	79	7.2	546	49.2	661	54.3	758	59.8	384	36.5	100	14.2	48	9.1	25	7.8	8	— [‡]
ND	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
OH	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
OK	— [‡]	— [‡]	— [‡]	— [‡]	31	6.3	345	68.4	297	71.2	359	70.6	153	34.8	54	16.9	21	8.8	14	— [‡]	6	— [‡]
OR	— [‡]	— [‡]	— [‡]	— [‡]	46	10.0	379	82.7	393	92.5	464	88.0	259	53.0	71	23.5	30	13.7	14	— [‡]	15	— [‡]
SC	— [‡]	— [‡]	— [‡]	— [‡]	26	4.8	161	28.9	245	43.7	322	51.2	159	30.3	45	12.9	17	— [‡]	7	— [‡]	— [‡]	— [‡]
TX	— [‡]	— [‡]	— [‡]	— [‡]	182	5.8	1,322	43.4	986	35.6	968	29.7	514	20.1	172	10.6	114	10.3	50	7.4	28	12.0
UT	— [‡]	— [‡]	— [‡]	— [‡]	24	6.3	223	54.0	139	42.1	177	56.7	98	42.6	30	22.0	8	— [‡]	9	— [‡]	— [‡]	— [‡]
VT	— [‡]	— [‡]	— [‡]	— [‡]	8	— [‡]	50	59.8	61	80.1	67	66.4	41	45.2	6	— [‡]	7	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
WA	— [‡]	— [‡]	— [‡]	— [‡]	52	6.0	345	43.0	391	46.3	487	50.0	255	31.6	62	12.9	37	10.8	32	13.7	16	— [‡]
WI	— [‡]	— [‡]	— [‡]	— [‡]	82	10.7	593	78.2	525	76.3	647	74.5	325	46.7	86	19.1	34	9.7	15	— [‡]	12	— [‡]

‡ No data available.

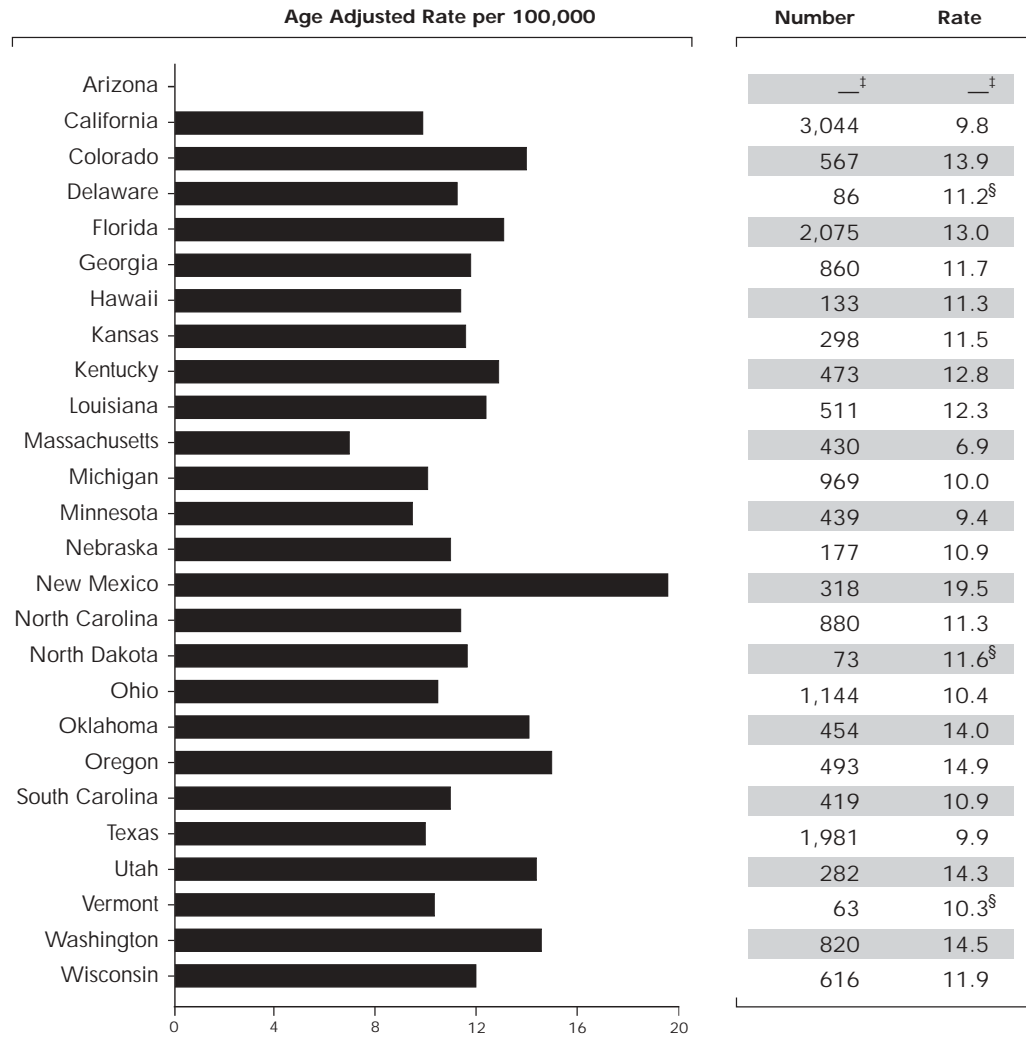
‡ Rates are suppressed if fewer than 20 cases were reported.

‡ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

FIGURE 9d.
Suicide Indicator: Suicide (Overall), 1999



* Incompleteness can lead to bias.

[†] Subjective assessment by health department staff that a substantial proportion of state residents injured in-state who require hospitalization are hospitalized in a neighboring state.

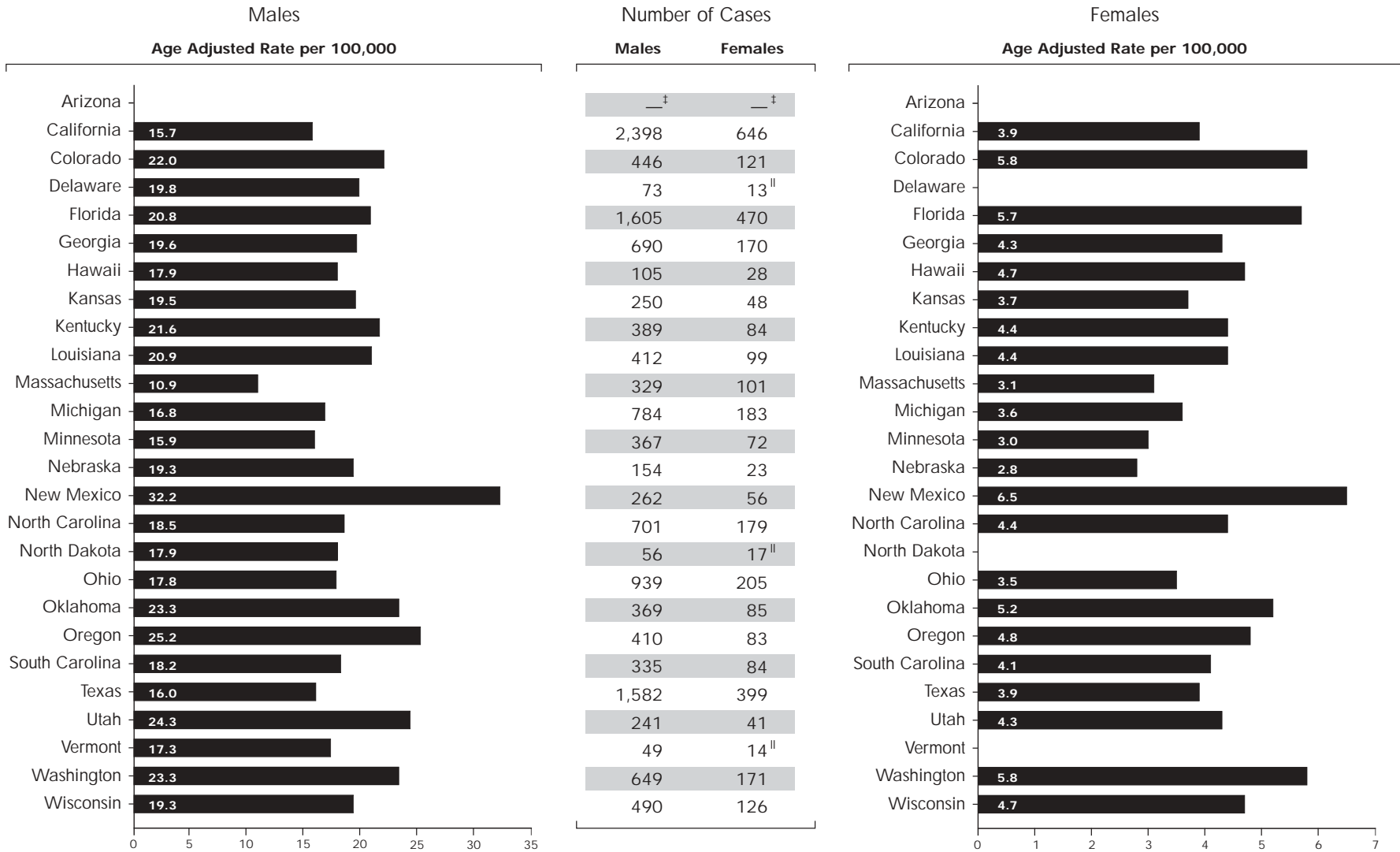
[‡] No data available.

[§] Rate = [(male rate * pop) + (female rate * pop)] / (male + female pop).

^{||} Rates are suppressed if fewer than 20 cases were reported.

[¶] Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 9e.
Suicide Indicator: Suicide by Sex, 1999



[‡] No data available.

[¶] Rates are suppressed if fewer than 20 cases were reported.

^{¶¶} Case counts are suppressed if fewer than 5 cases were reported.

FIGURE 9f.
Suicide Indicator: Suicide by Age, 1999**

State	<1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75-84		85+	
	N	Rate ^{††}	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
AZ	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]	— [‡]
CA	— [¶]	— [¶]	— [¶]	— [¶]	26	0.5	311	6.6	512	10.0	641	11.5	593	14.4	316	12.9	282	14.6	255	19.7	108	25.5
CO	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	86	14.3	101	15.3	135	18.7	105	17.8	50	15.1	40	17.9	36	26.1	11	— [¶]
DE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	10	— [¶]	17	— [¶]	27	20.7	14	— [¶]	7	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
FL	— [¶]	— [¶]	— [¶]	— [¶]	7	— [¶]	166	9.0	299	15.1	457	19.7	389	19.4	202	13.5	244	16.9	219	20.7	89	27.7
GA	— [¶]	— [¶]	— [¶]	— [¶]	8	— [¶]	118	10.6	184	15.3	173	12.9	132	12.9	87	13.8	78	18.6	70	27.3	10	— [¶]
HI	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	14	— [¶]	38	25.9	13	— [¶]	9	— [¶]	— [¶]	— [¶]	5	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]
KS	— [¶]	— [¶]	— [¶]	— [¶]	5	— [¶]	55	13.8	55	16.2	62	14.5	52	15.2	27	12.3	19	— [¶]	18	— [¶]	5	— [¶]
KY	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	54	9.4	90	16.6	118	18.4	80	14.8	42	11.3	39	14.6	33	19.6	15	— [¶]
LA	— [¶]	— [¶]	— [¶]	— [¶]	6	— [¶]	80	11.5	99	17.3	96	14.2	90	15.8	50	13.0	38	13.7	37	22.0	15	— [¶]
MA	— [¶]	— [¶]	— [¶]	— [¶]	10	— [¶]	45	5.1	84	8.4	105	10.3	74	9.0	55	11.1	20	4.5	24	8.0	13	— [¶]
MI	— [¶]	— [¶]	— [¶]	— [¶]	13	— [¶]	137	10.2	188	13.1	217	13.5	173	13.1	94	11.3	67	10.4	56	12.9	24	16.7
MN	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	78	11.4	68	10.8	113	13.9	75	12.0	37	9.4	22	7.6	38	18.1	— [¶]	— [¶]
NE	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	34	13.5	38	18.4	40	15.3	26	12.1	17	— [¶]	12	— [¶]	9	— [¶]	— [¶]	— [¶]
NM	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	62	23.5	54	25.6	69	24.8	54	23.5	29	19.4	20	18.0	22	32.8	6	— [¶]
NC	— [¶]	— [¶]	— [¶]	— [¶]	9	— [¶]	127	11.4	161	13.2	189	14.9	169	16.0	92	13.0	69	13.1	50	15.5	14	— [¶]
ND	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	18	— [¶]	13	— [¶]	10	— [¶]	8	— [¶]	9	— [¶]	5	— [¶]	5	— [¶]	— [¶]	— [¶]
OH	— [¶]	— [¶]	— [¶]	— [¶]	11	— [¶]	157	10.0	193	12.6	252	13.8	173	11.6	107	10.8	122	15.5	98	18.3	31	17.6
OK	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	73	14.5	98	23.5	103	20.3	66	15.0	38	11.9	30	12.6	35	22.8	7	— [¶]
OR	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	55	12.0	67	15.8	107	20.3	105	21.5	45	14.9	49	22.4	46	28.7	17	— [¶]
SC	— [¶]	— [¶]	— [¶]	— [¶]	8	— [¶]	64	11.5	61	10.9	96	15.3	65	12.4	60	17.2	34	12.7	24	15.1	7	— [¶]
TX	— [¶]	— [¶]	— [¶]	— [¶]	23	0.7	286	9.4	360	13.0	447	13.7	347	13.6	178	11.0	170	15.3	135	20.0	35	15.0
UT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	62	15.3	55	16.7	68	21.8	44	19.1	19	— [¶]	20	20.2	8	— [¶]	5	— [¶]
VT	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	8	— [¶]	8	— [¶]	17	— [¶]	8	— [¶]	6	— [¶]	6	— [¶]	7	— [¶]	— [¶]	— [¶]
WA	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	— [¶]	125	15.6	135	16.0	173	17.7	149	18.5	77	16.0	68	19.8	66	28.2	24	29.4
WI	— [¶]	— [¶]	— [¶]	— [¶]	8	— [¶]	105	13.8	98	14.2	128	14.7	113	16.2	62	13.8	46	13.2	35	14.1	21	22.2

‡ No data available.

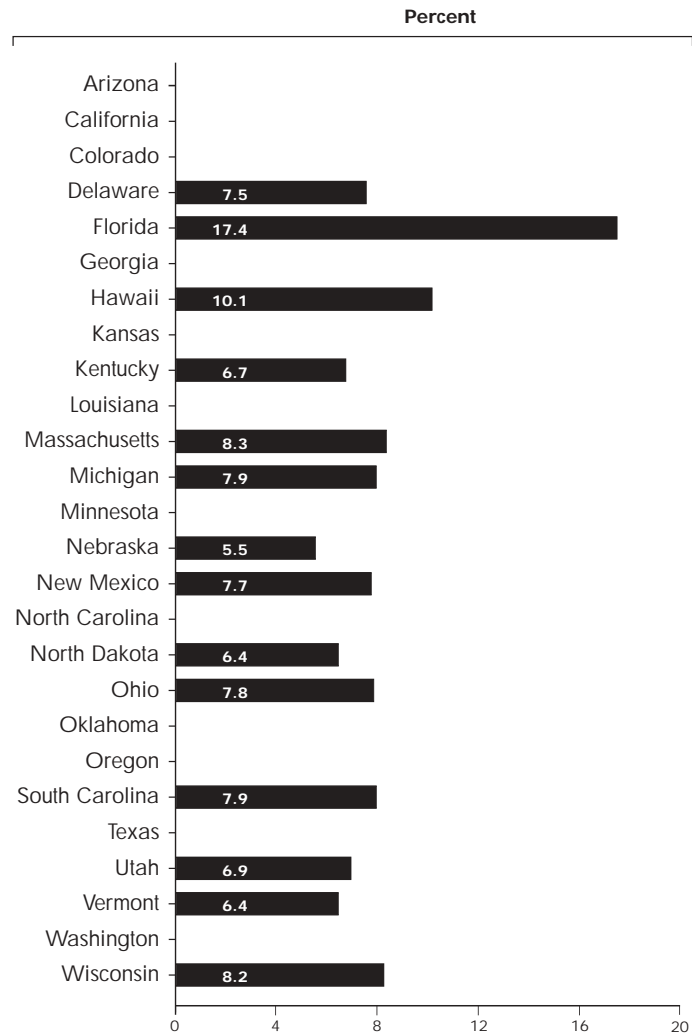
¶ Rates are suppressed if fewer than 20 cases were reported.

¶¶ Case counts are suppressed if fewer than 5 cases were reported.

** Age in years.

†† Rate per 100,000 population.

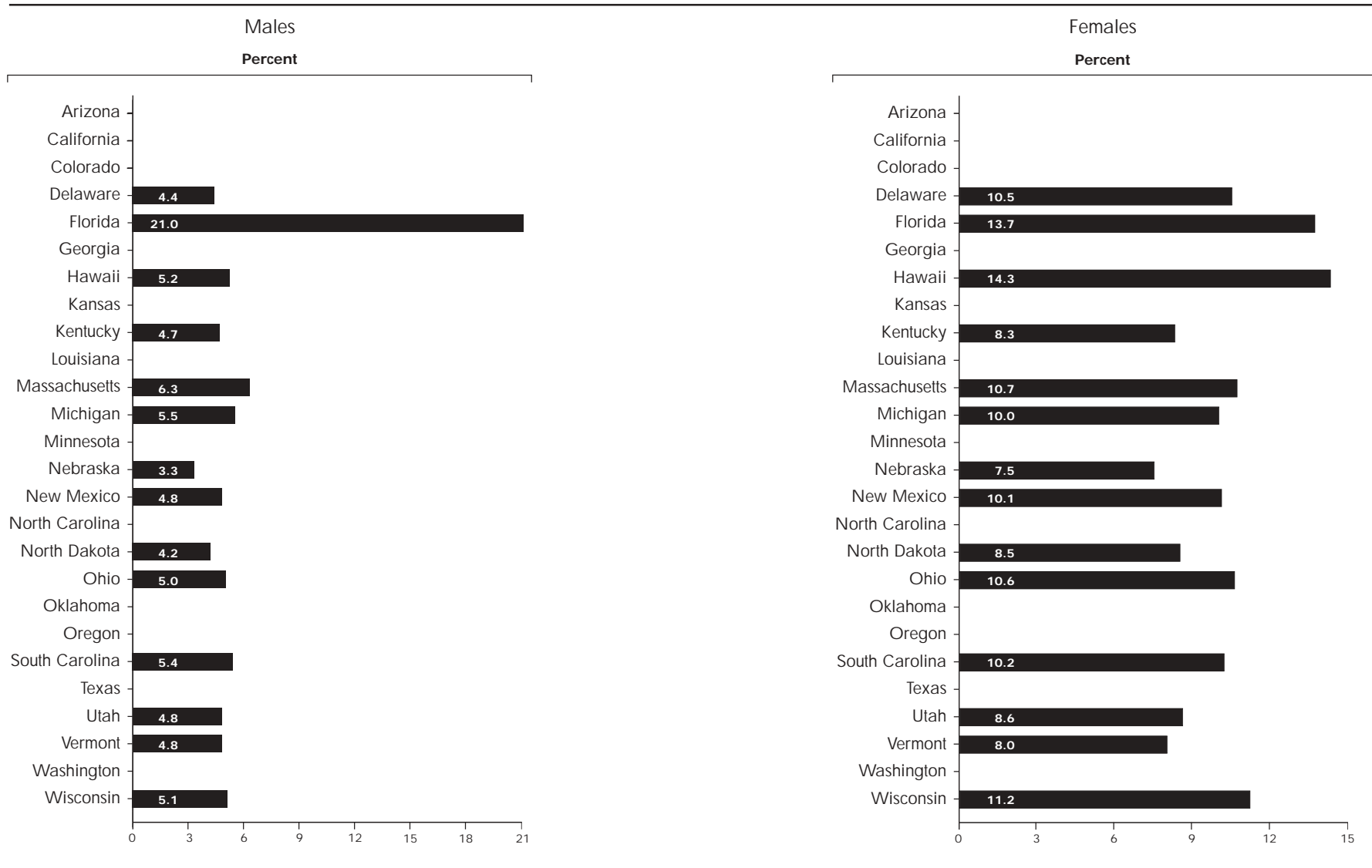
FIGURE 9g.
**Suicide Indicator: Percentage of High School Students Reporting
Suicide Attempt During Past 12 Months, 1999, Youth Risk Behavior Survey**



Note: No data available for Arizona, California, Colorado, Georgia, Kansas, Louisiana, Minnesota, North Carolina, Oklahoma, Oregon, Texas, and Washington.

FIGURE 9h.

Suicide Indicator: Percentage of High School Students Reporting Suicide Attempt During Past 12 Months by Sex, 1999, Youth Risk Behavior Survey



Note: No data available for Arizona, California, Colorado, Georgia, Kansas, Louisiana, Minnesota, North Carolina, Oklahoma, Oregon, Texas, and Washington.

Appendix – Instructions for Calculating National Public Health Surveillance System Indicators Using 1999 Data

Instructions referenced in this report were circulated to the states to help them prepare 1999 data. While the format for those instructions has been modified for presentation here, the content is the same.

Note: In the future, CDC will modify instructions based upon feedback received. Instructions for calculating the National Public Health Surveillance System (NPHSS) indicators will be modified as appropriate in subsequent data collection cycles.

Computation of Rates

- Compute rates per 100,000 population.
- Use the estimated population for the year of the data. Obtain that estimate from your state's demographic center or from:
www.census.gov/population/
<http://eire.census.gov/popest/estimates.php>
- Round rates to one decimal place.

Data Source: Death Certificates

Mortality indicators should be age-adjusted to the 2000 standard using CDC's National Center for Health Statistics (NCHS) population distribution (Table 1). Calculate age-adjusted rates for both the male and female populations.

- With the exception of the fatal TBI indicator, all fatal indicators should be calculated by searching the *underlying cause of death field only*. For the fatal TBI indicator, search *all fields* in a multiple cause of death file.
- Count deaths of state residents only.
- For each indicator, report the age-adjusted rates stratified by sex (female and male), and report the overall age-adjusted rate for the state as the weighted average of the age-adjusted male and female rates as follows:

$$\text{Overall Rate} = \frac{\left[\begin{array}{c} \text{Age-} \\ \text{Adjusted} \\ \text{Male} \\ \text{Rate} \end{array} \times \begin{array}{c} \text{Male} \\ \text{Population} \end{array} \right] + \left[\begin{array}{c} \text{Age-} \\ \text{Adjusted} \\ \text{Female} \\ \text{Rate} \end{array} \times \begin{array}{c} \text{Female} \\ \text{Population} \end{array} \right]}{\text{Male Population} + \text{Female Population}}$$

Report age-specific rates for each indicator in the following age categories:

Under 1	45-54
1-4	55-64
5-14	65-74
15-24	75-84
25-34	85+
35-44	

Indicators

Fatal TBI:

S01.0-S01.9, S02.0, S02.1, S02.3, S02.7-S02.9,
S06.0-S06.9, S07.0, S07.1, S07.8, S07.9, S09.7-S09.9,
T01.0, T02.0, T04.0, T06.0, T90.1, T90.2, T90.4,
T90.5, T90.8, T90.9

Drowning:

(1) Unintentional: W65-W74
(2) Water transport: V90, V92

Fatal Fire-Related Injuries:

X00-X09

Fatal Firearm Injuries:

W32-W34, X72-X74, X93-X95,
Y22-Y24, Y35.0

Homicide:

X85-Y09, Y87.1

Suicide:

X60-X84, Y87.0

Fatal Motor Vehicle Traffic injuries:

V30-V39 (.4-.9), V40-V49 (.4-.9), V50-V59 (.4-.9),
V60-V69 (.4-.9), V70-V79(.4-.9), V81.1, V82.1,
V83-V86 (.0-.3), V20-V28 (.3-.9), V29 (.4-.9),
V12-V14 (.3-.9), V19 (.4-.6), V02-V04 (.1, .9),
V09.2, V80 (.3-.5), V87 (.0-.8), V89.2

Poisoning:

X40-X49, X60-X69, X85-X90, Y10-Y19, Y35.2

Data Source: Hospital Discharge Data (HDD)

- Hospitalizations should be age-adjusted to the 2000 standard using NCHS population distribution (Table 1).
- Include only non-federal, acute care, or inpatient facilities in your HDD data set. This excludes VA and other federal hospitals, rehabilitation centers, and psychiatric hospitals.
- Include readmissions, transfers, and deaths occurring in the hospital.
- Count hospitalizations of state residents only.
- In order to calculate Injury Hospitalization Indicators, first you need to create a subset of hospital discharge records based on the principal diagnosis field. The subset you create will be injury hospitalizations, defined as follows.

- **Injury hospitalization:** Records in which the principal reason for admission, after study, to a non-federal, acute care, inpatient facility was an injury, including late effects, but excluding adverse effects of therapeutic use of drugs and adverse effects of medical/surgical care and the late effects of those adverse effects.

Instructions for Creating the Injury Hospitalizations Subset of a State Hospital Discharge Data Set

Search only the principal diagnostic code field for the included N-codes. Exclude all other records from the injury hospitalization subset.

<u>Include</u>	<u>Exclude</u>
305	< 305
518 (only if there is also a corresponding E-code of E830, E832, E910, E854, E864, or E884)	306–800 (with the exception of 518 as noted under “include”)
800–909.2	909.3
909.4	909.5
909.9–994.9	995.0–995.4
995.5–995.59	995.6–995.7
995.80–995.85	995.86, 995.89
	996–999

Once the injury hospitalization subset has been created, calculate the injury indicators defined below by searching for E-codes in the following manner: Search all diagnosis fields. If there is a designated E-code field in your data set, start with the designated E-code field. Count the first-listed valid E-code, unless it is E849, E967, E869.4, E870–879, or E930–949, in which case, search any additional E-code fields and all diagnostic fields and use the next listed valid E-code.

For each indicator, report the age-adjusted rates stratified by sex (female and male), and report the overall age-adjusted rate for the state as the weighted average of the age-adjusted male and female rates as follows:

$$\text{Overall Rate} = \frac{\left[\begin{array}{c} \text{Age-Adjusted} \\ \text{Male} \\ \text{Rate} \end{array} \times \begin{array}{c} \text{Male} \\ \text{Population} \end{array} \right] + \left[\begin{array}{c} \text{Age-Adjusted} \\ \text{Female} \\ \text{Rate} \end{array} \times \begin{array}{c} \text{Female} \\ \text{Population} \end{array} \right]}{\text{Male Population} + \text{Female Population}}$$

Report age-specific rates for each indicator in the following age categories:

Under 1	45–54
1–4	55–64
5–14	65–74
15–24	75–84
25–34	85+
35–44	

Indicators

Hospitalizations for Injury:

N-codes 800–909.2, 909.4, 909.9–994.9,
995.5–995.59, 995.80–995.85.

Search for N-code only in the principal
diagnostic field.

The case count for hospitalizations for injury
should be equivalent to the number of records
in your injury hospitalization subset.

Hospitalizations for TBI:

N-codes 800.0–801.9, 803.0–804.9,
850.0–854.1, 959.01.

Search all diagnosis fields of the injury
hospitalization subset.

Hospitalizations for Near Drowning:

N-code 994.1 and/or E-codes E830, E832,
E910, E954, E964, or E984

Search all diagnosis fields for N-code.
Search for E-codes as described above.

Hospitalizations for Fire-Related injuries:

E-codes E890–E899

Hospitalizations for Firearm Injuries:

E-codes E922.0–E922.3, E922.9, E955.0–E955.4,
E965.0–E965.4, E985.0–E985.4, or E970

Hospitalizations for Suicide Attempts:

E-codes E950–E959

Hospitalizations for Motor Vehicle Injuries:

E-codes E810–E825

E-codes E810–E819

Hospitalizations for Poisoning:

E-codes E850–E869, E950–E952, E962,
E972, and E980–E982

Percentage of HDD Injury Hospitalizations
with External Cause Coding:

$$\text{Percentage of HDD Injury Hospitalizations with External Cause Coding} = \frac{\text{All Hospital Discharge Records with Injury Principal Diagnosis and Associated E-code}}{\text{All Hospital Discharge Records with an Injury Principal Diagnosis}} \times 100$$

Number of records with principal diagnosis of ICD-9 CM 800–994, 995.5 and 995.80–995.85, excluding ICD-9 CM 909.3 and 909.5 that have a valid E-code other than E849, E967, E869.4, E870–879, or E930–949

←

Number of records with principal diagnosis of ICD-9 CM 800–994, 995.5 and 995.80–995.85, excluding ICD-9 CM 909.3 and 909.5

←

Note: Please submit rates for fatal and hospitalization indicators in the accompanying Excel spreadsheets to facilitate CDC’s Injury Center compilation of the results.

Indicators based on BRFSS, YRBS, and FARS will be calculated at CDC and sent to participating state health departments for their review.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

- Not all BRFSS questions are asked every year. In 1999, the only injury questions asked pertained to the indicators listed below.
- BRFSS indicators are at: www.cdc.gov/nccdphp
- Report percentage of respondents.
- **Percentage of Adults Reporting Driving after Perhaps Having Too Much to Drink, in the Past Month:** *How often have you driven after having perhaps too much to drink during the last 30 days?* Report percentage answering one or more times.

Data Source: Youth Risk Behavior Survey (YRBS)

- YRBS is a biennial survey.
- YRBS indicators should be reported as percentage of respondents.
- **Do not age adjust.**
- **Percentage of High School Students Reporting Suicide Attempt During Past 12 Months:** Report percentage of respondents answering one or more attempts.
- **Percentage of High School Students Reporting Always Using Safety Belts:** *How often do you wear a seatbelt when riding in a car driven by someone else?* Report percentage of respondents answering “Always”.

Data Source: Fatality Analysis Reporting System (FARS)

Alcohol-involved Motor Vehicle Crash (MVC) Deaths:

An alcohol-related crash death is defined as a death in a motor vehicle traffic crash where either the driver or nonoccupant (e.g., pedestrian) had a blood alcohol concentration (BAC) ≥ 0.01 g/dL in a police-reported traffic crash.

State-specific counts are published by National Highway Traffic Safety Administration (NHTSA) in the annual publication *Traffic Safety Facts*. To calculate the crude alcohol-involved MVC death rate, look up the count in Table 114 “Persons Killed, by State and Highest Blood Alcohol Concentration in the Crash.” The numerator for calculating this rate is in the column “Total Killed in Alcohol-Related Crashes.” Use the estimated state population for the year as the denominator. Using this method, it will not be possible to calculate age-adjusted rates, as age-specific counts are not provided in the tables.

Table 1. Age Adjustment Table
All Ages — Eleven Age Groups

Age	U.S. 2000 Standard Population (1,000's)	Adjustment Weights
All ages	274,634	1.000000
Under 1	3,795	0.013818
1-4	15,192	0.055317
5-14	39,977	0.145565
15-24	38,077	0.138646
25-34	37,233	0.135573
35-44	44,659	0.162613
45-54	37,030	0.134834
55-64	23,961	0.087247
65-74	18,136	0.066037
75-84	12,315	0.044842
85+	4,259	0.015508