

## CDC REPORT

## Injury mortality among children and teenagers in the United States, 1993

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With this edition of *Injury Prevention*, we are pleased to begin the annual submission of injury mortality rates for children and teenagers in the United States. The 1993 cause specific mortality data are from the National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention, and are based on information reported on death certificates and filed in the 50 states and the District of Columbia.

The tabular data conventions we have adopted in the accompanying table were arrived at after long and significant deliberations, and are the product of a collaborative effort in the injury control community in the United States<sup>1,2</sup> with assistance from the National Center for Injury Prevention and Control and NCHS. Standard definitions of external causes of injury mortality (and morbidity) are crucial for improving comparability across populations. In addition, standardizing definitions will facilitate the dissemination of data and other resources needed for the effective implementation of injury prevention programs.

The mortality data shown in the following table are presented by the two axes of the external cause of injury and poisoning codes in the *International Classification of Diseases*, 9th revision (ICD-9 E-codes): (1) mechanism or cause of death and (2) intent of injury or manner of death. This method of data presentation more effectively presents the impact of injury mortality on children by focusing primarily on the mechanism of the injury, and secondarily on the intent. In previous tabulations of data, many of the external causes of injury such as suffocation, poisoning, and firearms have often been shown only for the 'unintentional' category. As shown in the table, this can significantly underestimate the magnitude of the problem caused by these injuries.

### Data highlights

In 1993, 20 945 children and teenagers 0-19 years of age died as a result of an injury at a rate

of 28.3 per 100 000 population. Across these ages, motor vehicle traffic crashes and firearm injuries were the two leading causes of death. Among infants, the death rate due to suffocation was higher than any other single cause of injury, although homicide accounted for 26% of injury deaths. For children 1-4 years, death rates associated with motor vehicle traffic crashes (occupant and pedestrian fatalities), fires/flames, and drowning were among the highest. At ages 5-9 and 10-14 years, death rates due to motor vehicle traffic crashes lead other causes. In these age groups, the children were occupants, pedestrians, and bicyclists. For teenagers ages 15-19, death rates due to motor vehicle traffic crashes (primarily occupant fatalities) and firearm injuries were similar, responsible for about 80% of all injury deaths in that age group. Homicide and suicide accounted for 45% of injury mortality among teenagers.

- 1 Berenholz G. *Draft recommendations report of standard E-code groupings*. (Unpublished report.) Lexington, MA: Berenholz Consulting Associates, July 1995.
- 2 McLoughlin E, Fingerhut L, Weiss H, Annett L. *A proposed mechanism/intent matrix for presenting E-coded data*. (Unpublished report.) Atlanta, GA: National Center for Injury Prevention and Control, July 1995.

*Editor's note:* this contribution marks the first of a new series of annual reports of this kind. Our hope is that alongside such critically important statistics from the United States, we will be able to publish similar data from other countries. International comparisons of this kind are vital to the promotion of injury prevention and the new classification system developed by Fingerhut and her colleagues is a major step towards making the data still more useful.

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Injury death rates among children and teenagers in the United States, 1993 (age in years)

E code	0-19		Under 1		1-4		5-9		10-14		15-19	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
All external causes	20 945	28.3	1303	33.3	3093	19.6	1816	9.8	2686	14.5	12 047	69.8
Motor vehicle traffic (MVT)												
Unintentional†	7699	10.4	183	4.7	756	4.8	838	4.5	1046	5.6	4876	28.2
person injured												
Occupant	4705	8.0	143	4.4	371	2.8	341	2.3	479	3.2	3 371	24.7
Motorcyclist	230	0.4	0	*	1	*	5	*	31	0.2	193	1.4
Pedal cyclist	352	0.5	0	*	12	*	94	0.5	157	0.8	89	0.5
Pedestrian	1134	1.5	11	*	291	1.8	308	1.7	248	1.3	276	1.6
Unspecified	1267	†	29	†	78	†	90	†	129	†	941	†
MVT, all	7718	10.4	183	4.7	756	4.8	838	4.5	1048	5.7	4893	28.3
Pedestrian, other	246	0.3	6	*	119	0.8	30	0.2	22	0.1	69	0.4
E800-E819												
E810-E819												
(4th digit codes)												
0-.1												
2-.3												
4												
5												
6												
7												
8												
9												
+E958-5, E988-5												
E800-E807 (2),												
E820-E825 (7),												
E826-E829 (0)												
Firearm, All	5751	7.8	14	*	102	0.6	141	0.8	700	3.8	4794	27.8
Unintentional	526	0.7	0	*	30	0.2	38	0.2	137	0.7	321	1.9
Suicide	1460	2.0	NA	NA	NA	NA	1	*	186	1.0	1273	7.4
Homicide	3661	4.9	14	*	71	0.5	99	0.5	359	1.9	3118	18.1
Intent unknown	104	0.1	0	*	1	*	3	*	18	*	82	0.5
Drowning, All	1486	2.0	77	2.0	556	3.5	192	1.0	239	1.3	422	2.4
Unintentional	1547	2.1	87	2.2	580	3.7	196	1.1	244	1.3	440	2.5
+E954, E964, E984												
Fire/flare, All	1105	1.5	117	3.0	584	3.7	224	1.2	90	0.5	90	0.5
Unintentional	1196	1.6	125	3.2	616	3.9	245	1.3	100	0.5	110	0.6
+E958-1, E968-0, E988.1												
Suffocation, All	1366	1.8	414	10.6	220	1.4	74	0.4	191	1.0	467	2.7
Unintentional												
Inhalation/ingestion	252	0.3	86	2.2	101	0.6	22	0.1	14	*	29	0.2
Other	482	0.7	285	7.3	82	0.5	31	0.2	51	0.3	33	0.2
Suicide	158	0.6	NA	NA	NA	NA	3	*	92	0.5	340	2.0
Homicide	158	0.2	31	0.8	34	0.2	17	*	18	*	58	0.3
Intent unknown	39	0.1	12	*	3	*	1	*	16	*	7	*
Falls, Unintentional	236	0.3	12	*	67	0.4	24	0.1	28	0.2	105	0.6
All	276	0.4	12	*	70	0.4	24	0.1	33	0.2	137	0.8
+E957, E968-1, E987												
Cutting/piercing, Homicide	325	0.4	3	*	13	*	16	*	41	0.2	252	1.5
All	347	0.5	3	*	18	*	23	0.1	42	0.2	261	1.5
+E920, E956, E986												
Poisoning, All	560	0.8	38	1.0	73	0.5	35	0.2	51	0.3	363	2.1
Unintentional	201	0.4	20	0.5	59	0.4	22	0.1	27	0.1	148	0.9
E850-E869												
E950-E952												
Suicide	28	0.0	NA	NA	NA	NA	1	*	22	0.1	178	1.0
Homicide	28	0.0	8	*	9	*	8	*	1	*	2	*
Intent unknown	55	0.1	10	*	5	*	4	*	1	*	35	0.2
+E980-E982												
All	13 391	18.1	898	22.9	2590	16.4	1599	8.6	1867	10.1	6437	37.3
Unintentional	2205	3.0	NA	NA	NA	NA	6	*	315	1.7	1884	10.9
Suicide	5040	6.8	344	8.8	464	2.9	194	1.0	462	2.5	3576	20.7
Homicide	309	0.4	61	1.6	39	0.2	17	*	42	0.2	150	0.9
Intent unknown/other												
Population	74 008 091		3 916 861		15 773 936		18 529 227		18 520 991		17 267 076	

Source: National Center for Health Statistics. Data computed by the Office of Analysis, Epidemiology and Health Promotion from data compiled by the Division of Vital Statistics, US Bureau of the Census, file RESP0793, 1995.

Notes: Rates are calculated as deaths per 100 000 population.

\*Rates based on fewer than 20 deaths are unstable and an asterisk is shown in place of the rate. †Total includes 4th digits 4, 5 and 8 not shown separately. ‡Data from the US National Highway Traffic Safety Administration † suggest that most of the unspecified (9) traffic deaths involve vehicle occupants or motorcyclists. Therefore, in the calculation of rates, the 4th digit 9 codes were proportionally distributed according to the known distribution of occupant and motorcyclist for each age group.