SPECIAL FEATURE

Departamento de
Salud Pública, Centro
Universitario de
Ciencias de la Salud,
Universidad de
Guadalajara, Mexico
A Celis

Departamento de
Salud Pública, Centro
Universitario de
Ciencias de la Salud,
Universidad de
Guadalajara and
Unidad de
Investigación
Epidemiológica y en
Servicios de Salud del
Adolescente, IMSS
Jalisco, Mexico
M Villaseñor

Correspondence to:
Dr Alfredo Celis, Av
Naciones Unidad #6754 9B,
Virreyes Residencial, 45110,
Zapopan, Jalisco, Mexico

Injury mortality among children and teenagers in Mexico, 1997

A Celis, M Villaseñor

Injury mortality rates among children and teenagers have been published for the United States,¹ Australia,² New Zealand,³ and England and Wales,⁴ all of them high income countries. No such statistics are available from middle or low income countries, where the injury picture is different.⁵ Table 1 summarizes injury mortality rates among children and teenagers in Mexico, a middle income country. We chose 1997 data because they are the most recent

data available. We also present figures from 1993 for comparison (table 2). The cause specific mortality data are from the Health Ministry, through the Public Health National Institute, and are based on information reported on death certificates, collected by the National Institute for Statistics Geography and Information. To facilitate comparisons, we present our data in the same format as that published previously in *Injury Prevention*.¹⁻⁴

Table 1 Injury death rates among children in Mexico, 1997 (age in years)

		0-19		Under 1		1-4		5-9		10-14		15-19	
	E code	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*
All external causes	E800-E999	11 783	27.38	1 288	63.37	2 125	23.87	1 464	13.32	1 743	16.17	5 163	49.97
Motor vehicle traffic (MVT)													
Unintentional	E810-E819	3 226	7.50	70	3.44	576	6.47	576	5.24	597	5.54	1 407	13.62
person injured	(4 th digit codes)												
Occupant	.0, .1	147	0.34	13	0.64	34	0.38	38	0.35	33	0.31	29	0.28
Motorcyclist	.2, .3	31	0.07	0	0.00	1	0.01	0	0.00	4	0.04	26	0.25
Pedal cyclist	.6	26	0.06	0	0.00	0	0.00	5	0.05	7	0.06	14	0.14
Pedestrian	.7	1 467	3.41	7	0.34	354	3.98	329	2.99	278	2.58	499	4.83
Unspecified	.9	1 546	3.59	50	2.46	184	2.07	203	1.85	273	2.53	836	8.09
MVT, all	+E958.5, E988.5	3 226	7.50	70	3.44	576	6.47	576	5.24	597	5.54	1 407	13.62
Pedestrian, other	E800-E807 (.2), E820-E825 (.7), E826-E829 (.0)	29	0.07	0	0.00	7	0.08	2	0.02	6	0.06	14	0.14
Firearm, all		1 369	3.18	4	0.20	38	0.43	61	0.56	165	1.53	1 101	10.66
Unintentional	E922	184	0.43	0	0.00	12	0.13	20	0.18	45	0.42	107	1.04
Suicide	E955(.0-.4)	142	0.33	NA	NA	NA	NA	0	0.00	13	0.12	129	1.25
Homicide	E965(.0-.4), E970	965	2.24	4	0.20	25	0.28	36	0.33	94	0.87	806	7.80
Intent unknown	E985(.0-.4)	78	0.18	0	0.00	1	0.01	5	0.05	13	0.12	59	0.57
Drowning, all		1 496	3.48	47	2.31	487	5.47	211	1.92	287	2.66	464	4.49
Unintentional	E830, E832, E910	1 324	3.08	44	2.16	446	5.01	196	1.78	260	2.41	378	3.66
Suicide	E954	6	0.01	NA	NA	NA	NA	0	0.00	0	0.00	6	0.06
Homicide	E964	78	0.18	2	0.10	23	0.26	6	0.05	12	0.11	35	0.34
Intent unknown	E984	88	0.20	1	0.05	18	0.20	9	0.08	15	0.14	45	0.44
Fire/flare,													
Unintentional	E890-E899	228	0.53	25	1.23	95	1.07	46	0.42	20	0.19	42	0.41
All	+E958.1, E968.0, E988.1	228	0.50	25	1.23	95	1.07	46	0.42	20	0.18	42	0.41
Suffocation, all		1 562	3.63	674	33.16	164	1.84	63	0.57	167	1.55	494	4.78
Unintentional													
Inhalation/ingestion	E911-E912	767	1.78	552	27.16	128	1.44	29	0.26	25	0.23	33	0.32
Other	E913	189	0.44	82	4.03	25	0.28	19	0.17	22	0.20	41	0.40
Suicide	E953	363	0.84	NA	NA	NA	NA	4	0.04	77	0.71	282	2.73
Homicide	E963	182	0.42	29	1.43	10	0.11	8	0.07	32	0.30	103	1.00
Intent unknown	E983	61	0.14	11	0.54	1	0.01	3	0.03	11	0.10	35	0.34
Falls,													
Unintentional	E880-E886, E888	302	0.07	34	1.67	93	1.04	45	0.41	49	0.45	81	0.78
All	+E957, E968.1, E987	319	0.74	34	1.67	97	1.09	46	0.42	51	0.47	91	0.88
Cutting/piercing,													
Homicide	E966, E974	354	0.82	6	0.30	24	0.27	13	0.12	32	0.30	279	2.70
All	+E920, E956, E986	391	0.91	7	0.34	26	0.29	18	0.16	33	0.31	307	2.97
Poisoning, all		448	1.04	52	2.56	84	0.94	36	0.33	52	0.48	224	2.17
Unintentional	E850-E869	286	0.66	45	2.21	81	0.91	27	0.25	27	0.25	106	1.03
Suicide	E950-E952	90	0.21	NA	NA	NA	NA	0	0.00	15	0.14	75	0.73
Homicide	E962, E972	29	0.07	5	0.25	2	0.02	6	0.05	4	0.04	12	0.12
Intent unknown	E980-E982	43	0.10	2	0.10	1	0.01	3	0.03	6	0.06	31	0.30
All													
Unintentional	E800-E949	8 673	20.15	1 108	54.51	1 934	21.72	1 310	11.92	1 348	12.50	2 973	28.77
Suicide	E950-E959	619	1.44	NA	NA	NA	NA	5	0.05	106	0.98	508	4.92
Homicide	E960-E978	1 963	4.56	109	5.36	126	1.42	104	0.95	210	1.95	1 414	13.68
Intent unknown/other	E980-E999	528	1.23	71	3.49	65	0.73	45	0.41	79	0.73	268	2.59
Population		43 040 931		2 032 617		8 903 052		10 989 694		10 782 430		10 333 138	

*Rate $\times 100\ 000$.

Table 2 Injury death rates among children in Mexico, 1993

	E code	Frequency	Rate $\times 100\ 000$
All external causes	E800–E999	12 740	30.50
Unintentional	E800–E949	9 515	22.78
Suicide	E950–E959	362	0.87
Homicide	E960–E978	2 354	5.64

Injury mortality rates were calculated using linear projections from published census population (1990 and 1995) denominator data.

Data highlights

In 1993, 12 740 children and teenagers 0–19 years of age died as a result of an injury—a rate of 30.5/100 000. By 1997 the total was 11 782, a rate of 27.4/100 000. This change was progressive and represents a decline of approximately 2.6/year. For 1997, 73.6% were unintentional, 16.7% were homicides, and 5.3% suicides. Motor vehicle traffic, suffocation, drowning, and firearms were the first four causes of death, accounting for 65.0%. Among

infants, the death rate due to suffocation was higher than any other single cause of injury, accounting for 52.3%. From the ages of 1–19, events associated with motor vehicle traffic, primarily pedestrian fatalities, lead the causes of death in all groups. For children 1–4 years, motor vehicle traffic and drowning (unintentional) accounted for 50.0% of the deaths. At ages 10–14 motor vehicle traffic, drowning, and suffocation accounted for 60.3%, whereas among those aged 15–19, motor vehicle traffic and firearm add to 48.6%.

- 1 Fingerhut LA, Annett JL, Baker SP, *et al.* Injury mortality among children and teenagers in the United States, 1993. *Inj Prev* 1996;2:93–4.
- 2 Scott I, Moller J, Bordeaux S. Injury mortality among children and teenagers in Australia, 1994. *Inj Prev* 1997;3:46–9.
- 3 Langley JD, Smeijers J. Injury mortality among children and teenagers in New Zealand compared with the United States of America. *Inj Prev* 1997;3:195–9.
- 4 DiGiuseppi C, Roberts I. Injury mortality among children and teenagers in England and Wales, 1992. *Inj Prev* 1997;3:47–9.
- 5 Plitponkarnpim A, Andersson R, Jansson B, *et al.* Unintentional injury mortality in children: a priority for middle income countries in the advanced stage of epidemiological transition. *Inj Prev* 1999;5:98–103.