

SPECIAL FEATURE

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Injury mortality among children and teenagers in Mexico, 1997

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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)

| 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 | 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 person injured (4 th digit codes) | E810–E819 | 3 226 | 7.50 | 70 | 3.44 | 576 | 6.47 | 576 | 5.24 | 597 | 5.54 | 1 407 | 13.62 |
| 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 | 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 | 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/flame, 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 | 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 | 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 | 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 × 100 000.

Table 2 Injury death rates among children in Mexico, 1993

| | <i>E code</i> | <i>Frequency</i> | <i>Rate ×100 000</i> |
|---------------------|---------------|------------------|----------------------|
| 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, Annest 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 DiGuiseppi 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.