

Table 1 continued

E code	0-19		<1		1-4		5-9		10-14		15-19			
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate		
Intent unknown	E983	1	*	0	*	0	*	0	*	1	*	0	*	
Falls														
Unintentional	E880-E886, E888	11	0.20	1	*	0	*	0	*	2	*	8	0.63	
Falls, all	E957, E968.1, E987	21	0.39	1	*	0	*	0	*	3	*	17	1.33	
Cutting/piercing														
Homicide	E966 E974	16	0.30	3	*	4	0.31	1	*	1	*	7	0.55	
Cutting/piercing, all	E920, E956, E986	19	0.35	3	*	4	0.31	1	*	2	*	9	0.70	
Poisoning, all		71	1.32	1	*	3	*	1	*	4	0.31	62	4.85	
Unintentional	E850-E869	35	0.65	1	*	1	*	0	*	3	*	30	2.35	
Suicide	E950-E952	29	0.54	0	*	0	*	0	*	0	*	29	2.27	
Homicide	E962-E972	3	*	0	*	2	*	1	*	0	*	0	*	
Intent unknown	E983	4	0.07	0	*	0	*	0	*	1	*	3	*	
Other causes														
Unintentional		59	1.10	1	*	12	0.93	9	0.70	11	0.86	26	2.03	
Suicide		12	0.22	0	*	0	*	0	*	1	*	11	0.86	
Homicide		15	0.28	3	*	8	0.62	0	*	0	*	4	0.31	
Undetermined intent		3	*	0	*	1	*	0	*	0	*	2	*	
Medical misadvent		6	0.11	2	*	0	*	1	*	1	*	2	*	
Total other causes		95	1.77	6		2.35	21	1.63	10	0.78	13	1.02	45	3.52
All injury deaths														
Unintentional	E800-E949	646	12.01	23	9.00	118	9.15	69	5.39	82	6.44	354	27.68	
Suicide	E950-E959	145	2.70	0	*	0	*	0	*	6	0.47	139	10.87	
Homicide	E960-E978	51	0.95	6	2.35	17	1.32	7	0.55	3	*	18	1.41	
Intent unknown/other	E980-E999	10	0.19	0	*	1	*	0	*	2	*	7	0.55	
Total		852	15.85	29	11.35	136	10.55	76	5.94	93	7.30	518	40.51	
Population		5 376 787		255 475		1 289 147		1 279 226		1 274 097		1 278 842		

Source: Australian Institute of Health and Welfare, National Injury Surveillance Unit, based on death registrations and coroner's reports collected by Australian Bureau of Statistics.

Notes: rates are calculated as deaths/100 000 population. Rates based on a low number of deaths are unstable and, in line with Australian practice are replaced with * below four deaths. Estimates of variability can be calculated from table 2.

Table 2 Poisson table: death data, 1994 (95% CI Poisson variability as a proportion of No of cases)

No	%	No	%
4	0.98	40	0.31
5	0.89	50	0.28
6	0.81	100	0.20
7	0.74	200	0.14
8	0.70	500	0.09
9	0.65	1000	0.06
10	0.62	2000	0.04
20	0.44	5000	0.03
30	0.36	10000	0.02

CI=confidence interval.

Injury mortality among children and teenagers in England and Wales, 1992

Carolyn DiGuseppi, Ian Roberts

The following table summarises 1992 injury mortality rates among children and teenagers in England and Wales. For these analyses we used annual numbers of injury deaths rather than annual numbers of death registrations as published in routine mortality data. Late registrations are common in injury deaths, often because an inquest is being held. Nearly one third of injury deaths registered each year in England and Wales were late registrations from previous years. To facilitate comparisons, we used the same data conventions for external cause of injury as in the recently published report on injury mortality among children and teenagers in the United States.¹ Injury mortality rates were calculated using published census population denominator data. We have chosen to present all rates except those in categories with no deaths. Due to space limitations, the 95% confidence limits for the death rates cannot be included in the table, but

these should be considered when interpreting the rates shown.

1992 is the most recent year for which there are mortality data coded for external cause of injury available from the Office of National Statistics. Trend analyses indicate that injury death rates in England and Wales declined 5.7% per year between 1985 and 1992.² Assuming death rates have continued to follow these downward trends, 1993 rates can be estimated to be 5.7% lower than the rates shown in the table.

Data highlights

Of the 1422 injury deaths among children and teenagers in England and Wales in 1992, 49% were attributable to motor vehicle traffic, for a rate of 5.39 deaths/100 000 population. Motor vehicle traffic deaths accounted for 62% of all unintentional injury deaths. Of all injury

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Table 2 Injury deaths rates among children and teenagers in England and Wales, 1992 (age in years)

E code	0-19		<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	1422	10.98	81	11.66	204	7.39	134	4.11	199	6.36	804	25.88
Motor vehicle traffic (MVT)													
Unintentional*	E810-E819	698	5.39	4	0.58	55	1.99	73	2.24	115	3.68	451	14.52
person injured	(4th digit codes)												
Occupant	.0, .1	339	2.62	4	0.58	17	0.62	15	0.46	20	0.64	283	9.11
Motorcyclist	.2, .3	84	0.65	0	-	0	-	1	0.03	2	0.06	81	2.61
Pedal cyclist	.6	57	0.44	0	-	3	0.11	7	0.21	24	0.77	23	0.74
Pedestrian	.7	204	1.58	0	-	35	1.27	50	1.53	68	2.17	51	1.64
Unspecified	.9	13	0.10	0	-	0	-	0	-	0	-	13	0.42
MVT, all	+E958.5, E988.5	698	5.39	4	0.58	55	1.99	73	2.24	115	3.68	451	14.52
Pedestrian, other	E800-E807 (.2)	9	0.07	0	-	0	-	0	-	5	0.16	4	0.13
	E820-E825 (.7), E826-E829 (.0)												
Firearm, all		12	0.09	0	-	0	-	0	-	1	0.03	11	0.35
Unintentional	E922	0	-	0	-	0	-	0	-	0	-	0	-
Suicide	E955 (.0-.4)	4	0.03	NA	NA	NA	NA	0	-	0	-	4	0.13
Homicide	E965 (.0-.4)	3	0.02	0	-	0	-	0	-	1	0.03	2	0.06
Intent unknown	E985 (.0-.4)	5	0.04	0	-	0	-	0	-	0	-	5	0.16
Drowning,													
Unintentional	E830, E832, E910	79	0.61	5	0.72	27	0.98	11	0.34	8	0.26	28	0.90
All	+ E954, E964, E984	92	0.71	7	1.01	28	1.01	11	0.34	10	0.32	36	1.16
Fire/flare,													
Unintentional	E830-E899	73	0.56	4	0.58	41	1.49	17	0.52	4	0.13	7	0.23
All	+E958.1, E968.0, E988.1	78	0.60	5	0.72	42	1.52	17	0.52	4	0.13	10	0.32
Suffocation, all		139	1.07	19	2.74	17	0.62	7	0.21	30	0.96	66	2.12
Unintentional													
Inhalation/ingestion	E911-E912	23	0.18	10	1.44	2	0.07	2	0.06	3	0.10	6	0.19
Other	E913	49	0.38	9	1.30	13	0.47	3	0.09	17	0.54	7	0.23
Suicide	E953	37	0.29	NA	NA	NA	NA	0	-	1	0.03	36	1.16
Homicide	E963	9	0.07	0	-	2	0.07	2	0.06	1	0.03	4	0.13
Intent unknown	E983	21	0.16	0	-	0	-	0	-	8	0.26	13	0.42
Falls, unintentional	E880-E886, E888	52	0.40	4	0.58	13	0.47	5	0.15	13	0.42	17	0.55
All	+957, E968.1, E987	67	0.52	5	0.72	13	0.47	5	0.15	13	0.42	31	1.00
Cutting/piercing													
Homicide	E966, E974	8	0.06	0	-	0	-	0	-	0	-	8	0.26
All	+E920, E956, E986	13	0.10	0	-	0	-	2	0.06	1	0.03	10	0.32
Poisoning, all		124	0.96	0	-	11	0.40	2	0.06	5	0.16	106	3.41
Unintentional	E850-E869	54	0.42	0	-	7	0.25	1	0.03	4	0.13	42	1.35
Suicide	E950-E952	44	0.34	NA	NA	NA	NA	0	-	0	-	44	1.42
Homicide	E962, E972	5	0.04	0	-	3	0.11	1	0.03	1	0.03	0	-
Intent unknown	E980-E982	21	0.16	0	-	1	0.04	0	-	0	-	20	0.64
Medical procedures/drugs													
Misadventure	E870-876	1	0.01	0	-	1	0.04	0	-	0	-	0	-
Adverse effects	E878-E879, E930-E949	6	0.05	3	0.43	1	0.04	1	0.03	0	-	1	0.03
All													
Unintentional	E800-E949	1120	8.65	45	6.48	178	6.45	124	3.80	182	5.82	591	19.02
Suicide	E950-E959	109	0.84	NA	NA	NA	NA	0	-	1	0.03	108	3.48
Homicide	E960-E978	48	0.37	10	1.44	9	0.33	3	0.09	5	0.16	21	0.68
Intent unknown/other	E980-E999	145	1.12	26	3.74	17	0.62	7	0.21	11	0.35	84	2.70
Population		12 946 600		694 500		2 760 100		3 258 900		3 126 600		3 106 500	

Source: Office of National Statistics.

Notes: rates are calculated as deaths/100 000 population.

*Total includes 4th digits .4, .5, and .8 not shown separately.

deaths, 3% were homicides and 8% were suicides. There were 12 firearm deaths, accounting for fewer than 1% of all injury deaths. Among adolescents aged 15-19, the highest cause specific death rate was associated with motor vehicle traffic occupant injury. Pedestrian traffic deaths were the leading cause of death among children aged 5-9 and 10-14, accounting for 34% and 37% of deaths, respectively. Among children aged 1-4, fire and flames, pedestrian traffic, and drowning were the leading causes of death. For infants the highest death rate was associated with suffocation, causing 42% of the total. This age group had the highest homicide rate, and also the highest rate of deaths of unknown intent, at least some of which may also have been homicides.

Death rates coded as 'intent unknown' were relatively high in England and Wales compared, for example, to US rates.¹ Difference in the coding of death certificates may affect international comparisons.³ For the age groups <1, 1-4, and 5-9 years, 90% of deaths categorised as 'intent unknown' did not fall within the specific categories outlined in the table and thus would have little effect on cause

specific comparisons. Among 10-14 year olds, however, 73% of such deaths were from suffocation; this would substantially affect the death rate if added to any of the intent defined categories for suffocation. No other deaths of unknown intent in this age group fell within the specified cause specific categories. The largest number of deaths of unknown intent occurred among adolescents aged 15-19. Many deaths of unknown intent were due to suffocation or poisoning, which together account for 74% of suicides in this age group. The large numbers of deaths of unknown intent in these two categories may reflect difficulties in differentiating unintentional death from suicide, or, in some cases, a reluctance to label such deaths as suicide. The already high rates of suicide by suffocation and poisoning would be substantially increased if most of the deaths of unknown intent were, in fact, due to suicide. Nearly half of the firearm deaths among persons aged 15-19 were of unknown intent, but firearm homicide or suicide rates would remain low even if these deaths were included in either total.

Several striking differences emerge when data from England and Wales are compared

to the recently published US data.¹ Overall, and for every age group, these deaths rates are less than half as high as US death rates. Low injury death rates in the UK compared with other developed countries have been reported previously.^{4,5} Unintentional injury deaths, suicides, and homicides, all contribute to this differential. The largest differences are in homicide rates, which are substantially lower in every age group compared to US rates. The homicide rate in the US is more than 18 times that in England and Wales, largely due to marked differences in firearm death rates (7.8/100 000 *v* 0.1/100 000).

- 1 Fingerhut LA, Annett JL, Baker SP, Kochanek KD, McLoughlin E. Injury mortality among children and teenagers in the United States, 1993. *Injury Prevention* 1996; 2: 93-4.
- 2 DiGiuseppi C, Roberts I, Li L. Influence of changing travel patterns on child injury death rates: a trend analysis. *BMJ* (in press).
- 3 Smith GS, Langlois JA, Rockett IRH. International comparisons of injury mortality: hypothesis generation, ecological studies, and some data problems. *Proceedings of the international collaborative effort on injury statistics. Vol 1. International Symposium on Injury Statistics, May 1994, Bethesda, Maryland: 13-15.* (DHHS Publication; No (PHS) 95-1252).
- 4 Rockett IRH, Smith GS. Injuries and the Australian mortality mosaic: a comparison with the United Kingdom and New Zealand. *Public Health* 1989; 103: 353-61.
- 5 Rockett IRH, Smith GS. Homicide, suicide, motor vehicle crash, and fall mortality: United States' experience in comparative perspective. *Am J Public Health* 1989; 79: 1396-400.

ATV ban called for in New Zealand

Two 8 year old boys' deaths have prompted a call for a ban on the use of ATVs by those under 16 years. The Federated Farmers opposition argument is that 'riding farm-bikes is an integral part of farm life' and that 'the next thing we'll be banning children from horses and . . . putting everyone in cotton wool' (*Otago Daily Times*, 8 December 1995) (DC).

Dogs rip boy apart 'like steak'

This is the headline of an article describing the result of a frenzied attack by two 'pet' dogs (a bulldog and a rottweiler) on a 3 year old boy in Auckland, New Zealand. 'One of them had his legs and one of them had his head. They were not just biting him, they were shaking him in their mouths, tearings, biting and mauling him. They wanted a piece to eat. They were trying to eat his ears off', the mother is reported to have said (*Otago Daily Times*, 6 December 1995) (DC).

Fell from car

A 2 year old boy was injured, but survived, falling from the car his mother was driving. Apparently, the rear door opened. The mother was charged with driving with a suspended license and failing to have the boy in a child restraining seat (*Patriot Ledger*, 25 May 1996) (AG).

Pool drownings and near drownings

My review of clippings in the last few months forces me to conclude that we have a long way to go, at least in North America, to reduce pool drownings. One was a 13 year old girl in Massachusetts at a public pool, posted saying that no lifeguard was on duty. Another in Montreal involved a retarded teenager whose parents and neighbours were quarrelling over who was responsible for fencing the pool. A 3 year old in Quincy, MA rode his tricycle to the edge of an in-ground pool in his backyard and was found unconscious (P Langer, *Boston Globe*, 24 May 1996).

Hazardous safety innovations?

A report in the *Boston Globe* (I Lakshmanan, 17 May, 1996) acknowledges that 'a generation of product and safety improvements has driven the accidental death rate for children dramatically downward', but suggests there are 'limits to safety-proofing a child's world' and that some new innovations may themselves be hazardous. The examples cited include holes in the platform of a slide intended to reduce slipping in which a jacket drawstring was caught; handrails on a school bus exit stairs, also snagging drawstrings; airbags (no need to repeat the details).