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Changes in rates of violent child deaths in England and Wales between 1974 and 2008: an analysis of national mortality data

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ABSTRACT

Background This study used national data to determine if violent child death rates fell between 1974 and 2008.

Design Using mortality data from the Office of National Statistics, categories potentially containing violent child deaths were analysed for children aged <1, 1–14 and 15–19 years. These data were compared with Home Office data on recorded homicides in children aged <1 and 1–15 years.

Results Annual rates of infant deaths registered as due to assault fell between 1974 and 2008 from 5.6 to 0.7 per 100 000 infants; those in children (1–14 years) fell from 0.6 to 0.2 per 100 000. When these deaths are combined with those registered as undetermined intent, rates are higher but still show a decline in both groups. There is a slight fall in the rates of police recorded homicides in infants, but no observable change in childhood rates. In adolescents, the rates of death from assault fell during the 1970s and have since remained static in females but have risen in males. When these deaths are combined with those registered as undetermined intent, the rates for adolescent women have remained static at 2.0 per 100 000, while for young men they increased from 3.3 to 5.7 per 100 000 before declining to 4.2 per 100 000.

Conclusion These data provide evidence that rates of violent death in infancy and middle childhood have fallen over the past 30 years. In contrast, rates in adolescence have remained static or risen over the same period.

INTRODUCTION

Worldwide it has been estimated that as many as 53 000 children each year die through homicide,¹ however, as with most measures of child maltreatment, there may be under-reporting of abuse related deaths. The deaths of Victoria Climbié in 2000, Holly Wells and Jessica Chapman in 2002 and Peter Connelly in 2007 and the subsequent public inquiries^{2–4} were highly publicised amidst much criticism of the ‘failure’ of child protection services in this country to actually protect children. The nature of these cases, the strong sentiment they evoke and the endless reviews and reforms which follow them mean that cases of violent child death are rarely out of the media spotlight.

Despite the media coverage and public perception which suggest this problem is increasing, a review of WHO data claimed that violent child deaths in England and Wales had actually fallen by 70% between 1974 and 2002, and that this decline was greater than in almost all other major developed countries.^{5–6} In order to clarify and describe any changes in rates of violent child

What is already known on this topic

- ▶ The number of violent child deaths in England and Wales is not known.
- ▶ It has been suggested that rates of violent death have fallen over the past 30 years.

What this study adds

- ▶ Rates of violent death in infancy and middle childhood have fallen over the past 30 years, while rates in adolescence have remained static or risen.
- ▶ Each year 5–15 infants, 15–45 children and 32–117 adolescents die violent deaths.
- ▶ Rates are higher in adolescent males than females.

deaths in England and Wales, we reviewed available source data on causes of child death published by the Office for National Statistics (ONS) and on recorded homicides published by the Home Office from 1974 to 2008.

METHODS

Data were drawn from the Registrar General's national mortality statistics series showing cause of death (DH2), which have been published annually by the ONS since 1974, and the more recent mortality statistics (DR). Data on homicides were taken from the Home Office crime statistics for England and Wales, supplementary volumes on homicides, firearm offences and intimate violence (available at <http://www.homeoffice.gov.uk/rds/>).^{7–11} These publications provide data on numbers and rates of different causes of death broken down by age categories, and of offences initially recorded by the police as homicide broken down by age and sex of the victim, and relate to England and Wales.

The mortality statistics from the ONS use the International Classification of Disease (ICD). Between 1974 and 2007 three different editions have been used: ICD-8 was used from 1974 to 1978, ICD-9 was used from 1979 to 2000, and ICD-10 has been used since 2001.^{12–14} The categories which potentially contained violent deaths and their corresponding classification codes are listed in table 1 (further details of the specific ICD codes used are available from the authors or at <http://www.who.int/classifications/icd/en/>).

Table 1 International Classification of Disease (ICD) categories for homicide and other external causes of child death

Category	Type of death	ICD-8 categories (1974–1978)	ICD-9 categories (1979–2000)	ICD-10 categories (2001–)
Assault	Homicide and injury purposely inflicted by other persons	E960–E969	E960–E969	X85–Y09
Undetermined intent	Injury undetermined whether accidentally or purposely inflicted	E980–E989	E980–E989	Y10–Y34, U50.9
Unknown	Ill-defined and unknown causes of mortality and morbidity	795–796	797–799	R95–R99
Other external	Other external causes (excluding transport accidents, suicides and categories included above)	EXVII (excluding E800–E849, transport accidents; E950–959, suicide and self-inflicted injury; and categories above)	EXVII (excluding E800–E848, transport accidents; E950–959, suicide and self-inflicted injury; and categories above)	XX (excluding V01–99, transport accidents; X60–84, suicide and self-inflicted injury; and categories above)

Data from the Registrar General's reports from 1974 and the Home Office Crime Statistics reports from 1975 to 2008 were entered into an Excel database and double checked for accuracy prior to analysis. Rates of child death (deaths per 100 000 population) were calculated from the numbers of child deaths and the overall population for each age group. Infant mortalities were expressed as deaths per 100 000 population rather than per 1000 live births to allow comparison with other age groups. Changes in death rates over time were modelled using logistic regression. Secular change was investigated using calendar year, with quadratic and cubic terms used to capture changing decreases or increases. The effect of changes in ICD coding was assessed by indicator variables, as were anomalous results. Changes in deviance were used to select covariates for inclusion, using a 5% significance level. Rather than presenting individual regression coefficients, fitted curves have been used to present the data visually as this gives more meaningful results in this context. Rates quoted in the text are those estimated from the fitted curves rather than absolute rates for the first and final years, to account for year-on-year fluctuations.

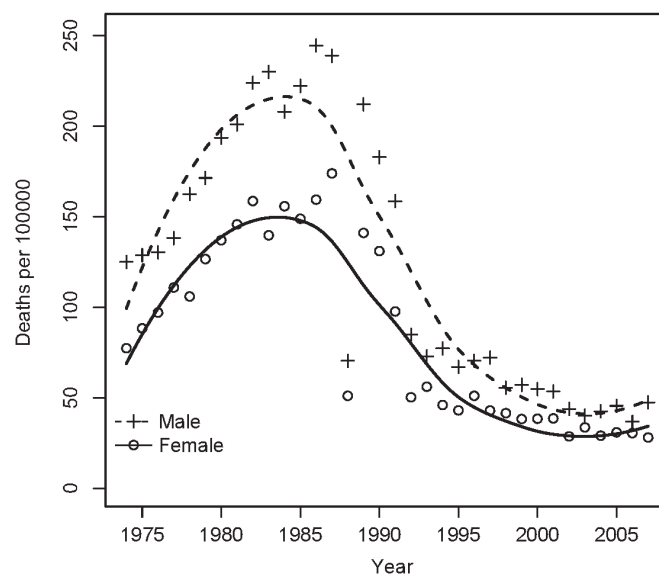
As this was a study using publicly available and anonymous secondary data, ethics approval was not required.

RESULTS

Between 1974 and 2008, total infant, child and adolescent mortality in England and Wales fell from 113 to 26 per 100 000, an overall 77% drop in mortality over this period. Mortality is highest in infancy, dropping to very low levels in the middle childhood years and rising to intermediate levels in adolescence. At all ages, rates are higher in males than in females for all causes of death combined and for all external causes of death.

Infants (<1 year)

The death rate from assault for infants decreased by 5% per year from 1974 (5.6 per 100 000 population; 0.056 per 1000 live births) to 2008 (0.7 per 100 000 population; 0.007 per 1000 live births), with no difference between girls and boys (appendix 1 and figure 1). This equated to absolute numbers of 33–36 in the mid 1970s falling to 6–8 in 2006–2008. The change to ICD-9 in 1979 was associated with a drop in mortality attributed to assault. Among infants, the combined death rate for all assault, undetermined intent and unknown causes was dominated by the large numbers of deaths from unknown causes (including sudden infant death syndrome, SIDS), rising to a peak in the late 1980s followed by a very rapid decline to 1992 and a steady decline thereafter (figure 2). In 1986 new stillbirth and neonatal death certificates were introduced in the UK. These use a different method of classifying the cause of death, as a result of which it is not possible to directly compare neonatal and postneonatal causes of death. The data from 1986 onwards therefore exclude deaths before 28 days of age.

**Figure 1** Infant death rates from assault per 100 000.**Figure 2** Infant death rates from all assault, undetermined intent and unknown causes per 100 000.

In order to ascertain the impact of this change on the data, we examined ONS data on infant death from 1999 to 2007. Neonatal (under 28 days) deaths classified as assault or undetermined causes averaged 0.47 and 0.46 deaths per 100 000 per year (male and female combined), respectively, during the

period 1999–2007. Neonatal deaths classified as unknown (including SIDS) during this period averaged 7.8 and 7.6 per 100 000 per year for males and females. Thus our calculated rates for infant deaths from assault and undetermined causes from 1986 onwards will be lower than the actual rates, by up to 28%, but the trends are unchanged.

Numbers and rates of recorded infant homicides showed considerable year-on-year variation (figure 3). Rates of infant homicides were in the range of 4–6 per 100 000 for boys and 3–5 per 100 000 for girls, with an apparent drop in both over the most recent years. Numbers of recorded infant homicides were 31–49 in 1974–1976 and 16–24 in 2006–2008.

Children (1–14 years)

For children (1–14 years), the death rate from assault decreased by 2% per year from 0.6 per 100 000 in 1974 to 0.2 per 100 000 in 2008 (appendix 2 and figure 4). There was no gender difference. Numbers fell from 49–71 in the mid 1970s to 16–19 in 2006–2008. The changes to ICD-9 and ICD-10 are both associated with further drops in mortality attributed to assault. The combined rate for all assault, undetermined and unknown causes rose to a peak in the 1980s of 1.3 per 100 000 in boys and 1.1 per 100 000 in girls before decreasing to 0.9 per 100 000 in boys and 0.75 per 100 000 in girls by 2008 (figure 4). Rates of recorded homicides in children (1–15 years) were much lower than those in infants and did not show any evidence of decline (figure 3). For 1–15-year-old boys, rates were stable between 0.47 and 0.58 per 100 000. In girls, there was an increase from 0.35 to 0.58 per 100 000 by the mid 1980s before falling to 0.35 again. Although there was no evidence of a decline in rates, absolute numbers fell from 49–77 in 1974–1976 to 31–52 in 2006–2008.

Adolescents (15–19 years)

For young women (15–19 years), the death rate from assault decreased from 1.3 to 0.5 per 100 000 over the 34 years (appendix 3 and figure 5). However, the rate for young men is not only higher, but after declining from 1.6 to 0.8 per 100 000 in the late 1980s, increased again to 1.3 per 100 000 by 2008. Numbers of adolescent deaths from assault were 41–47 in 1974–1976 and 23–35 in 2006–2008. There were no changes associated with

the shifts to ICD-9 and ICD-10. In adolescents, the combined death rate for young women was constant at 2.24 per 100 000 for all assault, undetermined and unknown causes combined (figure 5). For young men, the death rate for all assault, undetermined and unknown causes increased from 3.4 per 100 000 to 6.2 per 100 000 by 1997–1999 and then declined to 4.9 per 100 000 by 2009. No data were available on police recorded adolescent homicide.

DISCUSSION

By directly analysing source data from the ONS, this study has confirmed the findings of Pritchard and colleagues^{5–6} that rates of registered deaths from assault in infants and children have reduced since the 1970s. In contrast, rates of fatal assaults in adolescence have remained static or risen. The pattern for recorded homicides is less clear, with some indication that

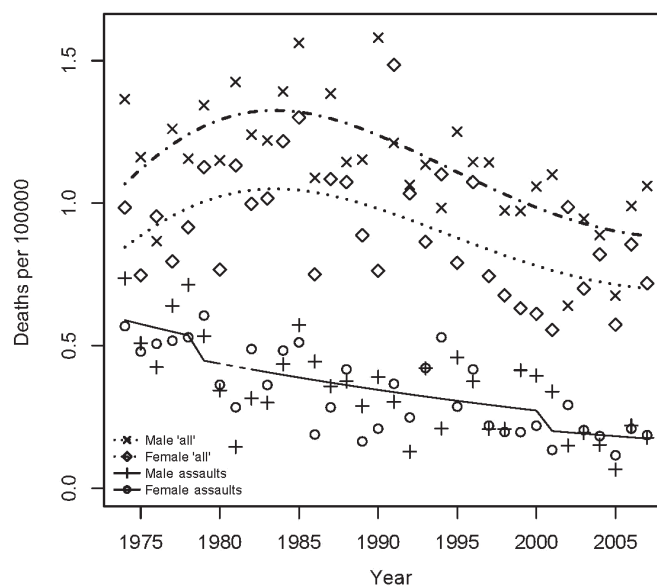


Figure 4 Child (1–14 years) death rates from assault, and combined (all assault, unknown causes and undetermined intent) per 100 000.

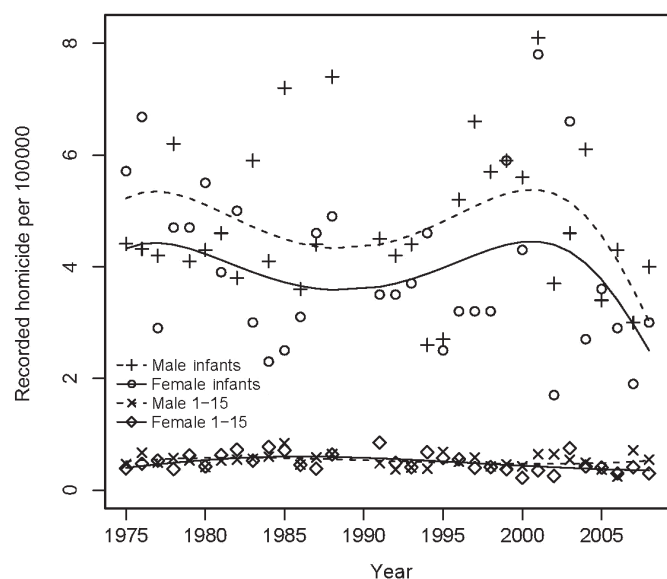


Figure 3 Rates of recorded homicide per 100 000 infants and children.

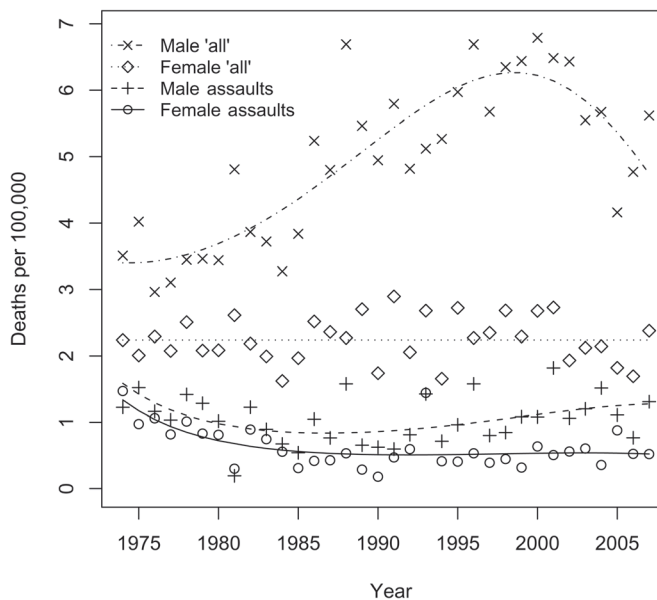


Figure 5 Adolescent (15–19 years) death rates from assault, and combined (assault, unknown causes and undetermined intent) per 100 000.

rates in infancy have fallen, but no evidence of any change in childhood homicides.

On closer inspection of the data some important patterns emerge. Rates of violent deaths are highest in infancy, dropping to very low levels in the middle childhood years and rising again in late adolescence. There has been a general trend towards a lower proportion of deaths being registered as assault and a higher proportion as undetermined intent in all three age groups, suggesting there may have been some diagnostic shift over the past 30 years. Nevertheless, the overall rates of assault plus deaths of undetermined intent have fallen in both infancy and childhood. The true rate of violent deaths is likely to lie between the rates for assault only and those for assault, unknown and undetermined intent combined.

The rates for recorded homicide are generally higher than those for registered deaths from assault, but less than those for assault, unknown and undetermined intent combined. A number of factors may lie behind these discrepancies. Police recorded homicides include all those which the police are investigating as homicides, whereas the Registrar General's statistics relate to final recorded cause of death. The Registrar General's statistics relate to the registered cause of death, and are recorded by the year in which the deceased died; the Home Office statistics relate to recorded criminal offences and relate to the year in which the offence was first recorded. Finally, the age bands used by the Registrar General and the Home Office are not the same. Thus the two are not directly comparable but provide complementary estimates of the numbers and rates of violent child deaths.

Based on the absolute numbers of deaths from assault and from assault plus undetermined intent over the 5 years from 2004 to 2008, we estimate that the annual numbers of violent childhood deaths in England and Wales lie between 5 and 15 infants, 15 and 45 children aged 1–14 years and 32 and 117 adolescents aged 15–19 years. It is our view that the true numbers are likely to be at the higher end of these ranges, which are more in keeping (at least for the infants and children) with the numbers of police recorded homicides.

While every effort has been made to ensure the robustness of these data by going back to the original source, there are limitations to this analysis which should be borne in mind. Publicly available data from the ONS do not give a full breakdown of cause by age. We have chosen for simplicity and in consideration of the relatively small numbers within each group, to restrict our analysis to three broad age groups; this may hide different patterns, for example, between preschool and school age children. The small numbers inevitably mean that year-on-year variations could result in substantial changes to rates.

In the past 3 years, absolute numbers of child deaths (0–19 years) from assault have varied from 48 to 58, with a large proportion of these now being deaths in the adolescent age group. We would argue that these figures represent a minimum estimate of the numbers of children dying violent deaths. Violent child deaths do not conform to one particular pattern but include both deliberate and unintentional assaults as well as the broader scope of fatal child maltreatment.^{15–17} As with other studies there is likely to be some underascertainment arising from death registration data.^{18–20}

In infancy, the biggest influence on death rates outside the perinatal period has been the dramatic drop in rates of SIDS in the early 1990s associated with 'Reduce the Risk' campaigns.²¹ Prior to this fall, it was postulated that a substantial proportion of sudden unexpected deaths in infancy might be covert homicides.²² While it is possible that some of the fall in violent infant deaths is accounted for by reclassification into

unknown causes, this seems an unlikely scenario given that both have dropped substantially over the same time period. Given the difficulties in identifying asphyxia postmortem, it is inevitable that some infant homicides will be classified as unknown causes or undetermined intent, while others may be hidden within other external causes, but the overall numbers are likely to be small.^{23–25} Rates of deaths from assault and of recorded homicide in the middle childhood years are much lower than those in infancy, but have nevertheless fallen steadily over the 30-year period. There is no suggestion from our data that reclassification would account for the observed fall in rates. In contrast, adolescent deaths registered as assault fell in the 1970s and 1980s, but have remained static or risen marginally since then. Combining these deaths with those registered as undetermined intent, there is a steady rise over this period in rates for young men, while rates for young women have remained steady. Deaths registered as unknown causes are rare in adolescents. For all three categories of death, rates in young men are higher than those in young women.

It is interesting that the largest reductions in violent deaths observed are in infancy, with smaller reductions in the middle childhood years, and no change in adolescence. This may partly reflect the different nature of violent deaths in these age groups. In infancy and early childhood, violent deaths primarily occur in the context of the family, with parents the usual perpetrators. As children grow, the risks from those outside the immediate family increase, and in adolescence, it is likely that most violent deaths are perpetrated by extra-familial assailants. This may suggest that policies around protecting children from abuse and neglect within the family are having some effect, while those aimed at protecting older youths from violence have so far been unsuccessful.

CONCLUSION

Over the past 30 years there have been substantial reductions in deaths from assault in infants and children in England and Wales. These reductions are unlikely to be accounted for by changes in categorisation, but appear to reflect real improvements in protecting children from severe abuse. However, there is no cause for complacency while at least one child or young person per week dies as a result of assault. Within this context, it is important that professionals, policy makers and the public continue to learn lessons from violent child deaths and to recognise that we all carry a responsibility to ensure children's safety.

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Competing interests PS has received grant money for related work on fatal child maltreatment. He provides expert advice to courts in child protection cases. He does not stand to gain financially from the publication of this paper and has no other competing interests. BA and JH do not have any competing interests.

Contributors PS conceived the original research idea and was the lead author for this paper. He is the guarantor of the paper. BA carried out the data gathering, processing and initial analysis. JH provided statistical analysis. All three authors contributed to the development of the final manuscript.

Provenance and peer review Not commissioned; externally peer reviewed.

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Appendix 1 Infant (0 to <1 year) deaths

Year	Total deaths (all causes), N (rate per 100 000)	Assaults, N (rate per 100 000)*	Unknown (including SIDS), N (rate per 100 000)	Undetermined, N (rate per 100 000)	Recorded homicides, N (rate per 100 000)
1974	10 459 (1631)	35 (5.5)	610 (95.1)	8 (1.2)	49 (7.6)
1975	9488 (1479)	33 (5.4)	630 (102.3)	9 (1.5)	31 (5.0)
1976	8334 (1300)	36 (6.2)	622 (106.3)	10 (1.7)	32 (5.5)
1977	7841 (1223)	18 (3.2)	678 (121.3)	2 (0.4)	20 (3.6)
1978	7881 (1229)	29 (5.1)	727 (127.9)	11 (1.9)	31 (5.5)
1979	8178 (1275)	28 (4.5)	879 (142.3)	17 (2.8)	27 (4.4)
1980	7899 (1232)	13 (2.0)	1035 (161.9)	13 (2.0)	31 (4.9)
1981	7021 (1095)	10 (1.6)	1069 (168.5)	25 (3.9)	27 (4.2)
1982	6775 (1056)	13 (2.1)	1151 (186.3)	23 (3.7)	29 (4.4)
1983	6381 (995)	15 (2.4)	1128 (181.0)	16 (2.6)	28 (4.5)
1984	6037 (941)	9 (1.4)	1116 (179.2)	11 (1.8)	20 (3.2)
1985	6141 (958)	11 (1.7)	1185 (182.6)	14 (2.2)	32 (4.9)
1986	2824 (440)	15 (2.3)	1302 (198.8)	13 (2.0)	22 (3.4)
1987	2824 (440)	10 (1.5)	1354 (203.8)	12 (1.8)	30 (4.5)
1988	2849 (444)	21 (3.1)	1398 (203.9)	12 (1.8)	36 (6.0)
1989	2536 (395)	13 (1.9)	1176 (172.9)	17 (2.5)	16 (2.3)
1990	2343 (365)	6 (0.9)	1055 (153.9)	19 (2.8)	28 (4.0)
1991	2106 (328)	7 (1.0)	882 (125.7)	15 (2.1)	27 (3.9)
1992	1584 (247)	8 (1.2)	439 (63.2)	25 (3.6)	27 (4.0)
1993	1446 (225)	20 (3.0)	404 (60.3)	9 (1.3)	24 (3.6)
1994	1372 (214)	13 (1.9)	392 (58.4)	11 (1.6)	17 (2.6)
1995	1284 (200)	6 (0.9)	344 (53.0)	9 (1.4)	27 (4.3)
1996	1314 (205)	12 (1.9)	362 (56.9)	14 (2.2)	32 (5.0)
1997	1283 (200)	7 (1.1)	353 (54.2)	17 (2.6)	29 (4.5)
1998	1207 (188)	5 (0.8)	281 (44.4)	22 (3.5)	37 (5.9)
1999	1186 (185)	9 (1.4)	275 (43.8)	17 (2.7)	31 (5.0)
2000	1042 (162)	8 (1.3)	251 (41.2)	26 (4.3)	48 (8.0)
2001	1103 (172)	6 (1.0)	258 (43.8)	8 (1.4)	16 (2.7)
2002	1001 (156)	6 (1.0)	196 (33.3)	12 (2.0)	33 (5.6)
2003	1042 (162)	0 (0.0)	213 (35.1)	11 (1.8)	27 (4.4)
2004	1010 (157)	1 (0.2)	216 (34.3)	9 (1.4)	22 (3.5)
2005	1032 (161)	3 (0.5)	233 (36.5)	9 (1.4)	23 (3.6)
2006	1023 (160)	6 (0.9)	203 (31.1)	11 (1.7)	16 (2.4)
2007	1063 (166)	8 (1.2)	237 (35.1)	11 (1.6)	24 (3.6)
2008	1070 (167)	7 (1.0)	233 (33.1)	10 (1.4)	19 (2.7)

*The rates given in the table are absolute rates for each year, so do not match the rates quoted in the text which are based on the fitted curves. SIDS, sudden infant death syndrome.

Appendix 2 Child (1–14 years) deaths

Year	Total deaths (all causes), N (rate per 100 000)	Assaults, N (rate per 100 000)*	Unknown, N (rate per 100 000)	Undetermined, N (rate per 100 000)	Recorded homicides (1–15 years), N (rate per 100 000)
1974	4238 (39.1)	71 (0.7)	25 (0.2)	32 (0.3)	77 (NA)
1975	3885 (35.8)	53 (0.5)	16 (0.1)	34 (0.3)	49 (0.4)
1976	3652 (33.7)	49 (0.5)	22 (0.2)	25 (0.2)	65 (0.6)
1977	3383 (31.2)	60 (0.6)	19 (0.2)	28 (0.3)	52 (0.5)
1978	3431 (31.6)	63 (0.6)	18 (0.2)	24 (0.2)	56 (0.5)
1979	3129 (28.8)	56 (0.6)	19 (0.2)	47 (0.5)	65 (0.6)
1980	2971 (27.4)	34 (0.4)	29 (0.3)	30 (0.3)	43 (0.4)
1981	2870 (26.4)	20 (0.2)	35 (0.4)	66 (0.7)	56 (0.6)
1982	2680 (24.7)	37 (0.4)	28 (0.3)	39 (0.4)	63 (0.6)
1983	2599 (24.0)	30 (0.3)	41 (0.5)	31 (0.3)	50 (0.5)
1984	2475 (22.8)	41 (0.5)	41 (0.5)	35 (0.4)	66 (0.7)
1985	2534 (23.4)	48 (0.5)	36 (0.4)	43 (0.5)	73 (0.8)
1986	2289 (21.1)	28 (0.3)	29 (0.3)	24 (0.3)	44 (0.5)
1987	2263 (20.9)	28 (0.3)	41 (0.5)	39 (0.4)	48 (0.5)
1988	2311 (21.3)	33 (0.4)	39 (0.4)	46 (0.5)	61 (0.6)
1989	2253 (20.8)	20 (0.2)	35 (0.4)	35 (0.4)	46 (0.5)
1990	2148 (19.8)	28 (0.3)	35 (0.4)	47 (0.5)	65 (0.7)
1991	2158 (19.9)	30 (0.3)	45 (0.5)	46 (0.5)	41 (0.4)
1992	1911 (17.6)	17 (0.2)	27 (0.3)	52 (0.6)	42 (0.4)
1993	1940 (17.9)	39 (0.4)	27 (0.3)	28 (0.3)	52 (0.5)
1994	1796 (16.6)	34 (0.4)	29 (0.3)	34 (0.4)	63 (0.6)
1995	1739 (16.0)	35 (0.4)	27 (0.3)	34 (0.4)	53 (0.5)
1996	1659 (15.3)	37 (0.4)	32 (0.3)	35 (0.4)	50 (0.5)
1997	1687 (15.5)	20 (0.2)	31 (0.3)	38 (0.4)	42 (0.4)
1998	1619 (14.9)	19 (0.2)	29 (0.3)	30 (0.3)	44 (0.4)
1999	1581 (14.6)	29 (0.3)	25 (0.3)	22 (0.2)	34 (0.3)
2000	1417 (13.1)	29 (0.3)	20 (0.2)	30 (0.3)	50 (0.5)
2001	1420 (13.1)	22 (0.2)	32 (0.3)	23 (0.2)	46 (0.5)
2002	1376 (12.7)	20 (0.2)	22 (0.2)	32 (0.3)	60 (0.6)
2003	1365 (12.6)	18 (0.2)	24 (0.3)	33 (0.4)	45 (0.5)
2004	1238 (11.4)	15 (0.2)	36 (0.4)	26 (0.3)	39 (0.4)
2005	1210 (11.2)	8 (0.1)	26 (0.3)	22 (0.2)	27 (0.3)
2006	1310 (12.1)	19 (0.2)	27 (0.3)	36 (0.4)	52 (0.6)
2007	1295 (11.9)	16 (0.2)	32 (0.4)	31 (0.4)	45 (0.4)
2008	1201 (11.1)	16 (0.2)	29 (0.3)	34 (0.4)	31 (0.4)

*The rates given in the table are absolute rates for each year, so do not match the rates quoted in the text which are based on the fitted curves.
NA, population base not available.

Appendix 3 Adolescent (15–19 years) deaths

Year	Total deaths (all causes), N (rate per 100 000)	Assaults, N (rate per 100 000)*	Unknown, N (rate per 100 000)	Undetermined, N (rate per 100 000)
1974	2212 (63.3)	47 (1.3)	1 (0.0)	53 (1.5)
1975	2216 (63.4)	45 (1.3)	2 (0.1)	62 (1.7)
1976	2283 (65.3)	41 (1.1)	0 (0.0)	56 (1.5)
1977	2236 (64.0)	35 (0.9)	4 (0.1)	59 (1.6)
1978	2467 (70.6)	47 (1.2)	4 (0.1)	64 (1.7)
1979	2349 (67.2)	42 (1.1)	4 (0.1)	64 (1.6)
1980	2412 (69.0)	37 (0.9)	8 (0.2)	67 (1.7)
1981	2384 (68.2)	10 (0.2)	2 (0.0)	140 (3.4)
1982	2257 (64.6)	44 (1.1)	1 (0.0)	81 (2.0)
1983	2209 (63.2)	34 (0.8)	4 (0.1)	81 (2.0)
1984	2059 (58.9)	25 (0.6)	3 (0.1)	72 (1.8)
1985	1918 (54.9)	17 (0.4)	5 (0.1)	94 (2.4)
1986	1991 (57.0)	29 (0.7)	4 (0.1)	120 (3.1)
1987	1914 (54.8)	23 (0.6)	4 (0.1)	111 (2.9)
1988	1821 (52.1)	15 (0.4)	8 (0.2)	124 (3.3)
1989	1856 (53.1)	17 (0.5)	7 (0.2)	123 (3.4)
1990	1767 (50.6)	14 (0.4)	2 (0.1)	100 (2.9)
1991	1670 (47.8)	17 (0.5)	9 (0.3)	114 (3.5)
1992	1401 (40.1)	22 (0.7)	9 (0.3)	77 (2.5)
1993	1306 (37.4)	43 (1.4)	6 (0.2)	69 (2.3)
1994	1200 (34.3)	17 (0.6)	10 (0.3)	78 (2.6)
1995	1292 (37.0)	21 (0.7)	11 (0.4)	101 (3.3)
1996	1355 (38.8)	33 (1.1)	8 (0.3)	99 (3.2)
1997	1373 (39.3)	19 (0.6)	10 (0.3)	99 (3.1)
1998	1282 (36.7)	21 (0.7)	14 (0.4)	112 (3.5)
1999	1287 (36.8)	23 (0.7)	20 (0.6)	100 (3.1)
2000	1256 (35.9)	28 (0.9)	14 (0.4)	113 (3.5)
2001	1260 (36.1)	38 (1.2)	10 (0.3)	102 (3.2)
2002	1217 (34.8)	27 (0.8)	17 (0.5)	96 (2.9)
2003	1161 (33.2)	31 (0.9)	15 (0.4)	86 (2.5)
2004	1150 (32.9)	33 (1.0)	11 (0.3)	93 (2.7)
2005	1117 (32.0)	35 (1.0)	12 (0.3)	59 (1.7)
2006	1225 (35.1)	23 (0.7)	16 (0.5)	77 (2.2)
2007	1154 (33.0)	33 (0.9)	14 (0.4)	97 (2.7)
2008	1130 (32.3)	35 (1.0)	16 (0.5)	101 (2.9)

*The rates given in the table are absolute rates for each year, so do not match the rates quoted in the text which are based on the fitted curves.



Changes in rates of violent child deaths in England and Wales between 1974 and 2008: an analysis of national mortality data

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