Coroners’ records of accidental deaths

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Abstract
This study set out to provide a description of the children involved in fatal accidents and to ascertain which deaths might have been prevented and by what means. The records from a convenience sample of four coroners (jurisdictions of Inner North London, Birmingham, Bedfordshire, and Ipswich) of inquests opened in 1984–8 on children aged under 15 killed in accidents were reviewed for information on the deceased, the accident, and the injuries sustained. Altogether 225 records (150 boys, 75 girls) were examined. Accidents to pedestrians were the commonest cause of death (81 cases), and road safety engineering measures were the most likely means by which most fatalities might have been prevented. The records frequently omitted information on social circumstances, family structure, ethnic group, or the use of safety equipment.

Cooperative coroners can contribute to child safety as their records are rich in information about accidents. This could be made available to parties interested in accident prevention, including community paediatricians.

Accidental death is the largest single cause of death to children aged under 15, and in the UK over 800 children are killed in accidents every year. Some of these cases are thoroughly investigated and considerable information on them is available for analysis, for example, road accidents (from police records). Other sources of data lack uniformity and detail and are not up to date, for example, the Home Accident Deaths’ Database.

The only comprehensive source of detailed information on death from all accidental causes is that held in the coroners’ records. As has been shown elsewhere, these records contain both basic demographic data (age, sex, etc) and detailed pathological information.1 An in depth study of these records was undertaken.

Immediate objectives were to provide a detailed description of the children involved in fatal accidents and to ascertain which childhood deaths might have been prevented and by what means. This report also suggests how coroners could contribute more widely to child safety.

Methods
Records from a convenience sample (a presumably unbiased but non-random sample) of four coroners with jurisdictions of different sizes and demographic characteristics were included in the study. The four jurisdictions were Inner North London, Birmingham, Bedfordshire, and Ipswich.

All inquests opened in 1984–8 inclusive were analysed for children age 0–14. Cases where the verdict was ‘accidental death’ or ‘misadventure’ other than medical accidents were included. In addition, records where the verdict was ‘unlawful killing’, ‘death by natural causes’, and ‘open verdicts’ were reviewed and included where appropriate. The following information was systematically abstracted, if available:

- The coroner: jurisdiction, record number.
- The deceased: name, address, sex, date of birth, height and weight, ethnic group.
- The family: parent’s occupation, family structure.
- The accident: time, day, and date of accident, accident type.
- The injury: nature of injury, treatment received, time to die, abbreviated injury severity score.
- The verdict: cause of death as certified, verdict, notes.

Results
A total of 225 cases was included. These covered Inner North London (87 cases), Birmingham (91 cases), Bedfordshire (42 cases), and Ipswich (5 cases).

PERSONAL DETAILS OF DECEASED
A detailed breakdown into sex and age groups is presented in table 1.

ACCIDENT DETAILS
The various accident types are detailed in table 1, subdivided by age group and sex. There were 91 home accidents, 103 road accidents, and 31 leisure accidents. Of the 225 children, 126 (56%) were playing at the time of the accident. Of 81 pedestrian casualties, 48 (59%) were at play, and sleep was mentioned for 18 children (49%) of the 33 killed by burns or in fires.

POSSIBLE PREVENTATIVE MEASURES
All cases were examined to see whether there were possible measures that might have contributed towards preventing the accident. There were 38 cases where it was considered that no such measures would have been useful. This included a child struck by lightning, three older children who were strangled in accidents that were considered by the coroners to be prank...
imitations of suicide, and older children deliberately crossing major roads in the presence of barriers.

Suggested preventative measures in the other cases were broadly divided into education, engineering, and enforcement. The results are given in table 2. Totals exceed the number of fatalities reviewed, as more than one measure was possibly relevant in some cases.

Because the use of specific safety measures was rarely recorded, it is possible that safety devices were actually in use in some cases but proved ineffective.

MULTIPLE DEATHS
Eighteen children were killed in an accident where more than one person died. These were five house fires, one situation where two cyclists died, and one where two boys playing in a quarry were trapped by falling sand. Only one child was killed in a major disaster (one boy aged 7 in the fire at King’s Cross tube station).

UNAVAILABLE INFORMATION
Information on children’s height and weight was poorly recorded in postmortem data (not available in 142 cases). Information on ethnic group was not available in 88 cases, so no conclusions as to accidents in various racial groups could be drawn. The records also contained very little information about the social and personal details of the children and their families. These shortcomings limited examination of hypotheses linking accident frequency to family size, family structure or position in the family, and social or ethnic background. Information on safety training of children was also limited (for example, cycle training was mentioned in none of 14 cycle accident cases and in cases involving swimming one drowned child was described as a non-swimmer and one as a swimmer).

Discussion
For this study a number of interested and
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Coroners are able to contribute to child safety by opening their records. This should include community paediatricians and other safety workers as well as academic researchers.

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1 Hayes HRM, Hanstead JK. A study on some information sources on accidents to children in the West Midlands region. Birmingham: West Midlands Health Authority, 1982.