

Death from childhood stroke

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(PhysOrg.com) -- Stroke is an important cause of childhood morbidity and is in the top ten causes of childhood death. For the first time, new research has looked at trends in death from childhood stroke in England and Wales, from 1921 to 2000.

In the study, 'Mortality from childhood [stroke](#) in England and Wales, 1921-2000', academics in the Division of Child Health at Bristol University investigated how death rates varied according to age, gender, stroke subtype, period of death and birth cohort.

The study, funded by The Stroke Association (UK) and published by [Archives of Disease in Childhood](#) found:

- Most deaths from childhood stroke occur due to haemorrhagic stroke, ruptured blood vessels leaking blood into the brain;

- Children less than one year old and males have the highest stroke death rate;
- [Mortality rates](#) from childhood stroke steadily declined during the 1960s and 1970s but plateaued in the 1980s and 1990s;
- Birth cohort mortality rates fell for each successive generation since the 1950s suggesting the influence of prenatal or perinatal factors.

Dr Finbar O’Callaghan, Consultant Senior Lecturer in Paediatric Neurology in the Division of Child Health at Bristol University and senior author on the paper, said: “The decline in birth cohort mortality since the 1950s is striking and points to changes in causal factors that are operating early in life and affecting successive generations of children.”

Dr Andrew Mallick, Paediatric Neurology Research Associate in the Division of Child Health at Bristol University and co-author of the study, added: “Despite the potential limitations of using mortality data, this study has provided some compelling insights into childhood stroke in England and Wales.”

Joanne Murphy, Research Liaison Officer for The Stroke Association said: “It’s a common myth that stroke only happens to older people when it is actually one of the top ten causes of deaths in children and can be devastating for families. Because people don’t think that children can have a stroke, it can take longer to be diagnosed. As with stroke in adults, a quick diagnosis and rapid treatment is essential to save lives and reduce disability.

“Childhood stroke is under researched which is why we are funding the team at the University of Bristol to find out more about how many children have strokes and what their outcomes may be. It is imperative that we raise awareness of this issue so more children get the chance to

make a good recovery.”

From the data evaluated, the researchers found 6,029 deaths from childhood stroke between 1921-2000. Analysis by period of death showed that rates declined in the 1960s and 1970s but then plateaued.

At all time points males had a higher mortality rate than females. Infants had a relatively high mortality rate (24.5 per million person years) but rates fell steeply in early childhood (2.5 per million person years at age five to nine years) before rising again in late adolescence (7.5 per million person years at age 15-19 years). An increased rate was found for males at all ages but was greatest in infancy.

Haemorrhagic stroke accounted for 71 per cent of stroke deaths. Birth cohort analysis showed a trend of declining mortality with each successive generation since the 1950s.

There has been one previous study by Dr Heather Fullerton that analysed stroke deaths in US children. The study, confined to the years 1979 to 1998, did not analyse mortality by birth cohort. However, there are some striking similarities to the two studies.

Both studies have shown a similar decline in mortality rates analysed by period of death in the latter part of the twentieth century together with higher risk for males and for infants. It has previously been assumed that the high mortality rate in infancy was due to very high rates in the very youngest children (younger than one month). The study in the USA was not able to analyse this assertion but this paper has found that this assumption was incorrect.

Provided by University of Bristol ([news](#) : [web](#))

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