Child mortality of children aged 5–15 years in the UK and Sweden: a comparison

Child mortality is higher in the UK than in many other European countries. We have previously compared mortality rates of children under the age of 5 years in the UK with Sweden. We, therefore, decided to look at the mortality rates of children between the ages of 5 and 15 years in both countries.

The methodology was similar to that used in our previous paper. Child mortality cause-specific data were obtained from the respective National Statistics Offices. Because of the limitations of International Classification of Diseases classification, we used a more clinically useful classification to specifically identify infections. Additionally, other respiratory disorders (J98) were analysed and classified clinically.

Data combined for three years were analysed. A test was used to compare the number of deaths. Mortality rates (per 1 000 000 children) were calculated for each of the three years. Mean mortality rates for the three years were used for direct comparison between the two countries.

There were 2342 and 207 deaths in children aged 5–15 years in the UK and Sweden, respectively, between 2006 and 2008. The mean population of children aged 5–15 years for the same time period was 7 403 933 and 1 146 061, respectively.

The overall mortality rate was significantly higher in the UK than in Sweden (105.6 and 78.5, respectively, p<0.001). The mortality rates for most of the common causes of death (neoplasms, diseases of the nervous system, respiratory, infectious, circulatory, endocrine and metabolic disorders) were all significantly higher in the UK (table 1). There was no difference in the mortality rate for external causes of morbidity and mortality between the two countries. Symptoms, signs, abnormal clinical and laboratory findings not elsewhere classified were significantly higher in Sweden. There were, however, only 9 of these unclassified deaths in Sweden and 23 in the UK.

The greatest difference, with a mortality rate ratio of 14.2, was in diseases of the respiratory system. Also, 97 of the 135 deaths due to respiratory disorders in the UK were classified as other respiratory disorders (J98). The majority of these appeared to be due to asthma and status asthmaticus. The mortality rates for asthma and status asthmaticus, respiratory infections and septicaemia were all significantly higher in the UK than in Sweden (table 2). Our findings in relation to the high mortality rate for asthma are in keeping with previous studies. Most childhood deaths from asthma are preventable.

Our findings raise questions about the organisation and delivery of services for children of all ages in the UK. Access to healthcare is an issue in many low-income countries, but unfortunately also appears to be an issue in the UK.

Researchers, funding agencies and the media are often more interested in clinical trials of new medicines. The higher mortality for many of the common causes of death in the UK suggests a need to focus on services for children with chronic conditions and in clinics providing care for children with acute conditions.

| Table 1 | Mean mortality rates of children 5–15 years in the UK and Sweden 2006–2008, ICD classification |
|---------|------------------------------------------------------------------------------------------|
| ICD code | Disease                                                                                     |
| J0–99   | Diseases of the respiratory system                                                        |
| AD–B99  | Certain infectious and parasitic diseases                                                  |
| I0–99   | Diseases of the circulatory system                                                        |
| E0–90   | Endocrine, nutritional and metabolic diseases                                              |
| D50–89  | Diseases of the blood and blood forming organs and immune system                          |
| G0–99   | Diseases of the nervous system                                                            |
| C0–D48  | Neoplasms                                                                                  |
| Q0–99   | Congenital malformations and chromosomal anomalies                                         |
| K0–93   | Diseases of the digestive system                                                          |
| V0–Y89  | External causes of morbidity and mortality                                                |
| F0–99   | Miscellaneous                                                                              |
| H0–95   |                                                                                           |
| L0–N90  |                                                                                           |
| P0–96   |                                                                                           |
| R0–99   | Symptoms, signs, abnormal clinical and laboratory findings not elsewhere classified        |
|         | Overall mortality                                                                          |
| UK      | Sweden                                     Rate ratio | p Value                   |
| 8.5     | 0.6                                      | 14.2       | <0.001                   |
| 3.6     | 1.5                                      | 2.4        | 0.04                     |
| 7.2     | 3.8                                      | 1.9        | 0.02                     |
| 7.0     | 4.1                                      | 1.7        | 0.05                     |
| 1.8     | 1.2                                      | 1.5        | 0.4                      |
| 15.1    | 10.2                                     | 1.5        | 0.03                     |
| 26.2    | 19.4                                     | 1.3        | 0.02                     |
| 7.0     | 6.4                                      | 1.1        | 0.7                      |
| 2.7     | 3.2                                      | 0.8        | 0.9                      |
| 23.1    | 23.0                                     | 1.0        | 0.9                      |
| 2.4     | 2.6                                      | 0.9        | 0.7                      |
| 1.0     | 2.6                                      | 0.4        | 0.02                     |
| 105.6   | 78.5                                     | 1.3        | <0.001                   |

ICD, International Classification of Diseases.
mortality rates in relation to respiratory disorders, infections and other diseases in the UK are unlikely to be significantly changed by new medicines. Studies to improve the delivery of healthcare in children are urgently required.

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Contributors All authors contributed to the study in relation to design and analysis. All authors have contributed to the paper.

Competing interests None declared.

Provenance and peer review Not commissioned; externally peer reviewed.

To cite Tambe P, Sammons HM, Choonara I. Arch Dis Child 2016;101:409–410.
Accepted 13 January 2016
Published Online First 3 February 2016
Arch Dis Child 2016;101:409–410,
doi:10.1136/archdischild-2015-310109

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