Why do more infants die in the UK than in Sweden? An intercountry comparison of birthweight-specific infant mortality

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Abstract

Background **The UK has one of the highest infant mortality rates in western Europe, whereas Sweden has one of the lowest. A comparison of cohorts with similar characteristics at birth could show the origin of these disparities. This study aimed to compare birthweight-specific and age-at-death-specific mortality rates to assess which groups are most at risk in England and Wales relative to Sweden.**

Methods **We used tabulated data on singleton live births and deaths in 2006 for England and Wales and in 2002–06 for Sweden. We examined mortality rates and rate differences per 1000 live births by birthweight (<1000 g, 1000–1499, 1500–2499, 2500–3499, ≥3500) and age-at-death categories (0–6 days, 7–27, 28–365). We calculated the number of excess deaths (deaths that could have been prevented if England and Wales had Sweden's mortality rates in 2006).**

Findings **The study included 477 153 births and 1168 deaths in Sweden, and 649 421 births and 2828 deaths in England and Wales. The infant mortality rate in England and Wales was nearly double that in Sweden (4·36 deaths per 1000 live births, 95% CI 4·19–4·52 *vs* 2·45, 2·31–2·59), resulting in 1238 excess deaths (95% CI 1100–1377). If England and Wales had Sweden's birthweight-specific mortality rates, only 559 excess deaths would have occurred in 2006. The greatest disparities were observed for extremely low-birthweight babies (<1000 g), with 440 (95% CI 360–519) excess deaths (334 within the first week of life [265–404]). Babies with normal birthweights (2500–3499 g) had the second highest number of excess deaths (219, 95% CI 137–302), with 118 occurring in the postneonatal period (61–176).**

Interpretation **The number of excess deaths in England and Wales relative to Sweden declined substantially after accounting for differences in the birthweight distribution, suggesting that preventive policies in the UK should focus on reducing prenatal risk factors and improving maternal health before and during pregnancy. Differences in registration of live and stillbirths, resuscitation, or obstetric practices could explain some disparities in the early deaths among extremely low-birthweight babies. Excess postneonatal deaths among normal-birthweight babies suggests scope for reducing mortality by improving postnatal support for families.**

Funding **AZ's PhD studentship is supported by awards to establish the Farr Institute of Health Informatics Research, from the Medical Research Council, Arthritis Research UK, British Heart Foundation, Cancer Research UK, Chief Scientist Office, Economic and Social Research Council, Engineering and Physical Sciences Research Council, National Institute for Health Research, National Institute for Social Care and Health Research, and Wellcome Trust (grant MR/K006584/1). The authors' work was independent of their funders.**

Contributors

AH provided Swedish data for the comparison. AZ analysed the data and drafted the abstract. All authors contributed to interpretation of the results and revised the abstract. All authors have seen and approved the final version.

Declaration of interests

We declare no competing interests.

Published Online November 13, 2015

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