

# Risk of death higher for babies born outside normal working week in Scotland

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Babies born outside normal working hours of 9am to 5pm Monday to Friday are at an increased risk of death due to lack of oxygen (intrapartum anoxia), according to a study from Scotland published in the British Medical Journal today.

Many studies have sought to determine whether the risk of perinatal mortality (death before, during or shortly after birth) varies in relation to time and day of birth, but findings have been inconsistent.

Using detailed data from Scottish national registers, researchers led by Professor Gordon Smith at the University of Cambridge analysed over one million births and [infant deaths](#) in Scotland between 1985 and 2004.

Birth was classified as occurring during the normal working week (Monday to Friday, 09.00-17.00) or out of hours (all other times). Neonatal death was defined as death during the first four weeks of life unrelated to congenital abnormality.

Results were adjusted for factors such as infant age, sex, and [birth weight](#), [maternal age](#), socioeconomic deprivation, onset of labour and hospital throughput (total number of births recorded for the hospital over the given year).

A total of 539 neonatal deaths were identified. The risk of neonatal death was 4.2 per 10,000 live births during the working week and was 5.6 per 10,000 at all other times.

This represents a relatively small but significant risk of one to two extra deaths per 10,000 live births, due to intrapartum anoxia, say the authors. Moreover, the additional risk associated with delivering out of hours was estimated to account for approximately 1 in 4 of this type of death.

This association can be explained by many different variables, say the authors, such as the total number or the profile of staff at different times of the day, in particular the immediate availability of senior clinicians. It could also be related to access to clinical facilities, such as obstetric operating theatres.

They suggest that improving the level of clinical care for women delivering out of normal working hours might reduce overall rates of perinatal death.

It is reasonable to assume that these results can be generalised to the rest of the UK and perhaps other countries, say David Field and Lucy Smith from the University of Leicester in an accompanying editorial. However, the data leave several policy questions unanswered, such as where does the problem lie and is the difference in performance related to the numbers of staff available or their level of experience?

Provided by British Medical Journal

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