

Spontaneous and medically induced preterm births contribute equally to the rising rate of preterm births

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Research published this week in the open access journal *PLoS Medicine* shows that the rising rate of preterm birth in Scotland is as much a result of an increase in spontaneous preterm birth as it is of preterm birth that is medically-induced to avoid risking the lives of the mother and child. The results emphasize that preterm birth, which remains the single biggest cause of infant death in many developed countries, continues to be a major obstetric and neonatal problem despite the reductions that there have been in stillbirths and perinatal deaths as a result of improved maternal medical care.

Jane Norman, of the University of Edinburgh, and colleagues from NHS National Services in Scotland, researched a population-wide database of linked maternity records, infant health and death records in Scotland. They identified 1.49 million singleton births between 1980 and 2004, of which 90,000 were preterm births - babies born before they reach 37 weeks of gestation. Both spontaneous preterm births and medically-induced preterm births increased between 1980 and 2004; in absolute terms the rates of increase in each type of preterm birth were similar.

Examining the database, the researchers found that maternal complications including pre-eclampsia (a condition causing high blood pressure) and placenta previa (the covering of the opening of the cervix by the placenta) played a decreasing role in preterm births over the period, whilst gestational and pre-existing diabetes played an increasing

role. The researchers also found that there was an overall decline in stillbirth and in neonatal and perinatal deaths amongst preterm babies in the period covered - although at 28 weeks gestation and beyond, stillbirths and perinatal deaths reduced amongst medically-induced preterm babies, but were not reduced in babies who were spontaneously preterm.

These findings are important because rates of preterm birth are rising worldwide. Studies conducted in populations in the United States and in Latin America have suggested that this is mainly due to an increase in medically-induced labor, and therefore could be associated with reduced neonatal deaths, whilst studies conducted in Europe and Australia have shown an increase in spontaneous preterm births. The results of this study show that in Scotland at least, methods will have to be found to reduce the rates of both spontaneous and medically-induced preterm births to both reduce the considerable suffering and better identify those sick babies who need to be delivered early to give them the best chance of survival.

More information: Norman JE, Morris C, Chalmers J (2009); The Effect of Changing Patterns of Obstetric Care in Scotland on Rates of [Preterm Birth](#) and Its Neonatal Consequences: Perinatal Database Study. *PLoS Med* 6(9): e1000153. [doi:10.1371/journal.pmed.1000153](https://doi.org/10.1371/journal.pmed.1000153)

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