

Estimating the risk of adverse birth outcomes in pregnant women undergoing non-obstetric surgery using routinely collected NHS data: an observational study

Paul Aylin,^{1*} Phillip Bennett,² Alex Bottle,¹
Stephen Brett,² Vinnie Sodhi,³ Angus Rivers³
and Violeta Balinskaite¹

¹Dr Foster Unit at Imperial College London, Department of Primary Care and Public Health, Imperial College London, London, UK

²Department of Surgery and Cancer, Imperial College London, London, UK

³Imperial College Healthcare NHS Trust, London, UK

*Corresponding author

Declared competing interests of authors: Paul Aylin reports grants and other from Dr Foster (company has included an analysis of weekend mortality in previous 'Hospital Guide' and have paid travel expenses to biannual conference on Global Comparators in Healthcare), outside the submitted work. Alex Bottle reports that The Dr Foster Unit at Imperial College London, where he is based, is part-funded by Dr Foster Intelligence, a private health-care information company (wholly owned by Telstra Corporation Ltd).

Published October 2016

DOI: 10.3310/hsdr04290

Plain English summary

Birth outcomes in women undergoing surgery

Health Services and Delivery Research 2016; Vol. 4: No. 29

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Plain English summary

We set out to estimate the risk of adverse birth outcomes following an unrelated surgical procedure (non-obstetric surgery) during pregnancy. Using English NHS hospital administrative data, we identified 6,486,280 pregnancies in the period April 2002 to March 2012. Women had surgery in 0.7% of these pregnancies.

We found that having an operation was associated with a small additional risk of all adverse birth outcomes compared with not having an operation. We took into account factors including maternal age, social class and illnesses that women had during pregnancy.

We estimated that there was one additional preterm delivery for every 31 procedures carried out during pregnancy; one additional caesarean section for 25 procedures; one additional long inpatient stay for every 50 procedures; one additional stillbirth for every 287 procedures; and one additional low-birthweight baby for every 39 procedures. The risk of adverse birth outcomes in pregnant women undergoing non-obstetric surgery is relatively low, confirming that surgical procedures during pregnancy are generally safe.

It is not possible to tell whether the worse outcomes in pregnancies in which surgery was carried out were attributable to the surgery or the health problems that were being treated, and we do not know if the outcomes would have been better or worse if the surgery had not been carried out. However, we believe that our findings improve on previous research, by utilising a more recent and larger data set based on UK practices, and that they may help to inform mothers of the expected risks of having a procedure during pregnancy.

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

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Editorial contact: nihredit@southampton.ac.uk

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The research reported in this issue of the journal was funded by the HS&DR programme or one of its preceding programmes as project number 12/209/59. The contractual start date was in April 2014. The final report began editorial review in April 2015 and was accepted for publication in January 2016. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

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