

<http://dx.doi.org/10.1590/0102-3111XCO045114>

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Reducing routine interventions during labour and birth: first, do no harm

Dr. Leal et al. have undertaken a very timely and important study. The issue of cesarean section has been a concern for some years now, and there is emerging evidence of both short and long term harms, for mother and for baby, associated with both primary and repeat cesarean section ^{1,2}. However, interest in what happens during labour and births that are recorded as being 'normal' or 'spontaneous' has only been evident more recently. The Trent study of interventions in normal labour and birth that was carried out in the UK in 2000 was one of the first in this area ³, and prior and subsequent debates on this topic area have highlighted the lack of agreement on how 'normal' birth without interventions should be characterized ^{4,5,6,7}. In the UK, this has led to the UK government formally defining normal childbirth in its national routine health data collection, based on the following characteristics: "...delivery without induction, the use of instruments, caesarean section, episiotomy and without general, spinal or epidural anaesthetic before or during delivery" ⁸.

There does not seem to have been a multi-site survey of interventions in labour and birth by place of birth for low risk women anywhere in the world since the Trent study, although the national Birthplace in England study is likely to generate such data for the UK between 2008 and 2010 as a whole in the near future ⁹, and the Royal College of Midwives in the UK has recently commissioned a national study to replicate the Trent survey. Brazil has been an international byword for high levels of cesarean section for at least the last decade. It is therefore apt that the first published representative national study of labour interventions in low risk women should be undertaken in Brazil.

The findings are, in one way, unsurprising, given the known increase in routine labour interventions across the world. However, both the prevalence of routine interventions, and the variation across the country, offer a shocking insight into what happens when medical and technical practices become generalized from those individuals who need them due to actual or very imminent pathology, to, for some interventions, almost every woman and baby, "just in case". This is an abrogation of the creed that all medical practitioners sign up to, and that nurses and midwives abide by in principle, which is, "first do no harm". The concerns in this area have in the past

rested on immediate iatrogenic morbidity, such as perineal trauma consequent on episiotomy¹⁰. However, they are now given special urgency by the growing evidence base arising from a range of disciplines that associates interventions in labour and birth, including mode of birth, use of oxytocin, and use of antibiotics to increased risk of longer-term non-communicable autoimmune disorders, such as type one diabetes, multiple sclerosis, asthma, eczema, and even some cancers, and to so-called 'lifestyle' disorders, such as obesity¹¹.

Conrad et al.¹² have calculated the cost of unnecessary routine interventions in childbirth in the USA at over 18 billion dollars a year. This calculation does not take account of the longer term public health and social costs that might arise if the hypotheses we pose in Dahlen et al.¹¹ are justified. It also does not take account of the opportunity costs – that is, what could be bought if the spend on iatrogenic labour interventions is translated to spend on currently unaffordable but effective preventative interventions, technologies, drugs, and treatments. As a rough example of this phenomenon, Gibbons and colleagues calculated that, across 137 countries in 2008¹³: “3.18 million additional cesarean section were needed and 6.20 million unnecessary sections were performed. The cost of the global “excess” cesarean section was estimated to amount to approximately US\$ 2.32 billion, while the cost of the global “needed” CS was approximately US\$ 432 million”.

Based on these findings, all other things being equal, if no unnecessary cesarean sections were done, and all those that were necessary were carried out, there would still be a cost saving of nearly US\$2 billion per year, and the reduction in avoidable mortality and morbidity in mothers and babies would be dramatic. The numbers and savings are likely to be much bigger if the over use of interventions reported by Leal et al were also added to the calculation, both at a country level, and across continents.

Dr. Leal et al. issue an urgent call for an improved model of maternity care in Brazil, especially, but not only, in the private sector. This is a moral and ethical issue, as well as an issue of finances and longer-term public health. The increased recognition of the prevalence of, and damage caused by, disrespect and abuse in maternity care across the world includes the iatrogenic damage caused by unnecessary routine intervention. Brazil has led the world in defensive maternity care as illustrated by rising rates of cesarean section. The results of this study can be catalytic in helping Brazil to lead the world in the opposite direction, as signposted by the

Hippocratic oath – *Primum non nocere*: First: do no harm.

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