

Making evidence about risks and benefits accessible to parents

Kirstie Coxon, a maternity researcher at King's College, London, discusses how practitioners can explain research findings to parents.

Nobody would welcome a return to the days when women were expected to accept advice from health professionals without quibbling or asking questions, but recognition that women should be involved in all decisions made about their health care brings its own challenges. Many kinds of information contribute to decisions made during pregnancy and birth, including our own and others' experiences, the beliefs we hold, and our preferences about the kind of birth we might want. Sometimes, women want more formal information about pregnancy and postnatal options, such as the risks and benefits of different approaches to care.

Practitioners have access to a wealth of information about different aspects of pregnancy, birth and childcare¹, but communicating research evidence is not easy. Sometimes research findings can be difficult to access and to understand. The media often provide useful information about research, but findings can be misconstrued, or stripped of important contextual information. Sometimes even the best research provides no simple answers. This article considers some key issues in making research findings accessible using an example from the Birthplace in England cohort study.²

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Be clear about the population

The Birthplace research aimed to find out just how safe it is for healthy women with a straightforward pregnancy to plan to give birth in hospital, in a midwifery unit and at home. The study looked at outcomes for babies and for women themselves. In terms of contextualising this information, it's important to recognise that the study findings are only helpful for low-risk women, because women with complications (such as twin pregnancies, diabetes, high blood pressure, or previous caesarean sections) were not included.

Beware newspaper headlines

Population-based research of this kind provides good evidence about risks and benefits, but media coverage of findings can sometimes be misleading. The following headline appeared in the *Daily Telegraph* just after the Birthplace findings were published: 'First-time mothers warned over home birth risks'.³ The accompanying article emphasised the risks of home birth for first-time mothers, and focused on the risks of complications for babies without explaining that the outcomes it was reporting were very rare.

'The absolute risk of a poor outcome may be small even when relative risks appear high.'

Find out the details - parity and transfer rates

Birthplace followed 64,500 low-risk women through pregnancy and birth and found that birth was safe for babies in all settings, especially for women who were expecting their second or subsequent babies. Among the second-time mothers, transfer rates for those who planned to give birth in out of hospital settings, including at home, were quite low (9-13%) and intervention rates were much lower than for women who planned a hospital birth. However, the findings for women expecting their first babies weren't quite so clear-cut. Although most had safe births, transfers from out of hospital settings during labour were much higher (36-45%) and the risks of a poor outcome for the baby (which included oxygen deprivation, stillbirth, and birth injuries) were increased.

Consider absolute as well as relative risk

The *Telegraph* headline sounded worrying, but to appreciate the findings in a balanced way, it's useful to know the 'absolute risk', or the frequency of a given event within a population. Amongst women expecting their first baby, the Birthplace study found that 5.3 per 1000 babies had poor outcomes when hospital birth was planned, compared with 9.3 per 1000 following planned home birth, so the likelihood of a poor outcome (the 'relative risk') was almost doubled. This meant that around

NICE guidance

NICE recommends the following principles when discussing risks and benefits:

- Personalise risks and benefits as far as possible
- Use absolute risk rather than relative risk (for example, the risk of an event increases from 1 in 1000 to 2 in 1000, rather than the risk of the event doubles)
- Use natural frequency (for example, 10 in 100) rather than a percentage (10%)
- Be consistent in the use of data (for example, use the same denominator when comparing risk: 7 in 100 for one risk and 20 in 100 for another, rather than 1 in 14 and 1 in 5)
- Present a risk over a defined period of time (months or years) if appropriate (for example, if 100 people are treated for 1 year, 10 will experience a given side effect)
- Include both positive and negative framing (for example, treatment will be successful for 97 out of 100 patients and unsuccessful for 3 out of 100 patients)
- Be aware that different people interpret terms such as rare, unusual and common in different ways, and use numerical data if available
- Think about using a mixture of numerical and pictorial formats (for example, numerical rates and pictograms).

(Source: Recommendation 1.5.24, Patient Experience in Adult NHS Services)

four more babies in every thousand births had a poor outcome as a result of a planned home birth in first pregnancies. Put another way, 991 per 1000 planned home births amongst low risk first labours resulted in safe births for women and babies. The absolute risk of a poor outcome was small, although the relative risk appeared high.

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Explore parents’ views and values

Of course, how parents interpret evidence of this nature will vary. For some, any risk is too great; faced with this knowledge, they may well choose to give birth in hospital. Others will interpret the absolute risk as small, and balance this against other factors, particularly the knowledge that intervention rates for women are much higher in hospital.

Fortunately, there are now good resources available that help us think about how to understand and communicate risks and benefits. New NICE guidelines on communicating risk and benefit have recently been published, and recommendation 63, which lists the principles to use when explaining risk, is particularly useful.⁴ ‘Sense about statistics’ (www.senseaboutscience.org/) publishes resources to help the people interpret evidence and statistics, and the ‘Understanding Uncertainty’ website (understandinguncertainty.org/) shows different ways of displaying risk using interactive graphics. *Perspective* also plans future articles which use these approaches to help practitioners discuss risks and benefits with parents and parents-to-be.

Kirstie Coxon is a maternity researcher from the Women’s Health Academic Centre at King’s College London. Over the next two years, Kirstie will be working alongside NCT and NHS colleagues exploring new approaches to communicating risks and benefits of maternity care options. Contact Kirstie at kirstie.1.coxon@kcl.ac.uk if you would like to discuss these issues, or raise questions about discussing risks and benefits with parents.

References

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2. National Perinatal Epidemiology Unit. Birthplace in England Research Programme. The Birthplace cohort study: key findings. Available from: <https://www.npeu.ox.ac.uk/birthplace/results>
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Enables you to instantly respond when your baby stirs or cries.

Sleeping close by helps you bond with your baby.

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Benefits of bedside sleeping