
Declarative title: Does training in intrapartum fetal monitoring actually work?

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Intrapartum cardiotocograph (CTG) monitoring is widely used in the provision of maternity care in high-income countries. First introduced into clinical practice in the 1960s, it was anticipated that the use of CTG monitoring in labour would dramatically reduce the perinatal mortality rate and prevent long term neurological injury, while also reducing the caesarean section rate (Paul & Hon, 1970, Obstetrics & Gynaecology 35(2), 161-9). Paul and Hon recognised the central role of education ining the best use of CTG monitoring, but underestimated the challenge of providing this, saying “with a little instruction [clinicians] apparently have little difficulty in recognising the various types of fetal heart rate patterns and classifying them into innocuous and ominous groups” (p. 168).
The use of CTG monitoring has expanded in the decades since, and the focus has shifted more towards reducing perinatal asphyxia than intrapartum mortality, yet sound evidence that the anticipated benefits from CTG monitoring are able to be delivered remains lacking (Alfirevic et al., 2017 Cochrane Database of Systematic Reviews; Small et al., 2020, Women & Birth 33(5), 411-18). When poor perinatal outcomes arise in conjunction with the use of intrapartum CTG monitoring, additional or different approaches to education are commonly recommended in the belief that education about the use of CTG monitoring will lead to improved outcomes. Indeed, it is usually considered a failure of the individual clinician, rather than the method, when harm occurs despite CTG monitoring.

A systematic literature review and meta-analysis (Kelly et al, BJOG 2020) addresses the question of whether education of maternity care providers in intrapartum CTG use is effective. Their comprehensive search strategy identified 65 papers published between 1978 – 2020. Formal education programs appeared to increase the knowledge and confidence of clinicians in interpreting CTGs but research regarding the impact of education on clinical outcomes was found to be of low quality and the findings inconsistent.

Care should be taken when recommending additional CTG education as a means to resolve high rates of poor perinatal outcome, as the evidence presented by these authors demonstrates that it cannot be assumed that education leads to predictable and sustained improvements in outcomes. There are many factors which contribute to poor perinatal outcome and an undue focus on CTG education may divert appropriate investment in resources and time away from other effective solutions. In some jurisdictions the completion of CTG education is considered mandatory for clinicians providing intrapartum care. Given the evidence, it is difficult to argue for such a position unless it is included in a more comprehensive approach to intrapartum clinical practice improvement. Quality research assessing whether CTG education can improve perinatal outcomes, and documenting the best way to deliver this, is sorely needed.
No disclosures: Completed disclosure of interest forms are available to view online as supporting information.

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