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**Clinical competence in performing and recognising a mediolateral episiotomy of protective angle and length: a systematic review**

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**Objective** It is assumed that all doctors and midwives understand and apply evidence-based principles in performing episiotomies in their everyday practice. However, remarkable discrepancies between even the most reputable literature sources in defining and describing the technique of performing mediolateral episiotomy (MLE) suggest that there is much ambiguity and confusion for both researchers and clinicians alike.

**Design** The systematic review protocol was written prior to starting the review and registered in the international prospective register of systematic reviews (PROSPERO/ID CRD42017070523) last updated on December 15, 2017. The review is reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines.

**Methods** A database search was performed using: Medline, CINAHL, Scopus, Informit, the Cochrane Library and PubMed from database inception to 17 September 2017, with a final search on 10 February 2017. Studies were included if they examined clinicians' competency in performing an 'ideal' or 'correct' mediolateral episiotomy, as well as those studies that compared the performance of different professional roles. Studies usually defined an 'ideal' incision as one that met the criteria of an acceptable angle of incision from the midline, starting incision point distance from the midline and in terms of the length of the incision created.

**Results** While many of the studies included in this review were not of high quality (author self-assessment) and had their own study criteria for a MLE, the literature suggests clinicians are generally unable to perform or simulate episiotomies within such standards. Overall, most of the literature reported doctors were performing more 'ideal', lateral and longer incisions compared to midwives; however, there were studies that found the opposite, showing statistically significant results in favour of midwives performing more protective episiotomies. There was no association between clinicians' participation in formal training courses and their ability to perform the 'ideal' incision, though

one study did find an increased number of episiotomies performed under supervision improved clinicians competency.

**Conclusion** The obvious lack of understanding around defining and performing MLE for clinicians of various professional roles suggests the need to produce a uniform set of guidelines, and to develop a universal, low-cost approach for teaching and performing the MLE technique in any clinical environment around the world.