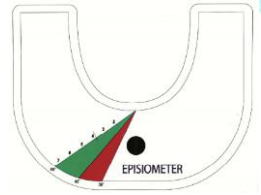


Evaluating the usability of a new U-shaped measuring tool for mediolateral episiotomy: a mixed methods study



van der Lugt, B. Woolley, T. Harvey, N. Gupta, S. Rane, A. James Cook University – College of Medicine and Dentistry.

Correspondence: Brittany van der Lugt: brittany.vanderlugt@my.jcu.edu.au

Background

The literature has shown that clinicians have great difficulty performing a safe mediolateral episiotomy (MLE),^{1,2} and an episiotomy that is performed too close to the midline can increase the risk of obstetric anal sphincter injury (OASIS).³ The 'Episimeter' prototype¹ is low-cost and low-tech clinical innovation made of transparent vellum paper, designed to assist clinicians performing an MLE.

Objectives

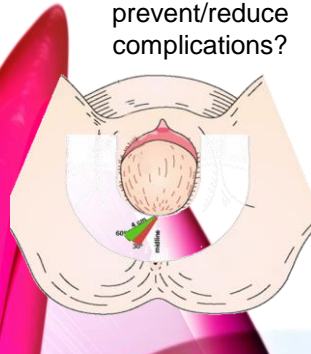
Primary objectives:

Assess clinician feedback about:

- Usability/benefit of device in real-time delivery situations
 - Ease of use
 - Device accuracy in assisting to perform a safe MLE

Secondary outcomes:

- Does the Episimeter have the potential to prevent/reduce complications?



Methods

This is a prospective, multi-site Phase-I clinical trial with study sites at The Townsville Hospital, Queensland and Port Moresby General Hospital in Papua New Guinea.

This mixed-methods study (with an explanatory sequential design) included the use of surveys, clinician interviews and patient chart review to determine the usability and feasibility of the Episimeter.

We recruited 108 clinicians who provided feedback and measurements of incisions performed using the Episimeter, and 93 patients who were followed up 6-weeks postpartum to monitor for complications. We then conducted interviews with 20 clinicians.

Results

Objective	Result
Benefit to staff	83% of clinicians said 'moderately beneficial' or 'extremely beneficial', all 20 clinicians interviewed said 'acceptable or useful' Junior clinicians more likely to say 'moderately beneficial/extremely beneficial', $p=0.003$
Ease of use	79% of clinicians said 'easy' or 'very easy' to use
Device accuracy	87% of incisions were between 45 and 60 degrees ('SAFE ZONE'), 37.5% incisions at exactly 60 degrees from the midline, as recommended.
Potential to reduce complications	84% clinicians believe Episimeter could help prevent OASIS All 93 patients were followed up and 0% had experienced perineal tears of any grade.

Conclusion

- Episimeter well received by clinicians (particularly juniors)
- When used as directed (incision at 60 degrees), the Episimeter produces an accurate and safe incision
- Good patient outcomes – compared to Townsville chart audit, literature and other device studies
- High level of patient acceptability

References

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