## Authors' reply re: Assisted Vaginal Birth: Green-top Guideline No. 26. (Response to BJOG-20-1243)

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Letter to the Editor, BJOG Exchange

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## Dear Editor

The challenge when counselling a woman about Assisted Vaginal Birth (AVB), and which instrument to use, encompasses a range of potential outcomes including early and late maternal and neonatal morbidity, and the implications for future births. Pelvic floor trauma is one important factor to consider and for those with a specialist interest in levator ani muscle avulsion it would seem obvious that assisted vaginal birth should be avoided whenever possible, and that vacuum should be preferred to forceps. <sup>1</sup> However, for circumstances where clinicians are attempting to avoid failed vacuum, subgaleal haemorrhage and second stage caesarean section, forceps may be preferred. In response to Dietz & Esegbona's assertion that the guideline conveys a pro-forceps bias that does little to help clinicians make informed choices, exposing the RCOG to substantial medicolegal liability, we believe the guideline has provided balanced guidance for clinicians advising women on AVB. <sup>2</sup>

Dietz and Esegbona find it "astounding" that the guideline and associated patient information leaflet "channel the state of the literature as it was over 10 years ago, especially since some of the most relevant literature was published in this journal." Dietz cites three of his own publications including a BJOG publication from 2008 (12 years ago), and two systematic reviews of observational studies (many published over 10 years ago).

In preparation for the RCOG Guideline, a literature search was conducted by the college and included publications up to May 2019. A total of 149 publications were cited based on relevance and methodological quality, and at least 35 reported data on pelvic floor morbidity. A publication from 2015, addressing levator ani muscle injury, co-authored by Dietz, was included.<sup>3</sup>

When comparing vacuum and forceps assisted delivery, the most reliable data are from randomised controlled trials and we cited the original Cochrane systematic review. <sup>4</sup> This review reported that vacuum assisted delivery was significantly less likely to be associated with significant maternal perineal and vaginal trauma than forceps (OR 0.4; 95% CI 0.3–0.5). We cited a further Cochrane review from 2010 that addressed choice of instrument and included additional RCTs that compared different types of vacuum device. <sup>5</sup>The conclusion of this review was entirely consistent with the guideline.

"The results showed that the forceps was the better instrument in terms of achieving a successful delivery. However, it was also associated with higher rates of complications for the mother. These were perineal trauma, tears, requirements for pain relief and incontinence. "

The relevant RCOG Assisted Vaginal Birth Guideline recommendation is as follows:

"Operators should be aware that forceps and vacuum extraction are associated with different benefits and risks; failure to complete the birth with a single instrument is more likely with vacuum extraction, but maternal perineal trauma is more likely with forceps. [New 2020]"

We leave it to the readers of the guideline and those responsible for local implementation to determine if this represents a pro-forceps bias. Where we agree with Dietz & Esegbona is that much of the published literature is dated, and that further high quality longitudinal research is required. We would highlight for those conducting research in this field that they should differentiate between intended forceps-assisted delivery and sequential delivery (forceps following failed vacuum delivery) when reporting instrument specific pelvic floor morbidity, as the two are not the same.

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## References

1. Dietz HP, Esegbona G. Letter to the Editor, BJOG Exchange. (ref to be added by BJOG)

2. Murphy DJ, Strachan BK, Bahl R, on behalf of the Royal College of Obstetricians Gynaecologists.

Assisted Vaginal Birth. BJOG 2020; https://doi.org/10.1111/1471-0528.16092

3. Memon HU, Blomquist JL, Dietz HP, Pierce CB, Weinstein MM, Handa VL. Comparison of levator ani muscle avulsion injury after forceps-assisted and vacuum-assisted vaginal childbirth. Obstet Gynecol 2015;125:1080–7.

4. Johanson RB, Menon BK. Vacuum extraction versus forceps for assisted vaginal delivery. Cochrane Database Syst Rev 2000;2:CD000224.

5. O'Mahony F, Hofmeyr GJ. Menon V. Choice of instruments for assisted vaginal delivery. Cochrane Database of Syst Rev 2010;11:CD005455.