Appendix 4 (as supplied by the authors): Analysis with propensity score taking the timing of the cesarean into account

To take the timing of the cesarean delivery into account, that is, before or during labor, analyses were conducted distinguishing 3 modes of delivery: vaginal delivery, cesarean before labor, and cesarean during labor. The same variables as above were included in the propensity score model. Propensity score estimation used generalised boosted models. As the research question focused on the risk of severe acute maternal morbidity associated with cesarean before labor or during labor rather than vaginal delivery for women having the same characteristics as those with vaginal deliveries, we weighted the groups of cesareans before and during labor to match the vaginal delivery group, by estimating the average treatment effect among the treated (ATT), with vaginal delivery the treated group. The ATT weights equalled one for vaginal delivery, and the ratio of the propensity score to one minus the propensity score for the two cesarean groups. Briefly, each woman who had a cesarean was assigned a weight inversely proportional to her probability of delivering vaginally. Therefore, women delivering by cesarean whose characteristics differed significantly from the average women with vaginal deliveries contributed relatively little to the comparisons. We checked the balance between the groups by looking at ATT-weighted means. Then, we used pairwise ATTs to fit weighted multivariable logistic regression models separately for vaginal delivery versus cesareans before labor and vaginal delivery versus cesareans during labor, adjusting for absence of prophylactic oxytocin after birth.

Appendix to: Korb D, Goffinet F, Seco A, et al.; for the EPIMOMS Study Group. Risk of severe maternal morbidity associated with cesarean delivery and the role of maternal age: a population-based propensity score analysis. *CMAJ* 2019. doi: 10.1503/cmaj.181067.