



Published in final edited form as:

*BJOG*. 2014 January ; 121(1): 42.

## Commentary on ‘Pregnancy week at delivery and the risk of shoulder dystocia: a population study of 2 014 956 deliveries’

WM Callaghan<sup>a</sup> and F Prefumo<sup>b</sup>

<sup>a</sup>Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA, USA

<sup>b</sup>Department of Obstetrics and Gynaecology, Maternal–Fetal Medicine Unit, University of Brescia, Brescia, Italy

---

The article by Øverland et al. presents a population-based analysis of 33 years of data from Norway. The authors sought to determine if week of gestation (for births  $\geq 32$  weeks) was an independent risk factor for shoulder dystocia. After adjusting for birthweight and other obstetric factors with multivariable analysis, the authors found that infants born at 32–35 weeks had higher odds of shoulder dystocia than infants born at term or post-term. The authors correctly conclude that term and post-term gestational age per se is not positively associated with shoulder dystocia.

It is unclear why the authors generated the hypothesis that advanced gestational age is an independent risk factor for shoulder dystocia. Of course fetal weight and gestational age are highly correlated (as demonstrated by these authors and many others) and it seems obvious that this correlation accounts for the observation that shoulder dystocia increases with each week of gestation. Moreover the large baby at earlier gestation is more likely to be large as a result of pathological excess growth and to have a different body composition than a large fetus at term. To place the information contained in this article in a proper perspective, it is important to note that according to the authors’ analysis gestational age at delivery of 32–35 weeks has an adjusted odds ratio of 1.68 for shoulder dystocia, as opposed to 0.88 for weeks 42–43, using the 40–41-week interval as the reference. However, birthweight remains by far the most important determinant of the risk of shoulder dystocia, with adjusted odds ratios of 15, 52 and 157 for birthweights of 4–4.5 kg, 4.5–5 kg and  $>5$  kg, respectively, compared with newborns of 3–3.5 kg. Finally, because most large babies are born at later gestations, the contribution of large preterm fetuses to the population burden of shoulder dystocia is small.

Shoulder dystocia remains an enigmatic event in modern obstetrics; accurate prediction and prevention remain elusive (*ACOG Practice Bulletin* No. 40, Washington: ACOG, 2002; *RCOG Green-top guideline* No. 42, London: RCOG, 2012).

---

### Disclosure of interests

We declare no conflicts of interest. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.