

units. Mattresses for the labor ward must be of high quality and be audited regularly for signs of fatigue, soiling, and damage. Parturients need to be regularly turned side to side, and sheets changed as and when necessary. Finally, it is essential that all women in labor be assessed for risk of pressure damage. ■

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Induction of labor at term



TO THE EDITORS: Souter et al¹ have presented a careful and comprehensive evaluation of outcomes after elective induction of labor compared with expectant management. These authors have joined the ranks of others who offer labor induction at 39 weeks gestation as a favorable alternative to expectant management. An explanation for the findings of these groups is that expectant management is associated with a higher prevalence of preeclampsia and with larger babies, which are findings that were confirmed in the ARRIVE trial.²

The studies in this area are limited by the expectant management group being managed by modern obstetricians, whose inclination for intervention may be higher than is optimal. Larger babies mean longer labors, which may tax the patience of the modern obstetricians, and preeclampsia is alarming to some practitioners who may not be willing to stabilize the patient and wait for the uterus to respond to oxytocin. As gestation advances, there may be less amniotic fluid with consequent benign variable decelerations that are over-interpreted as fetal hypoxemia.

The answer might come from a careful review of the cesarean deliveries in these studies to determine whether they represent a disadvantage of expectant management or a consequence of modern obstetrics training. Obstetricians of my vintage were trained when the cesarean delivery rate was considered high at 15% and when we didn't have so many categories of fetal tracings. Even in the modern era, the midwives at my institution have a cesarean delivery rate of 3–5%, caring for exactly the kind of patient in the ARRIVE trial. The current high induction and cesarean rates in modern obstetrics have not given us better babies, and we would do well to be concerned about effects on maternal morbidity and mortality rates. ■

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REPLY



We appreciate Dr Scialli's thoughtful comments about our study on elective induction of labor (IOL) at term and his concerns about current obstetric practices that contribute to high rates of intervention in births beyond 39 gestational weeks.¹

Term elective IOL is 1 of a growing number of optional interventions in maternity care. Unlike many obstetric practices, we have increasing evidence about the impact of induction of labor that we can share with individual patients and that may help inform their birth choices.² We believe this information is useful for clinicians and patients alike.

However, Dr Scialli raises a bigger question about whether recent study results reflect unnecessarily high rates of intervention in births at >39 weeks gestation and whether term elective IOL would still appear beneficial in a clinical context in which there was less intervention in labor at later gestational weeks. This is an important question; however, determining whether a cesarean delivery prevented an adverse outcome or was an unnecessary reaction to perceived risk is challenging.

Relationships between obstetrics interventions and outcomes are not straightforward. Over the last 40 years, induction has more than doubled while cesarean delivery rates

have increased dramatically. There is therefore no guarantee that recommending IOL at 39 weeks gestation for all nulliparous women would reduce the national cesarean delivery rate or indeed be acceptable to most pregnant women.

That being said, there are consistent findings across a variety of settings that term elective IOL, when compared with expectant management, leads to either a reduction or no difference in cesarean deliveries.^{3,4} Additionally, in a recent systematic review, the findings from previous cohort studies that examined this question essentially found a similar effect size to the randomized trials.⁵ Thus, although the impact on cesarean delivery in lower intervention settings may have a lower absolute impact, there is no evidence to suggest it may lead to harm. However, going forward, a better understanding of the economic, resource, and long-term implications of elective induction at term will be important areas for investigation. ■

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Fresh in vitro fertilization cycles increase risk of small-for-gestational age; frozen cycles increase risk of large-for-gestational age: Which is worse?



TO THE EDITORS: We enthusiastically read the article entitled “Risk of severe maternal morbidity by maternal fertility status: a US study in 8 states” by Luke et al.¹ The aim of this study was to evaluate the risk of maternal morbidity by maternal fertility status and, for in vitro fertilization pregnancies, by oocyte source and embryo state combination. The study concluded that risk of severe maternal morbidity is increased for subfertile and in vitro fertilization births, particularly in pregnancies that are not autologous, fresh assisted reproductive technology (ART) treatment cycles.

In this article, Luke et al¹ reference a connection between frozen cycles and large-for-gestational age (LGA) neonates. What is not mentioned is the accepted relationship between fresh cycles and small-for-gestational age (SGA).² Aberrant fetal growth, in either extreme, is linked with offspring

complications. LGA is associated with delivery trauma and stillbirth, although there are conflicting reports regarding actual LGA mortality rates. On the other hand, SGA is associated with anomalies, amniotic fluid abnormalities, stillbirth, neonatal acidosis, seizures, and death. SGA neonates may be at greater risk for neurodevelopmental delays and cardiovascular disease later in life. A 2010 retrospective analysis evaluated 123,383 diverse live births and concluded that SGA, but not LGA, was associated with increased mortality rates. In fact, appropriate-for-gestational age and LGA neonates had similar likelihoods of death.³ Therefore, we caution citing aberrant fetal growth as an argument for favoring fresh over frozen in vitro fertilization cycles without properly considering other elements that may be more relevant.