

How to Apply the ARRIVE Trial To My Practice

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With extensive press coverage, the ARRIVE Trial was published on August 9, 2018 in the New England Journal of Medicine.¹ The ARRIVE trial was a very well-designed and performed randomized controlled trial, in university and university-affiliated community hospitals, comparing labor induction at 39 weeks to expectant management up to 42 2/7 weeks among low risk nulliparous women. The primary outcome was a composite of perinatal outcomes, which showed no statistical difference. The secondary outcome was cesarean birth, which was significantly lower in the induction of labor group. The rate of cesarean birth was 18.6% in the immediate induction group and 22.2% in the expectant management group.

How does this study apply to my practice?

When deciding what the implications might be for your practice and how you will counsel women, it is very important to first compare the patient population of the ARRIVE Trial to your population, and to compare the induction protocols that you use to those used in the study.

- (1) **Patients in this study were very low risk.** Half of the mothers were under 24 years old and all mothers with any medical complication were excluded. Furthermore, the women were very committed to a labor induction (fully 70% of eligible patients refused entry into the trial). Nonetheless, a cesarean rate of 18.6% following labor induction in nullips is a spectacular accomplishment! Can you copy these results?
- (2) **In California, most hospitals and physicians do not come anywhere near this rate** (or even a rate of 22% as seen in the study's expectantly managed group). Among the 240 California hospitals, the median rate of cesarean after labor induction in low-risk nullips is 32% with rates as high as 60%. Visit the CMQCC Maternal Data Center to check the rate of cesarean among induced NTSV births at your own hospital and for your individual physicians.
- (3) **Hospitals in the ARRIVE trial used a common definition of failed induction** (a cesarean for any reason following labor induction). An induction was considered "failed," and cesarean was undertaken, only if *at least* 12 hours had elapsed with concurrent oxytocin administration and ruptured membranes, and the patient remained in the latent phase. Additionally, women with an unfavorable cervix (Bishop Score < 5) underwent cervical ripening before proceeding to oxytocin. Does your hospital and physician practice use this same definition of failed induction? Do you routinely use cervical ripening when the cervix is unfavorable? Once in the active phase (6 centimeters dilation) do you closely follow ACOG/SMFM guidelines for the diagnosis of labor arrest and descent disorders?

Bottom Line:

- (1) **If a hospital's induction guidelines are to be changed to allow for elective inductions at 39 weeks, strict guidelines for defining failed induction (see above) and guidelines for management of active phase and fetal monitoring abnormalities should be adopted simultaneously.**
- (2) If labor guidelines and definitions for failed induction similar to those in the study hospitals are not adopted, it is very likely cesarean rates will rise significantly. This can be followed in the Data Center.
- (3) Elective Induction of labor was noted to take an average of 6 hours longer than spontaneous labor (and much longer with an unfavorable cervix) and will impact room availability and nursing hours.
- (4) There are some California hospitals who have achieved similar low NTSV Cesarean rates with very low rates of labor induction. They have emphasized continuous labor support, increased mobility during labor, and strict adherence to ACOG definitions of labor dystocia.
- (5) The preferences and values of each individual woman are extremely important to a successful vaginal birth and should be the starting point for any shared decision-making discussion about the risks and benefits of elective induction of labor at 39 weeks versus expectant management.

¹ Grobman WA, et al. Labor Induction versus Expectant Management in Low-Risk Nulliparous Women. New Eng J Med 2018;379:513-23.