Monitoring Cut Labor Induction Rate by a Third

BY MARY ANN MOON

A large maternity hospital markedly decreased its excessive rate of labor inductions simply by strictly enforcing American College of Obstetricians and Gynecologists's recommendations for averting inappropriate inductions.

By requiring physicians to justify ordering elective labor inductions that might be deemed inappropriate, the hospital cut the overall rate of inductions by one-third, decreased the rate of inductions performed before 39 weeks by 64%, and reduced the rate of cesarean delivery among nulliparas undergoing induction by 60%, reported Dr. John M. Fisch and his associates at Magee-Womens Hospital (Obstet. Gynecol. 2009;113:797-803).

ACOG 2004 guidelines permit elective inductions only after 39 weeks, advise that the procedure be done in nulliparas only if the Bishop score is 8 or more (and in multiparas only if the Bishop score is 6 or more), and do not allow the use of cervical ripening. These guidelines were immediately implemented at Magee-Womens Hospital, a tertiary care center with 36 ob.gyn. residents and more than 100 practicing physicians caring for both clinic and private patients.

However, an audit of actual practice there between 2004 and 2005 showed little adherence to the guidelines and minimal improvement in the "unacceptably high" rate of inductions (28% in 2003).

The hospital then began a program to enforce the recommendations. The process for scheduling an induction was computerized, allowing data on all inductions to be monitored easily. This allowed program overseers to track individual physician patterns of delivery, and to discover that some physicians induced more than 30% of their deliveries while others did not induce at all.

A large maternity hospital cut the overall induction rate from 25% in 2004 to 17% in 2007, by enforcing ACOG recommendations for avoiding inappropriate inductions.

The number of induction slots was reduced from 13 to 8, and staff in charge of scheduling inductions were instructed to remind physicians to adhere to ACOG's induction guidelines if they were not doing so. These staff also were empowered to involve the nurse manager or the medical director of the birth center in any inductions that did not meet ACOG criteria.

An audit form was attached to the front of the chart of every patient who presented to the labor and delivery unit for induction, and information such as gestational age, stated reasons for induction, attending physician, parity, Bishop score, and delivery outcomes was tracked.

Inductions that went forward even though they did not meet the criteria were reviewed by a multidisciplinary team each month and discussed with the attending physician. Peer review was performed, and letters sent from the vice president of medical affairs were included in the physicians' permanent recredentialing files.

With this enforcement, the overall induction rate decreased from 25% in 2004 to 17% in 2007. The rate of inductions at less than 39 weeks fell from 12% to 4%, and the rate of cesarean deliveries among nulliparas who had been induced dropped from 35% to 14%.

"Initial reaction to the guidelines ranged from skeptical to hostile, as physicians objected to oversight of their medical decision making," Dr. Fisch and his colleagues noted.

The hospital sidestepped much of this resistance by presenting this program not as an effort to reduce inductions but as an effort to improve maternal and fetal outcomes by adhering to ACOG standards. Also, "due to the sensitive nature of altering physician practice patterns within such a large group of practitioners," the task force that implemented the program was carefully chosen and included stakeholders from several disciplines.

Other obstacles were overcome by negotiation. For example, physicians initially resisted cooperating with the induction scheduler, who reminded them of the ACOG recommendations whenever they attempted to schedule an induction and brought in the director of the nursing unit or, if necessary, the medical director of the birth center. "This process evolved over time to the point where an attending will go directly to the medical director if they feel that approval will be needed to schedule an induction," the researchers noted.

"A major strength of this study is its applicability for use at other institutions faced with an unacceptably high induction rate. … This article provides a blueprint for the development and implementation of a program" to reduce the risks associated with labor induction, which include infection, cesarean delivery, and neonatal ICU admission.

Noting that women who have induced labor spend more time in the hospital and incur greater costs for care than do those with spontaneous labor, Dr. Fisch and his associates calculated that their program has likely averted 71 unnecessary inductions and 5 unnecessary cesarean births per month.

"This accounts for 284 more hours in the hospital and a cost of $29,235 more per month," which "translates into a total cost savings of 3,408 hours and $350,820 per year," they said.

The investigators added that in the future, "individual provider induction rates may be monitored and evaluated, especially if the induction rates and subsequent cesarean birth rates are excessive." ■

Program Decreased Elective Deliveries Before 39 Weeks

BY SHERRY BOSCHERT

Many physicians think it's no big deal to schedule elective deliveries before 39 weeks' gestation—contrary to guidelines—but their minds and practices can be changed with concerted effort, according to a study at nine hospitals.

In a 5-year program, reeducation of physicians and nurses on the hazards of early-term elective delivery, combined with policing of their practices, reduced the rate of early elective deliveries from 28% of all elective deliveries in 1999-2000 to less than 10% within 6 months of program initiation. After 6 years with the program in place, the near-term elective delivery rate remained less than 3%, Dr. Bryan T. Oshiro and his associates reported (Obstet. Gynecol. 2009;113:804-11).

Those improvements did not come easily. It wasn't enough to remind physicians of American College of Obstetricians and Gynecologists guidelines recommending that elective deliveries not be performed before 39 weeks' gestation. Nor were their minds changed by national data showing greater perinatal morbidity in infants delivered before 39 weeks, including 8- to 23-fold higher incidences of severe respiratory distress syndrome with deliveries at 38 or 37 weeks, respectively.

The medical staff argued that their local patients were healthier than those reported in the literature. The physicians wanted to maintain autonomy in managing the timing of delivery. Nursing staff did not want to be responsible for enforcing a policy against early elective deliveries, which would put them in adversarial relationships with the doctors. "It was not until internal or local neonatal morbidity data were presented that significant initial buy-in by the medical staff was seen," reported Dr. Oshiro of Loma Linda (Calif.) University.

The team who developed and administered the program within the Intermountain Healthcare network of hospitals in Utah and Southeast Idaho collected and presented data showing that their rate of neonatal ICU admissions for normal pregnancies increased from 3.3% for deliveries at 39 weeks to 4.5% for elective deliveries at 38 weeks and 8.9% for deliveries at 37 weeks. The rate of ventilator use for deliveries without complications increased from 0.3% for deliveries at 39 weeks to 0.5% for deliveries at 38 weeks and 1.4% for deliveries at 37 weeks. The in-hospital data were key to obtaining staff buy-in.

Concerns that delaying elective deliveries might increase morbidity were allayed by follow-up data showing significant declines in the rates of postpartum anemia, meconium aspiration, Apgar scores less than 5 at 1 minute, and cesarean deliveries due to fetal distress in infants delivered at 39-41 weeks' gestation in the period after the program was started, compared with the pre-program era. The rate of preeclampsia increased slightly, the study found.

Intermountain Healthcare is a vertically integrated health care system with 21 hospitals. The nine hospitals in the study use an electronic records system that allows identification and tracking of elective deliveries.

To overcome strong initial opposition to the program, the program managers conducted extensive education of the staff at each hospital. Physicians who wanted to schedule an early-term elective delivery were required to obtain permission from their hospital's ob.gyn. department chair or the attending perinatologist so that nursing staff would not have to be the ones enforcing the new policy. A new brochure helped explain the policy on early-term elective deliveries to patients.

Clinical program leaders monitor performance systemwide, at each facility, and for each practitioner, and regularly discuss the results with each hospital and sometimes with individual physicians. Hospital administrators were motivated to help the program succeed because part of their compensation depended on meeting the goal of decreasing early-term elective deliveries.

"They've done a really nice job showing that if you do bring attention to it, you can improve your rates" of elective delivery at appropriate gestational ages, Dr. Catherine Spong of the National Institute of Child Health and Human Development commented in an interview.

Requiring physicians to get permission for early elective deliveries "would make it more difficult for someone to just go ahead and deliver early," she added.

The proportion of U.S. deliveries of live infants that occur between 37 and 38 weeks' gestation has increased to nearly 18% in the past decade. Separate data have shown that approximately one-third of elective repeat cesarean deliveries are performed before 39 weeks. The rate of late preterm deliveries (between 34 and 37 weeks' gestation) and the indications for those deliveries also have changed, Dr. Spong said. All of these "probably should be more closely evaluated."

The majority of obstetric providers in the Intermountain Healthcare system are community physicians, most of whom could choose to do deliveries at nearby competing hospitals. "Thus we feel that this program could work in other hospitals and in other areas of the country," the investigators concluded.

The authors and Dr. Spong reported no conflicts of interest related to this study. ■