Improving emergency caesarean delivery response times at a rural community hospital

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ABSTRACT

Introduction: According to national organisations, obstetric services should be able to initiate a caesarean delivery within 30 minutes of the decision to operate. This is uniquely challenging in a small, rural hospital. In 2001, the authors’ hospital was unable to meet this guideline reliably. This project demonstrates how we improved our emergency caesarean delivery response time.

Methods: The caesarean delivery process was examined, project co-chairs were selected and key personnel were identified. Four working groups (doctors, nurses, anaesthesia, operating room personnel) were formed to analyse and improve component parts of the process. Over time, multiple small changes were made, initially by each working group and then by the entire caesarean delivery team. Decision-to-incision time was the main outcome measure. The authors also measured standard birth statistics and tracked the percentage of caesarean deliveries that were classified as an emergency.

Results: Forty emergency caesarean deliveries occurred during the study. The mean decision-to-incision time dropped from 31 to 20 minutes and the treatment to goal ratio increased from 0.5 to 1.0. The percentage of caesarean deliveries that were classified as emergencies dropped significantly. There has been no change in the overall caesarean delivery rate or other markers of obstetric quality.

Conclusions: A small, rural community hospital with limited resources can consistently meet the 30 minute decision-to-incision guideline for emergency caesarean delivery.

Abbreviations: AAP, American Academy of Pediatrics; ACOG, American College of Obstetricians and Gynecologists; APD, Alice Peck Day Memorial Hospital; CNM, Certified Nurse Midwife
The American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG), two of the main accrediting organisations in the US, recommend 30 minutes from decision-to-incision for emergency caesarean delivery. A
review of the literature suggests that many hospitals struggle to meet this guideline and small, rural facilities are no exception. Small facilities have limited resources and, more importantly, those resources may not be immediately available. Often, critical personnel are not "in-house" at critical times. Additionally, birth attendants, such as Certified Nurse Midwives (CNMs) or Family Practice physicians, who often attend deliveries at small, rural hospitals, may not be able to perform a caesarean delivery. Responding to obstetric emergencies in such a setting is uniquely challenging.

In early 2001, a sentinel event at our facility led us to evaluate our caesarean delivery response times. Although we sporadically had the ability to initiate an emergency caesarean delivery within 30 minutes of the decision to operate, we could not do so consistently. Without this consistency, the safety of our obstetric patients was potentially compromised. Additionally, because the ACOG has clearly stated that facilities with obstetric services should have "... personnel to permit the start of a cesarean delivery within 30 minutes of the decision to perform the procedure", we were not compliant with the recommendation of a leading professional organisation. Therefore, the purpose of our improvement project was to improve the consistency and reliability of the caesarean delivery process and to achieve emergency caesarean delivery response times of less than 30 minutes.