



Preventing Adverse Perinatal Outcomes Through Effective Communication Lessons Learned

On August 17, 2005, *The Boston Globe* published an account of the death of a baby in a local, well-respected, medical center.¹ In 2000, a woman arrived at the medical center to deliver her first baby. She experienced a uterine rupture and placental abruption during the induction of labor. An emergency cesarean section was performed after an attempt to accomplish a prompt delivery by forceps failed. The baby was stillborn. It was at that time that the uterine rupture and complete abruption were discovered. Subsequently, a hysterectomy was performed for refractory uterine atony. The woman suffered numerous complications, including disseminated intravascular coagulopathy, adult respiratory distress syndrome, and sepsis. The article examined the events leading to this catastrophic outcome from the perspective of the parents and the medical center's chief of obstetrics and gynecology. The obstetrician acknowledged in the interview that numerous judgment errors and miscommunications were responsible for this preventable adverse outcome. *The Boston Globe* article coincided with the publication of a detailed report of the event in *JAMA*.² The article published in *JAMA* described in detail the efforts of the hospital and obstetrics department to identify and correct flaws in the system that contributed to the tragic outcome. It also delineated changes that have been made to create what other patient safety groups have termed a "high-reliability" perinatal unit.³

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) considers the unanticipated injury or death of an in-

fant during labor and delivery a "sentinel event."⁴ Accredited hospitals are required to perform a credible root cause analysis, a systematic process for analyzing the incident. In its review of the sentinel event, the Boston hospital identified numerous failures in communication.² The author concluded that interactions among residents, the attending physician, and nursing staff were "poor" as were the interactions between the team members and parents. Inadequate communication was a primary contributing factor to the adverse outcome. The findings are consistent with a recent JCAHO analysis of sentinel events related to fetal/neonatal demise during the intrapartum period.⁵ JCAHO found that communication failures headed the list of identified root causes, occurring in 72% of the reported infant injuries and deaths. The critical importance of communication in promoting patient safety resulted in the establishment of a JCAHO patient safety goal in 2004: "Goal 2. Improve the effectiveness of communication among caregivers."⁶

What are the components of effective communication? The Institute of Medicine outlined the elements of team communication in 2 of its publications, *To Err Is Human*⁷ and *Crossing the Quality Chasm*.⁸ Both the Institute of Medicine and the JCAHO endorse the application of a teamwork model known as Crew Resource Management (CRM). CRM was developed by the US military to reduce errors in high-risk military operations, and in 1997 the Federal Aviation Administration required institution of CRM training for all commercial airline pilots in the United States. A

central element of CRM is clear, direct, unequivocal team communication.

Effective team communication is based upon the following principles:

- Communication is open, continuous, and multidirectional.
- Communication is nonhierarchical. All members of the team have an obligation to speak up; all members of the team have an obligation to listen.
- Communication is collegial, respectful, and direct.
- Effective team-oriented communication is rewarded.
- "Near-misses" and "good catches" are reported.

An important aspect of team communication is the introduction of a structured approach to reporting problems known as the SBAR technique.^{9,10} SBAR stands for the following elements of clear reporting:

1. *Situation*: What is going on with the patient? What is the primary problem?
2. *Background*: What are the clinical facts or context surrounding the problem?
3. *Assessment*: What do I think the problem is?
4. *Recommendation*: What should be done to correct it? What do I need?

An example of a nursing report given to a provider illustrates the SBAR model.

S: Dr Doe, I am calling about Ms Jones. She is complaining of severe rectal pressure and pain, rating it 10/10 on a pain scale, and the pain is unrelieved by Percocet given one hour ago. She is pale, diaphoretic, and restless. Her blood pressure is dropping. Her blood pressure is 92/50 mm Hg, pulse 126, and respirations 26/min. This is a significant change in her status.

B: She is a gravida one, para one who had a forceps-assisted delivery 2 hours ago. She had a midline episiotomy, but no lacerations. Her fundus is firm, midline at 2 cm above the umbilicus. There was a moderate amount of lochia without clots until about 45 minutes ago. She has no lochial flow since then. Her bladder is nonpalpable. Her vital signs had been stable with a blood pressure of about

120/70 mm Hg and a pulse in the 70s until 10 minutes ago. She has an intravenous line with 20 units of Pitocin running at 125 mL³/h.

A: I think she may have a vaginal hematoma. I have started a second intravenous line in her other arm with a 16-gauge angiocatheter. The charge nurse has paged the anesthesiologist to alert her.

R: I want you to come and evaluate her now. I would like to send a stat CBC. Do you want me to have the blood bank cross-match her—and for how many units of blood? I want to start a bolus of intravenous fluid through her second line. Do you want me to give Ringer's lactate? How quickly can you get here?

Other crucial aspects of team communication in the perinatal setting include the following:

- There is clear articulation of the plan of care between team members at the beginning of the shift, when a problem develops, and at predetermined intervals during the course of the patient's treatment and care. The plan of care is articulated both verbally and in writing (nursing care plan, nurses' notes, and provider progress notes).
- The patient (or parent in the case of an infant) is given regular updates regarding status and the plan of care.
- There is consensus among team members regarding a taxonomy of terms for fetal heart rate characteristics.
- There is consensus among team members regarding terminology that will be used to convey an emergency.
- The charge nurse, team leader, or clinical coordinator responsible for unit operations is aware of the change in patient's status through direct reports by providers and the primary nurse.
- Team members with direct and primary responsibility for the patient and the charge nurse reassemble and communicate to make contingency plans when it is likely that an emergent situation may arise that will require rapid team response and treatment (eg, "crash" cesarean section).

In the next issue, we will have a drinatal team me ticle publishe reading for al providers. It i of how a peri trophic event based on pri of the change department o versal applica While it is a s it provides a

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In the next few years the mandate to institute the CRM model in healthcare settings will have a dramatic impact on the way perinatal team members interact. The seminal article published in *JAMA* should be required reading for all perinatal/neonatal nurses and providers. It is an open and detailed account of how a perinatal unit experiencing a catastrophic event created a new culture for care based on principles of patient safety. Many of the changes implemented in the obstetric department of this Boston hospital have universal applicability across perinatal settings. While it is a sobering report of a tragic event, it provides a template for the development

of effective teamwork and communication. It offers hope for perinatal team members everywhere who are striving to improve patient care outcomes through improvement of team communication.

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