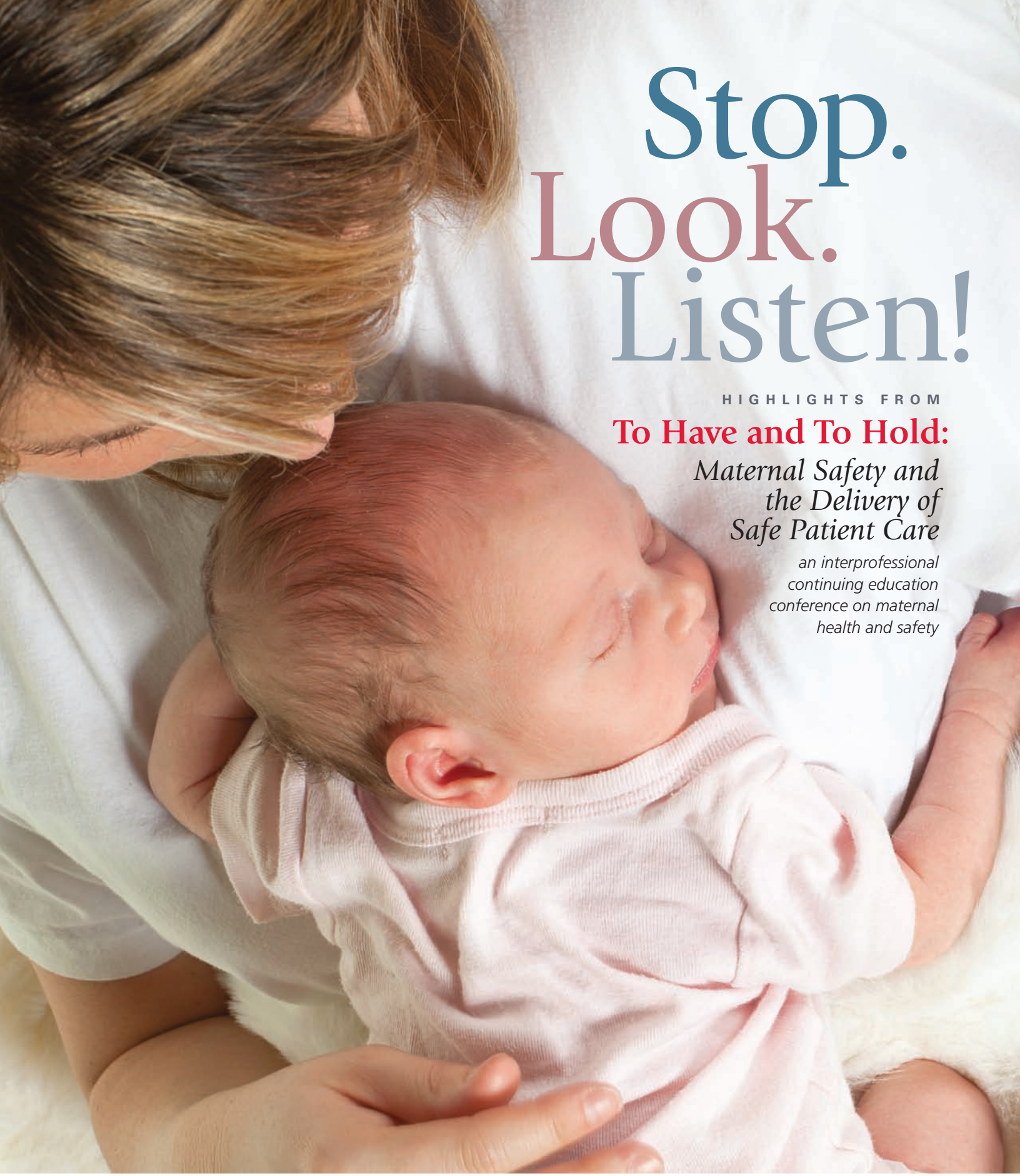


# Stop. Look. Listen!

HIGHLIGHTS FROM

## To Have and To Hold:

*Maternal Safety and the Delivery of Safe Patient Care*

*an interprofessional continuing education conference on maternal health and safety*

RUTGERS
Robert Wood Johnson Medical School

The Tara Hansen Foundation

RWJ Robert Wood Johnson University Hospital

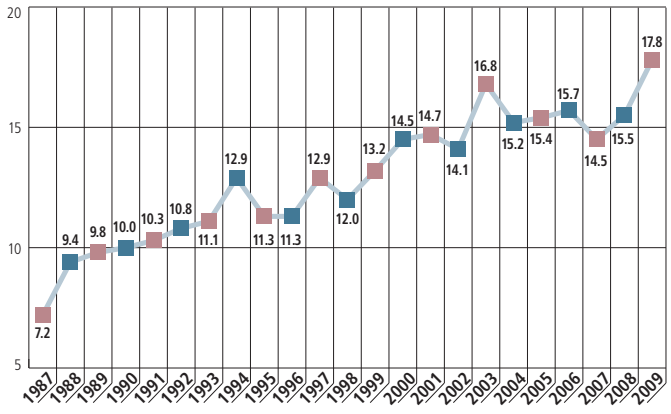
# *Message from the Conference Co-Chairs:*

Ask

Ask the average American about maternal mortality, and she or he is likely to call to mind issues related to third-world maternity health care, problems that would have been faced by a great-great grandmother, or even plotlines from the historical BBC series *Downton Abbey* or other works of historical fiction. But the reality is, women are dying every day in the United States from complications resulting from childbirth.

Yes, we've come a long way in improving health care to pregnant women, and today we are able to utilize several interventions that have made a significant difference in saving maternal lives. But there are still many hurdles. Currently, two women on average in the United States die every day following childbirth. In addition, severe maternal morbidity affects approximately 52,000 women each year, according to studies reported in *Obstetrics and Gynecology* and by the Centers for Disease Control and Prevention (CDC).

**Figure 1: Pregnancy-Related Mortality Ratio**
***Number of pregnancy-related deaths per 100,000 live births per year.***




*Source: Pregnancy Mortality Surveillance System, Centers for Disease Control and Prevention*

*"One exciting proactive initiative is The National Partnership for Maternal Safety that was created in 2013. The goal of the Partnership is for every birthing facility in the United States to have the three designated core Patient Safety Bundles (Preeclampsia; Hemorrhage; and Venous Thromboembolus Prevention) implemented within their facility within three years. The collaborative approach seeks to help women, families and clinicians as it moves forward."*

Unfortunately, despite advances in medicine in the past three decades, the national track record for maternal mortality and morbidity has not achieved expected goals, with rates not declining. CDC analysis of pregnancy-related death rates between 1998 and 2009, the most recent year reported, shows an increase in maternal mortality rates of more than 48 percent. Likewise, severe complications during delivery increased by 75 percent and during postpartum hospitalizations by 114 percent in that same time span.

As compared to the United States, 49 other countries have reported lower maternal mortality rates, with the U.S. maternal mortality ratio higher than in many developing countries, according to a study in the *American Journal of Obstetrics and Gynecology* (AJOG).

Drafted in 2000, the U.S. Department of Health and Human Services' *Healthy People 2010* objectives called upon health care providers to take the steps to reduce maternal mortality to 3.3 deaths per 100,000 live births by the end of that decade. Looking at the most current data, the actual maternal death rate in 2010 was 14.5.

But there are many initiatives in the United States that are focused on decreasing the number of maternal complications and deaths.

The *AJOG* study revealed that between 40 percent and 50 percent of maternal deaths and 30 percent to 40 percent of "near miss"/severe complications are preventable through changes in provider, patient, and systems factors. These statistics reinforce the need for proactive initiatives in order to improve maternal health outcomes in this country.

One exciting proactive initiative is The National Partnership for Maternal Safety that was created in 2013. The goal of the Partnership is for every birthing facility in the United States to have the three designated core Patient Safety Bundles (Preeclampsia; Hemorrhage; and Venous Thromboembolus Prevention) implemented within their facility within three years. The collaborative approach seeks to help women, families and clinicians as it moves forward.

Enhancing all aspects of maternal health care is a priority for Rutgers Robert Wood Johnson Medical School and Robert Wood Johnson University Hospital. The importance of this area of health care, especially the need for continued educational outreach, had become even more obvious after a member of the medical school's extended family died due to childbirth complications after delivering in a community hospital close to her home. In the wake of this tragedy, a family foundation established in honor of this young woman—The Tara Hansen Foundation—was formed and became an important catalyst for this interprofessional continuing education conference on maternal health and safety.

Co-sponsored by Rutgers Robert Wood Johnson Medical School and Robert Wood Johnson University Hospital, and with program funding from The Tara Hansen Foundation, the conference—*To Have and To Hold: Maternal Safety and the Delivery of Safe Patient Care*—marked a commitment to enhance the education of clinicians, nurses, and all members of obstetrical health care teams in ways that emphasize maternal safety and promote prevention of perinatal morbidity and mortality. Perinatal health care providers and students from across the state, as well as nationally, were invited to attend this one-day program.

*To Have and To Hold* drew nearly 300 physicians, nurses, residents, medical students, nursing students, and other health care professionals involved in the care of women to discuss maternal health and safety. The importance of teamwork and team training, avoiding assumptions in care, listening to patients' concerns, and empowering patients to take an active part in their care, expanding their role as part of the care team, were discussed throughout the day.

Also emphasized during the conference was the **Stop, Look, and Listen!** campaign, which is designed to empower a woman's voice as an important aspect in addressing maternal health and safety. The concept is simple: "**stop**" when a woman has a complaint and no longer consider her a routine obstetrical patient, "**look**" and examine the patient related to her complaint, and "**listen**" to what she is experiencing, in her own words.

The following pages contain highlights from the day's sessions and ways health care individuals, teams, and organizations can and are making a difference.

All of us who provide health care to childbearing women know the importance of our making it a priority to address situations that may lead to an adverse outcome that may be preventable. All of us together have an opportunity not only to increase education and to enhance awareness, but also, and more importantly, to effect and encourage positive change in every perinatal health care setting.

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# Tara's Story:

## *"For 36 hours we celebrated a homecoming…"*

It was March 25, 2011, and the day had finally arrived. After years of dreaming about becoming a mother, Tara Hansen had spent the previous nine months preparing with her husband and high-school sweetheart, Ryan Hansen, for the arrival of their first child and the start of their new life together as a family.

No detail was missed in preparation. Nursery items were purchased and put away for safekeeping. Doctor's visits were scheduled and plans were made for the delivery. And, as a lifelong athlete and model of good health, Tara was vigilant about maintaining her healthy lifestyle during pregnancy—eating well, staying fit, and fully committing herself to those regular, recommended prenatal appointments. She used to joke with her family that she was the first pregnant woman to crave spinach and mushrooms, not ice cream.

Hers was not a "high-risk" pregnancy, and there were no red flags of any potential problems before delivery.

Yet, just six days after giving birth to a healthy, 9 pound 4 ounce baby boy, Brandon Ryan, at a hospital close to the family's home, Tara passed away as a result of complications due to childbirth.

"Between our two hospital stays, we spent 36 hours at home as Mom, Dad, and baby. Thirty-six hours looking for all the things we had 'conveniently' put away. Thirty-six hours to laugh with each other, and to love one another as a family. For 36 hours we celebrated a homecoming that was a lifetime in the making. That's it," Ryan recalled.

Ultimately, Tara's death was attributed to an infection from a third-degree tear that had gone unnoticed and uncontrolled, neither caught early enough nor treated aggressively enough to make a difference in saving Tara's life, he said.

But the condition that cost Tara her life had not come entirely without warning, he noted. She began to feel unwell in the hospital after delivery, taking the time to speak to her health care providers about her concerns and suspicions that her body did not feel the way it was supposed to. But Tara was considered a healthy postpartum patient and therefore sent home.

"In my experience, the only person who knew something was wrong was Tara, and she was right. To me it appeared that her complaints just kept falling on deaf ears, with everyone assuming that the pain she was describing was to be 'expected' because she just had a baby," he said.

Following this experience, Ryan wanted to be a part of enhancing the way health care providers communicate with patients. Listening to patients' concerns and not assuming they're part of the norm may make a difference in helping to prevent maternal morbidity and mortality.

With a firm belief that sharing Tara's story has the ability to possibly make things better for the next patient, wife, mother, or family member, Ryan launched The Tara Hansen Foundation in 2012 and now shares the message about the importance of maternal health and safety.

Ryan sees the foundation's mission of education and raising awareness—the first steps toward real change—as a fitting memorial for the devoted elementary school special education teacher who, with her passing, left her husband with "her final lesson plan, her most important lecture." It is one he fully intends to see passed on, to be a part of the educational initiatives that it is hoped will enhance a safer, more successful birth experience for all. One of the educational initiatives the foundation hopes to support is the idea of **Stop, Look, and Listen!**—a reimagined safety campaign to focus on maternal health and safety. Ryan is pleased to be collaborating with the American Congress of Obstetricians and Gynecologists through their Safe Motherhood Initiative.

*With a firm belief that sharing Tara's story has the ability to possibly make things better for the next patient, wife, mother, or family member, Ryan launched The Tara Hansen Foundation in 2012 and now shares the message about the importance of maternal health and safety.*

# The Safe Motherhood Initiative

In January 2013, leaders in obstetric care from across New York State convened at a meeting sponsored by **ACOG District II** to strategize on clinical, educational, surgical and research initiatives to reduce maternal mortality and severe morbidity in New York State. ACOG District II has secured funding from Merck for Mothers for a comprehensive educational and research program to reduce maternal mortality. Through an iterative process, clinical measures with the potential to reduce maternal morbidity and mortality were identified and endorsed.

In developing a systematic strategy to reduce maternal mortality, the challenges New York State faces are representative of the United States as a whole. Nationally, obstetrical care is provided in diverse clinical settings, so that success in reducing maternal mortality is contingent on addressing sources of maternal morbidity and mortality which may differ in small, medium, and large academic and community obstetric centers.

Obstetric leaders in New York State have taken a mutual pledge to help facilitate a landmark change in the way obstetric care is provided by seeking to ensure that all hospitals have a systematic and comprehensive framework by which to operate. The cornerstone of the ACOG District II endeavor, entitled, **The Safe Motherhood Initiative**, consists of local hospital sessions to educate maternity teams on how to successfully standardize care and eliminate variation statewide. This is an intense three-year commitment hospital and their labor and delivery staff.

Every birthing facility should have a system of support for staff, families and patients who have been involved in a severe maternal event. ACOG District II, working with the **Tara Hansen Foundation** and other similar associations, aims to improve patient safety and reduce the rate of adverse maternal outcomes through education, support and patient and family collaboration.

## *What is the Safe Motherhood Initiative?*

- ***The Safe Motherhood Initiative (SMI) is a multi-year, multi-stakeholder project comprised of nurses, midwives, physicians, patient safety specialists, and other partners in New York State working together to standardize care in all obstetric hospitals to prevent obstetric emergencies associated with maternal mortality and morbidity.***
- ***The SMI focuses on the three leading causes of maternal death – obstetric hemorrhage, severe hypertension in pregnancy, and venous thromboembolism.***
- ***The SMI has been working with a team of clinical experts since January 2013 to develop, implement, and evaluate evidence-based practices which have resulted in the formation of maternal safety bundles for these three causes of death.***
- ***These three bundles (obstetric hemorrhage, severe hypertension in pregnancy, and venous thromboembolism) consist of a variety of step-by-step, evidence-based tools to manage risk, prevent adverse events, respond, and debrief. Examples of tools include key elements, protocols, checklists, algorithms, laminated posters, etc.***
- ***New York State is joining New Jersey, California, Florida, Georgia, and Washington, D.C., in implementation of parallel maternal safety projects.***
- ***The SMI is funded by Merck for Mothers, a 10-year commitment to tackle the leading causes of death during pregnancy and childbirth globally, including here in the United States.***

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# The Stop, Look, and Listen! Campaign:
## Improving Maternal Health and Safety

It is hoped that the three simple words—**Stop, Look, and Listen!**—can be the reminder for the health care team to always be aware of the need for early recognition of patient complaints that may indicate the beginning stages of a condition that is preventable and could, over time, become life-threatening for the mother or her child. The campaign hopes to get this message to women as well, so they feel empowered to speak up about any problems or concerns they may have.

The basic concepts of the **Stop, Look, and Listen!** campaign, from the health care provider's perspective, are straightforward:

**Stop:** *The health care team stops considering the patient routine.* ***If she says she does not feel well, or believes something is wrong, it is time for the clinician to stop and not assume that they are typical complaints that all new mothers experience.***

**Look:** *Conduct an examination to be sure there are no evolving problems such as an infection at the episiotomy site.*

**Listen:** *Hear the woman's complaints and never consider them a usual part of just having a baby.*

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## Highlights from To Have and To Hold:
## Maternal Safety and the Delivery of Safe Patient Care

*An interprofessional continuing education conference on maternal health and safety*
*November 6, 2013*

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# Perinatal Safety: A Systems Approach and Opportunities for Improvement

Lisa Miller, CNM, JD
*Perinatal Risk Management and Education Services*

*Findings on pre-term birth rates, maternal mortality and morbidity, and knowledge gaps in normal labor and delivery care must be seen not simply as tragedies, but as opportunities—chances to create safer systems and informed populations, two keys for improved health care in the United States. A systems approach, which avoids "blaming" and seeks prevention strategies to avoid future errors, can be particularly effective at improving maternal health and safety.*

Looking at systems, rather than individuals, can help identify the types of issues that are contributing to maternal mortality and morbidity at an organizational level—distinguishing among "slips" or lapses, such as most medication errors; rule-based errors resulting from lack of following effective protocols or standardization; and knowledge-based errors, whether they are caused by a lack of knowledge, or errors due to expert bias about a particular clinical situation.

The need to address the issue of medical errors in maternal health and safety is apparent.

A review of more than 100 hospitals, published in a 2008 issue of *Obstetrics & Gynecology*,[1] looked at perinatal closed claims from a single insurer over a five-year period. It found that 70 percent of obstetrics claims involved substandard care and concluded: "Most money currently paid in conjunction with obstetric malpractice cases is a result of actual substandard care resulting in preventable injury." A separate benchmarking study, CRICO Strategies' 2010 Annual Benchmarking Report, showed 77 percent of cases were a result of substandard clinical judgment, 26 percent were a result of technical error, and more than a third (36 percent) were a result of miscommunication.

The Joint Commission has found communication failure to be the most frequent cause of perinatal mortality and morbidity.[2] Communication problems are detracting from a culture of safety in the health care industry as a whole, in part because health care professionals may be uncomfortable speaking up. A 2005 report by VitalSmarts and the American Association of Critical-Care Nurses, *Silence Kills: The Seven Crucial Conversations for Healthcare*,[3] found that clinicians generally are not comfortable addressing concerns about teamwork and competency.

For example, more than half of nurses surveyed for the report (53 percent) said they were concerned about a peer's competency, but only 12 percent had discussed it. In addition, 34 percent of nurses were concerned about a doctor's competence, but less than 1 percent had spoken about it. These findings don't change even when direct harm had been witnessed. Results were similar from the doctor's perspective: 81 percent of physicians were concerned about a nurse's competence, but only 8 percent had discussed it, and more than two-thirds of physicians were concerned about another doctor's competence, yet less than 1 percent had spoken about it.

Three years later, a Joint Commission Sentinel Event Alert[4] showed not much had changed: approximately 40 percent of clinicians had "kept quiet or remained passive" during questionable events, rather than confront a "known intimidator."

Improving communication skills through multidisciplinary and interdepartmental training is therefore critical to improving maternal health and safety. Clinicians need not only to recognize cultural and disciplinary barriers to effective and open communication, but also be conscious of the tendency to assume others share similar views and knowledge when discussing clinical issues, and adjust for that bias, said Miller. This hesitancy to speak also can derail the intended safety efforts inherent in protocols and checklists.

"Checklists are only as good as the people using them. If the person is afraid to speak up, the checklist goes out the window," Miller said. Moreover, because staff "non-experts" may be hesitant to speak up in certain situations, clinicians need to elicit their opinions to avoid "expert error," she said.

An excellent resource for helping individuals learn to handle these types of critical conversations is *Crucial Conversations: Tools for Talking When the Stakes Are High*, by Kerry Patterson, Joseph Grenny, Ron McMillan and Al Switzler, Miller said.

Additionally, several impediments to change can affect the successful implementation of patient safety initiatives and will need to be addressed, Miller noted:

- **Status Quo Bias**—the tendency for people to like things to stay relatively the same.
- **Outcome Bias**—the tendency to judge a decision by its eventual outcome, instead of based on the quality of the decision at the time it is made. "Getting lucky is not the same thing as good practice," Miller said.
- **Projection Bias**—the tendency to unconsciously assume that others share the same or similar views, knowledge, or beliefs.
- **Bias Blind Spot**—the tendency not to compensate for one's own cognitive biases.
- **Bandwagon Effect**—the tendency to do or believe things because many other people do or believe the same. It is related to the concepts of "groupthink," herd behavior, and manias. Many common birth practices are related to this bias.

Competency assessments and ongoing training also are essential, Miller said. The entire health care team, including clinicians, needs to be open to recognizing their limitations and knowledge gaps, and embrace the idea of proving competency, using ongoing training to force habituation of their skills.

"We must begin making honest assessments of our individual strengths and weaknesses as clinicians. Next, we need to look at our institutions and systems: Where are our knowledge gaps? What areas need improvement? At the broader level, we need to begin to look at statewide health and health disparities. And most importantly, we must engage our communities—patients and families that are our neighbors, our friends, and our shared responsibility when it comes to safety," Miller said.

Look outside the organization's borders—whether state or national—for ideas on improving safety, she added. California, Illinois and New York, for example, have developed exemplary programs in the reduction of maternal mortality and morbidity, secondary to hemorrhage, she noted. In addition, the March of Dimes' 2012 Premature Birth Report Card grades the 50 states by comparing each state's rate of preterm birth to the organization's 2020 goal of 9.6 percent. Look at what Oregon is doing, for example, that earns its preterm birth rates an "A" grade. It is important to look at report cards such that local hospitals and health organizations can use them as a self-assessment tool by which to find areas for improvement.

Individualizing any patient safety programs to the particular organization is also extremely important, and taking patient volume into account may be a factor, Miller said, as the CRICO Strategies' 2010 Annual Benchmarking Report showed variation in the percent of liability cases based on hospital volume. For example, delay in treatment of fetal distress was more common in hospitals with fewer than 2,000 births per year compared to hospitals with higher volume (25 percent vs. 19 percent, respectively), while improper management of pregnancy was more common in cases among hospitals that have more than 2,000 births per year.

Standardizing obstetrical practices with an emphasis on understanding maternal mortality has proven to be effective in reducing risk and improving outcomes, said Miller. A study in *Obstetrics & Gynecology*[5] revealed that obstetrical litigation was reduced by changing practice patterns, including in-house obstetrical coverage and protocols for medication, shoulder dystocia, and vaginal births after Cesarean delivery.

And while changes and improvements are taking place, there is "still a way to go," she said.

"We are making strides in disclosure, transparency, and evaluation of medical and nursing error. Our next goals must include involving and educating the consumers of perinatal care, and evaluating the evidence that is based on patient outcomes," Miller said. "Physicians and nurses also need to look at sharing information across disciplines, and using each other's literature jointly when creating educational programs."

# The Effect of a Patient Safety Program on Labor and Delivery

Frank A. Chervenak, MD
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*"The problem is not that there are bad people in health care, but that good people are working in systems that need to be made safer." Team training and systemic changes in obstetrical procedures can have a significant impact on improving maternal safety and reducing liability due to medical errors.*

Human errors are inevitable. Mature systems do not just try to reduce the probability of human error; they accept that errors will occur, and then find ways to first intercept them, and then to identify their root cause, so that the deficiency is identified and corrected. Once the problem is corrected, it is unlikely that the error will recur, explained Dr. Chervenak.

Hospital errors are one of the leading causes of death in the United States—in fact, there are data to suggest that they are the sixth-leading cause. A 1999 Institute of Medicine report[6] found that preventable injuries affect 3 percent to 4 percent of all hospitalized patients—more than 1 million patients each year. More than half of these adverse events could have been prevented; most are problems resulting from systems errors, rather than individual error, the report found.

As many medical centers have done, to help improve maternal safety, NewYork-Presbyterian Hospital/Weill Cornell Medical College seriously addressed this issue and made it a priority. It took a cue from the airline industry, which has implemented **team training** as part of its safety efforts and initiatives. In each decade from the 1970s through 2010, U.S. airline safety improved markedly due to this training, with significant reductions in the number of fatal accidents occurring, Dr. Chervenak noted.

"We made a decision to make significant changes to our culture on the Cornell Labor & Delivery unit in order to make it safer to have a baby," Dr. Chervenak said of the work spearheaded at the organization in conjunction with Amos Grunebaum, MD, professor of clinical obstetrics and gynecology at Weill Cornell Medical College.

Team training is one of the most important aspects of making the hospital a safer place for pregnant patients and is at the center of many patient safety programs. Through an established program, which is mandatory in most medical centers in the United States, obstetrical units enhance their skills on how to function effectively as a team. The four- to eight-hour course—repeated periodically to maintain the skills and to update procedures the team utilizes with new information—focuses on drills for such situations that are critical events for both the mother and her baby. Events that can be catastrophic include shoulder dystocia, peri- and postpartum bleeding/hemorrhage, maternal cardiac arrest, and eclampsia. STAT Cesareans, which also carry a high degree of morbidity and mortality for the baby, are also simulated. This training is to ensure that all members of the obstetrical team, including the obstetrician, nurse, anesthesiologist, blood bank personnel, and neonatologist, know what their role is during all obstetrical emergencies and how to address them in the most timely fashion possible.

Not only are there situations in which intervention has to occur quickly, but there are also the everyday nurse-to-clinician interactions that, although not necessitating stat care, rely on excellent communication, which is critical to the patient and her baby. For example, if a nurse checks the blood pressure on a laboring patient and it is extremely high, then the nurse must be sure the message gets quickly to the obstetrician, and that both the systolic and diastolic values are noted and understood by the obstetrician. As well, in order to confirm an effective exchange of medical information, the obstetrician repeats the blood pressure values back to the nurse. In this way, the loop for excellent communication and care is closed.

Another critical area is the transition of care. When either the nurse or clinician caring for the patients ends a shift, it is extremely important for each to communicate thoroughly what has been clinically happening, what is pending (such as a blood test whose results are still not back), and what the clinical plans are at that point. Never should any of the health care team leave the hospital after their shift without communicating the status of the patient.

One of the most recent additions to enhancing patient safety is the tenet that everyone on the team (the nurse, learner, or any other team member) is empowered to report and follow through on issues that they note are negatively contributing to the patient and the desired health outcome. By everyone on the team being able to voice

a concern that they have noted with the patient's care, patient care improves significantly. Every team member is critical to the safety and best care for the patient for whom they are a part of the caregiving team. "Team training is also reflective of a changing environment in medicine to focus less on individual achievements and more on the importance of the team," Dr. Chervenak said.

Another important change in patient safety is the development of best practice protocols for patient care. Once the best way to manage a clinical situation, such as inducing labor with oxytocin (Pitocin), is having all clinicians follow the same template of care, so that not only do all patients benefit from the best dosing protocol, but also everyone on the team knows what to expect during the induction. Since all patients are being cared for in a standard way, it is also more obvious when the patient is not doing well or having an adverse response. At Cornell, Dr. Chervenak explained, they indeed have developed a standardized oxytocin protocol that is used by all clinicians. Having one protocol is critical, he said, since there is too much risk for miscommunication when several are in use. Miscommunication is what Dr. Chervenak calls the "deadliest sin." When everyone is giving patients different treatments that are not standardized, there is an increased potential for errors. Part of Weill Cornell's standardized policy for oxytocin features standardized doses of drug and templates of management. As well, not only the clinicians, but also the nurses are able to decrease or stop oxytocin if they observe that the fetal heart has been negatively affected.

Other initiatives Drs. Chervenak and Grunebaum have overseen the implementation of as part of the obstetric patient safety program include:

- Electronic charting and records, with electronic L&D boards allowing for simultaneous updating
- Chain of communication templates so that if there is an issue, the next responsible person is notified to address the issue
- Premixed medications and color-coding of labels to help staff more easily distinguish between different medications like oxytocin and magnesium sulfate (both of which are among the top L&D medications associated with patient harm)
- Templates for thorough documentation
- Regular review of malpractice suits
- Appointment of a safety nurse
- Use of physician assistants
- Fetal monitoring certification for L&D nurses and clinicians
- Thromboembolism prophylaxis in high-risk women
- Having a laborist on L&D at all times

Having patient safety initiatives and the entire team made aware of them and following them makes a dramatic difference in the safety and care of patients, especially obstetrical patients. The positive results of these patient safety initiatives implemented by Drs. Chervenak and Grunebaum and their team were reported in an article that was published in the *Journal of Perinatal Medicine* in 2012.[7] After implementation of these patient safety initiatives, the perinatal team found a marked reduction in Cesarean delivery rates at Cornell. In fact, the rates decreased incrementally from 41.6 percent in 2004 to 32.7 percent in 2012—a reduction seen in all of the age groups studied. Another of the team's studies, published in the *American Journal of Obstetrics and Gynecology*,[8] reported that the annual compensation payments for liability issues at Cornell declined from $50.9 million in 2003 to $250,000 in 2009.

Dr. Chervenak reviewed important concepts to keep in mind when developing patient safety systems:

- **Keep it simple.** Think about what errors can occur, and how you can avoid them.
- **Break down the old paradigm and attitudes.** For example, the myth that nurses should not be challenging doctors should be eliminated from every clinical situation. Everyone must be held accountable for communication that will ultimately benefit the patient.
- **Don't just look into what's an "acceptable" treatment protocol; find what is the safest from evidence-based data and use these protocols as the template of care.**

Lastly, Dr. Chervenak emphasized that patient safety alone, especially for the new mom and her baby, is not enough. Each L&D has to go a step further: "It's not enough to improve patient safety. You have to humanize the hospital experience. Make the hospital a comfortable place to have a baby and an enjoyable experience for the patient, her baby, and her family."

The Institute of Medicine report[6] indicated that a key approach for reducing medication errors is "establishing and maintaining a strong provider-patient partnership." Make sure the patient is part of the interaction when being given a medication. In conjunction with the idea of patients taking an active role their care, enhancement of patient autonomy is a core value, said Dr. Chervenak. He noted that there has to be constant reinforcement of these values. As he summarized, it is key that health care professionals and staff **must** listen to patients. It is an essential part of the template for best patient care and safety. This is truly a situation for Stop, Look, and Listen! **Stop:** take the time to interact with the patient. **Look:** examine the patient thoroughly. **Listen:** to what the patient is stating about her condition.

# Maternal Complications Related to Cesarean Delivery

Charles Denk, PhD
*Research Scientist*
*Maternal and Child Health Epidemiology Program, N.J. Department of Health and Senior Services*

*Nationally and in New Jersey, Cesarean deliveries have been increasingly performed to manage women with low-risk profiles. In the past, these same women would probably have delivered their babies non-surgically. The relative risks associated with Cesarean delivery have not changed and are higher than a vaginal delivery. As a result of the high surgical delivery rate, recent improvements in the area of maternal health and safety appear to be less significant than they could have been if more women were delivering vaginally.*

Over the past two decades, Cesarean delivery rates have increased steadily nationally and statewide, regardless of whether the individual is a first-time mom or a woman who previously delivered her child by Cesarean delivery. Specifically, Dr. Denk said, data show an increase in the rate of Cesarean delivery in many categories, which include:

- For first-time mothers, from 25 percent in 2000 to 35 percent in 2011
- For women who previously had a Cesarean delivery and no trial of natural delivery during the subsequent delivery, from 52 percent in 2000 to 83 percent in 2011
- For women who previously had a child, but not a Cesarean delivery, from 7 percent in 2000 to 11 percent in 2011

It is only within the past few years that there has been some stabilization of these high overall rates. New Jersey, with an overall rate of Cesarean delivery at 38.8 percent in 2011, still ranks among the highest nationally—second only to Louisiana. New Jersey is still above the national average of 32.8 percent, according to the most recent statistics from the Centers for Disease Control and Prevention.

Because Cesarean delivery has been associated with a higher risk of some maternal complications, the state's Maternal and Child Health Epidemiology Program explored whether the incidence of maternal complications has been rising in conjunction with the increased rate of Cesarean delivery.

The study that was done to answer this question focused specifically on short-term, physical, and acute conditions for such risks as **major postpartum infections** (e.g., peritonitis, septicemia, endometritis, pelvic sepsis), **systemic complications** (e.g., anesthetic reactions, maternal distress, cardiac arrest), **vascular complications** such as postpartum deep vein thrombosis and embolism, and **postpartum hemorrhage**, as well as related procedures such as transfusions and, in some cases, hysterectomy.

And, because the need for Cesarean delivery and the incidence of postpartum complications may have the same underlying cause, the study tried to minimize that factor by looking only at low-risk deliveries—that is, ones that were not typically associated with requiring Cesarean delivery:

- Single baby, rather than twins or other multiple births
- Full-term
- Head down, rather than breech birth
- No serious antepartum bleeding, severe hypertension, preeclampsia/eclampsia, uterine tissue abnormality, or fetal macrosomia

The results of this study indicated that the incidence of major infections and major systemic complications have declined overall. A rather significant reduction in the rate of major infection that was first noted between 1997 and 1998 is most likely a result of the adoption of prophylactic antibiotic protocols that year, Dr. Denk explained. However, the highest rate of major infections in low-risk deliveries was seen among C-sections after a trial of labor. As well, the rate of systemic complications was higher for women who have delivered by Cesarean delivery either without or after trial of labor, rather than by vaginal delivery.

Between 1997 and 2005, a clear shift was seen in the relative mix of these types of complications by type of delivery, with a larger proportion of negative outcomes being seen among women who had a Cesarean delivery without trial of vaginal delivery. The rate of transfusions also has been on the rise—again, with a higher

incidence among women who had Cesareans without a trial of delivery.

Overall, he concluded, the surge in Cesarean deliveries has not significantly increased serious maternal complications with morbid consequences, because independent of surgical vs. vaginal delivery route, serious complications are declining for deliveries overall.

At the same time, he noted if Cesarean deliveries had not increased beyond 19 percent of low-risk deliveries, there might have been greater improvement among several types of maternal complications:

- Systemic complications would have declined 52 percent, not 35 percent
- Major infections would have declined 49 percent, not 44 percent
- Vascular complications would have increased 5 percent, not 26 percent
- Transfusions would have increased 69 percent, not 94 percent

# Maternal Safety and the Delivery of Safe Patient Care


Anthony Tobia, MD
*Research Scientist*
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*Rutgers Robert Wood Johnson Medical School*


*One means of facilitating improved maternal health and safety is to EMPOWER patients: Eliminate Maternity Patients' Obstacles With Empathetic Regard. Central to this idea is the provision of patient-centered care that focuses on listening, understanding body language, and effective clinician/nurse/patient communication. Active listening skills, coupled with adaptation of a formal assessment tool for postpartum depression, not only can improve the overall outcome of the patient, but in particular, help determine whether a patient may be experiencing anxiety. Data clearly show that anxiety can often be a barrier to care.*

Increasing attention has been placed over the past few decades on identifying and treating women with postpartum depression, a condition that affects an estimated 13 percent of women—about one in every eight—usually within one to three months after delivery. Symptoms of postpartum depression range from mild to severe and usually last a minimum of two weeks. There are many protocols in place that aim to assist new mothers who experience postpartum depression.

Although most health care teams and patients know about postpartum depression, scant attention has been directed to the prevalence of anxiety and specific anxiety disorders (e.g., panic attacks, anxiety due to medical illness, specific phobias, etc.) in postpartum women and providing them with treatment for these conditions. Yet, anxiety appears to be far more common in the days after childbirth than depression, according to findings published in the April 2013 issue of *Pediatrics*.[9] Anxiety, or "psychic pain," is a signal to an individual of an impending internal threat. There is conflict between the part of the individual's psyche that is concerned about the way she is feeling and the part that discounts those feelings (Patients may think, "It's not right to think that the doctors don't know how to handle my pain; they're wearing white coats, not me."). This conflict creates a friction that is expressed in a variety of verbal and non-verbal signs and symptoms. However, in some individuals, their ego defense mechanisms may result in their not saying anything about their concerns, or suppressing what they are feeling, Dr. Tobia said. As a result, a patient's anxiety may get in the way of proper clinical diagnosis and treatment—particularly if the practitioner is unaware of the non-verbal cues, or the possibility anxiety may be present in the postpartum patient who is not verbalizing it.

Two strategies can help practitioners avoid missing this diagnosis: **(1)** recognize that postpartum anxiety may be an issue with the patient, and **(2)** overcome the tendency toward minimalizing this condition if anxiety is present.

Posing the question of whether routine screening is needed for postpartum anxiety, Dr. Tobia stated yes. The Edinburgh Postnatal Depression Scale (EPDS), which is routinely filled out by women after they deliver, also may be used as a multi-dimensional tool to screen for anxiety disorders in addition to depression (Matthey et al, 2012). Through this questionnaire, if the woman is found to have depression and/or anxiety that is causing significant distress, this response should generate a referral for mental health counseling, Dr. Tobia noted.

Three questions from the EPDS correlate with anxiety, which are:

1. I have blamed myself unnecessarily when things went wrong.
2. I have been anxious or worried for no good reason.
3. I have felt scared or panicky for no very good reason.

Matthey and colleagues analyzed six studies that used the above three questions (the EPDS-3A) among perinatal women with different diagnoses and discovered a consistent pattern, in which the total EPDS scores correlated with the presence of anxiety.[10] The EPDS-3A succeeded in identifying about two-thirds of the women who were identified with anxiety disorders. Four of these six studies interpreted results as supporting the use of the total EPDS score to differentiate between women with depression and women with anxiety. Two of the six studies identified a cut-off score for the EPDS-3A that could be used to identify women with different anxiety disorders, Dr. Tobia said.

Although women with depression also have elevated scores on the EPDS-3A, a psychiatric evaluation would distinguish between whether they are experiencing anxiety or depression, he explained. A potential problem with using only the overall EPDS score is the fact that women with anxiety may not have high overall scores and consequently may not be flagged for referral. Reducing the cut-off to generate psychiatric consultations from an overall score of 10 or above to eight or above (and high on the EPDS-3A) may help address that limitation, Dr. Tobia suggested.

There are steps health care professionals can take to overcome defense mechanisms such as suppression among postpartum women experiencing anxiety. One such method is through the use of unconditional positive regard and support for the new mothers. The answer to what this is, and how practitioners can use it, is embedded in the idea of empowerment, Dr. Tobia said. The best ways to empower a patient, he explained, are to:

- Create an unconditional, positive situation.
- Allow for an individual's natural "power" to emanate.
- Put your patients in a position to succeed.
- Empower versus dis-obstruct.

In addition, Dr. Tobia noted that based on Vaughn F. Keller, MFT, and J. Gregory Carroll's E4 model for physician-patient communication,[11] practitioners should keep several things in mind when communicating with patients:

- In the inpatient setting, do not write and listen at the same time if possible.
- Look at the patient.
- Sit or stand so that your head level is approximately even with hers.
- Do not permit physical barriers between you and your patient.

If a patient says nothing is wrong, but her non-verbal cues indicate "yes, something is bothering me," the answer is still yes; probe further. If the health care team members only take the patients verbatim and don't ask further questions, they may miss what might be vital clinical symptoms. If the clinician is looking at the computer, then the patient may not speak as freely. Clinicians may have to decide patient management on the patient's spoken word, said Dr. Tobia.

Effective communication is, therefore, critical, and an emphasis on communication and bedside manners should be part of patient-centered care courses at any medical school, he stressed. Rutgers Robert Wood Johnson Medical School features a strong patient-centered care curriculum, including a course in bedside manners that focuses on gaze (look at the patient equally when talking and listening), facial movements and expressions (face patients directly), head movements (use facilitative nodding when listening), body movements/posture, interpersonal distance, angle of orientation toward the other, interpersonal touch, and voice (speak at a similar speed and volume to the patient's).

A caring doctor-patient relationship has been shown to result in improvements in medical history taking, clinical judgment, accurate diagnoses, and cost-effective prescribing, Dr. Tobia said. Continued education assists in improving all aspects of patient care. This is especially important on the obstetrical service.

# Postpartum Complications: Opportunities for Team Management

Dzhamala Gilmandyar, MD
*Associate Professor of Obstetrics, Gynecology and Reproductive Sciences Rutgers Robert Wood Johnson Medical School*

*One in 10 women who give birth will develop a complication that requires immediate care. Physicians and other health care providers may need to frequently monitor the woman's vital signs over an extended period of time to get a global picture of what may be occurring, especially if a complication is evolving. And, the clinician must be sure to examine the patient before deciding on management. Management should never be based on assumptions of what the most common reason for a particular symptom is—the patient has to have a thorough medical history taken and a targeted examination that addresses the areas of concern.*

Understanding the typical postpartum clinical experience and then monitoring symptoms that infrequently occur after a woman has had a baby can assist in pointing to a more serious condition in the newly delivered patient. Talking to and examining the new mother is essential for clinicians to identify and treat complications that are the most common causes of pregnancy-related death—among them, infection/sepsis and postpartum hemorrhage. These complications are responsible for approximately 14 percent and 11 percent, respectively, of maternal deaths in the United States, according to the Centers for Disease Control and Prevention.[12]

In a postpartum patient, the uterine fundus should be firm and non-tender, and should have decreased in size such that it can be abdominally palpated at or near the umbilicus within 24 hours of delivery. Vaginal discharge consisting of blood, fragments of decidua, and mucus (lochia rubra) will be present on the woman's perineal pad after delivery.

Low-grade fever after delivery is also common, said Dr. Gilmandyar, occurring in about 50 percent to 60 percent of women within the first 24 hours of delivery. However, although the majority of women experience this temperature elevation, health care providers should not automatically give medication to lower the fever without first talking to the patient and then examining her. Temperature elevation can herald a more critical process that is evolving, Dr. Gilmandyar stressed.

One possibility of temperature elevation is **endometritis**. Endometritis, the inflammation of the inner lining of the uterus, occurs in 1 percent to 3 percent of women after vaginal deliveries, and 5 percent to 15 percent after Cesarean deliveries[13]. The etiology of this infection is usually polymicrobial, which is a very important consideration when thinking about the appropriate course of antibiotic treatment before cultures and sensitivities are known, Dr. Gilmandyar noted.

Women are at greater risk of endometritis if they had a Cesarean delivery, are young, had a prolonged ROM (rupture of membranes) prior to the delivery, have a pre-existing vaginal infection, have had multiple vaginal exams, and have maternal diabetes, anemia, or HIV. Symptoms usually include fever, increased white blood cell count, and uterine tenderness, with the tenderness more pronounced at the fundal site, rather than the incision site.

Endometritis is managed through antibiotic treatment, with the most common regimen being clindamycin (900 mg every eight hours) and gentamycin (1.5 mg/kg intravenously every eight hours or 5 mg/kg every 24 hours). This treatment is typically 90 percent to 97 percent effective, Dr. Gilmandyar said. In the case of Group B Strep (GBS) colonization, ampicillin should be added to the regimen, she said. Clinical improvement of the patient's symptoms should be seen within 48 to 72 hours. If symptoms do not improve, the patient should be reevaluated for another possible source of infection. The antibiotic regimen should also be reevaluated as well. Pharmacologic treatment should continue until the patient is fever-free for 24 hours.

About three to seven days after Cesarean deliveries, 3 percent to 13 percent of patients will develop an **infection** that may be related to the incision. Postpartum infection in women who have had a Cesarean delivery is characterized by fever, uterine tenderness, erythema of the incision, and induration around the incision. Risk factors for wound infections include diabetes, chorioamnionitis, steroid use, prolonged ROM, obesity, poor surgical technique, immunosuppression, and low

socioeconomic status. The rate of infection in this group of women has been greatly reduced by the prophylactic use of antibiotics, Dr. Gilmandyar noted. Treatment can include not only antibiotic regimens, but also surgical debriding and packing, if needed. Generally the treatment chosen will be guided by the severity of the infection and the clinical response of the patient.

**Postpartum hemorrhage** (PPH) is a major cause of maternal morbidity, occurring in 1 percent to 5 percent of all deliveries, and is one of the top causes of maternal mortality.[14] Uterine blood flow increases over the course of pregnancy, reaching roughly 600 ml/minute by the time a woman is in her third trimester of pregnancy. As a result, a patient can lose more than a quart of blood every minute at term if there is a significant hemorrhage. And, since there may be no maternal signs until up to 15 percent to 20 percent of the blood volume is lost, a patient can lose a significant amount of blood before exhibiting well-recognized PPH symptoms, Dr. Gilmandyar warned. Symptoms include mild hypotension, peripheral vasoconstriction, and tachycardia (100 to 120 bpm) at between 20 percent and 25 percent blood loss; hypotension (SPB 80 to 100 mmHg), restlessness, oliguria, and tachycardia (>120 bpm) at 25 percent to 35 percent blood loss; and hypotension (SBP <60 mmHg), altered consciousness, and anuria, at blood loss greater than 35 percent.

Risk factors for PPH include retained placenta, labor dystocia (second stage), placenta accreta (placenta abnormally attached to the inside of the uterus), lacerations, hypertensive disorders, and a fetus who is large, such as when the mother has gestational diabetes.[15] Causes may include such factors as uterine atony (when the uterine muscles fail to contract normally after delivery), retained placenta, trauma from birth, and a coagulopathy.

Postpartum hemorrhage that is caused by uterine atony may be the result of an overdistended, fatigued uterus that cannot contract normally, said Dr. Gilmandyar. The first step in this case is to alert the entire obstetrical team in a stat manner and have them on standby if further intervention is necessary. Another part of the initial management approach, especially if the bleeding does not appear to be slowing down, is to quickly transport the patient to the operating room. Once in the operating room, the obstetrical team focuses on:

- Ensuring adequate anesthesia for the patient.
- Establishing appropriate IV access (a larger-gauge IV or two is helpful here).
- Performing a pelvic examination to attempt to identify the source of bleeding.
- Emptying the patient's bladder.
- Checking uterine tone and massaging or administering uterotonics.

If the hemorrhage is caused by retained placenta, the uterus should be manually explored and the retained placental fragments removed. If manual extraction of the placental fragments is not possible, then a suction and curettage must be performed to empty the endometrial cavity. Because the postpartum uterus is much more likely to perforate, ultrasound guidance is useful, Dr. Gilmandyar advised.

Hemorrhages resulting from birth trauma can include lacerations (perineal, vaginal, and cervical), hematomas, and hysterotomy/uterine rupture, while those caused by coagulopathy can be related to maternal conditions or pregnancy-related conditions.

Less-invasive therapies for treating postpartum hemorrhage include uterine massage and uterotonic drugs, such as oxytocin, methylergonovine, carboprost, dinoprostone and misoprostol. More invasive therapies include arterial embolization, uterine compression sutures, uterine artery ligation, and, ultimately, if all other measures fail, hysterectomy.

As an intermediate intervention, a uterine tamponade may be used to help control the hemorrhage. The tamponade may be created using packs or balloons, Dr. Gilmandyar said. The balloon is inserted into the uterus and filled, exerting pressure on the uterine wall until the bleeding stops. Once the tamponade is in place (inflated), it can be left in place for 12 to 24 hours. The balloon can be deflated gradually over several hours, or all at once, depending on the situation.

Uterine artery embolization also can be considered if the patient is hemodynamically stable and interventional radiology is available. The femoral artery is used for access, and gelfoam is used for embolization. This procedure has a success rate of 89 percent to 97 percent, Dr. Gilmandyar said. The gelfoam used is typically reabsorbed by the body within weeks; this procedure is not the same as Uterine Artery Embolization (UAE) for fibroids, which is permanent, she noted.

Cases of postpartum hemorrhage are instances in which a multidisciplinary team must be available for the most consistent and the best outcomes, Dr. Gilmandyar said. This team usually includes the obstetrician, nursing staff, anesthesiologists, surgical assistance, and other health professionals or departments (e.g., blood bank). Protocols and drills, as noted by Dr. Chervenak, have been shown to improve outcomes, and to help reduce not only the time to diagnosis, but also the response times of the health care team for acting on the condition, she said.

# Postpartum Education Opportunities for Active Clinical Intervention

Kathy Mahoney, APN, RNC-OB
*Perinatal Clinical Nurse Specialist*
*Robert Wood Johnson University Hospital*

*Personalizing postpartum education and ensuring that this education is reaching patients and their family is vital in preventing readmissions and helping ensure maternal child safety.*

Whether it regards care of the new mother or the newborn, postpartum education offers a crucial opportunity to put both talking and listening into action as part of active clinical interventions with patients and their families. The ultimate goal of this education is avoiding major complications and ensuring a smooth transition home for the new mother and her baby.

Individualizing and personalizing the message is a key part of postpartum education, Mahoney says. To personalize the message effectively, the patient and her family must be understood from their cultural and social backgrounds, as well as from the community to which they belong.

This step is critical, because each team member who educates the mother and her significant others needs to develop and share the information in a way that is accessible to all the members who need to be reached—the patient, and the persons in her family who may play a role in caring for the new baby or the mom when she returns home. All of this information, says Mahoney, needs to be delivered in a way that is meaningful and useful to the patient and is altered by the feedback the patient and her family give the educator.

A one-size-fits-all message, therefore, will not be effective at ensuring the health of the mother and baby. Information must be able to be updated as new evidence in best practices requires. It must also change with the health care needs of the medical center's regional population and be culturally appropriate for that population.

In addition, Mahoney explains, postpartum education ideally should be delivered one-on-one, carefully following several steps:

- Review the printed word with the patient and her family. Have the information in the language the patient understands.
- Fill out any necessary forms with the patient.
- Sign all documents with the patient.
- Return the educational and reference forms to the patients so that they can review them at home.
- Get copies of the signed documents for the patient's medical record.

Carefully following each of the above steps will help ensure that the goal of complication avoidance is met, since families not only will receive the information vital to maternal and newborn care, but they will be able to share that information effectively with the others who need it, she says.

It is important to explain the following to new parents and their family:

- Where to go for information
- What to do with the information
- Whom to contact with questions
- Whom to contact for problems
- When to be concerned
- Why the information is important
- How to access and share the information

Throughout this process, clinicians, nurses and other health care providers delivering educational messages need to be able to evaluate patient responses to discharge instructions, Mahoney says: Is the patient understanding the important messages and information you are trying to relate? It is critical to help provide guidance to the new parents in teaching them how to take care of this new person.

Health care providers need to give new mothers the tools that will make it easier to identify what is wrong—or may be wrong—with her baby or herself, as well as to empower the women to always tell the provider about problems or concerns they may have. Patients and family members should clearly understand when to call the doctor's office and what to call about, as well the language they need to use when they call (e.g., "I'm very concerned…"). Health care providers, in turn, have the responsibility to be welcoming when patients or family call, and respond to those concerns.

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## The Tara Hansen Foundation

The Tara Hansen Foundation was established in 2012 to honor the life and memory of Tara Hansen, a special education teacher at the West Freehold School in Freehold, N.J., who passed away on March 31, 2011, due to complications from childbirth. Six days earlier, she had given birth to her first child, Brandon Ryan. The foundation is dedicated to the advancement of maternal health awareness and believes expecting parents deserve equal education on the risks associated with the mother as well as the child. In addition, the foundation plans to continue to give back to the school where Tara worked, and to keep Tara's positive spirit and appreciation for life alive. More information about The Tara Hansen Foundation and its efforts can be found online at **www.tarahansenfoundation.com**.

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## References:


**1)** Clark SL, Belfort MA, Dildy GA, Meyers JA. Reducing obstetric litigation through alterations in practice patterns. *Obstet Gynecol* 2008 Dec;112:1279-83.

**2)** Joint Commission. Sentinel Event Alert, Issue 30. Preventing infant death and injury during delivery. July 21, 2004.

**3)** VitalSmarts, American Association of Critical-Care Nurses, American Association of perioperative Registered Nurses. *Silence Kills: The Seven Crucial Conversations for Healthcare*, 2005.

**4)** Joint Commission. Sentinel Event Alert, Issue 40. Behaviors that undermine a culture of safety. July 9, 2008.

**5)** Clark SL, Belfort MA, Dildy GA, Meyers JA. Reducing obstetric litigation through alterations in practice patterns. *Obstet Gynecol* 2008 Dec;112:1279-83.

**6)** Institute of Medicine. *To Err Is Human: Building a Safer Health System*. Washington, DC: The National Academies Press, 1999.

**7)** Grunebaum A, Dudenhausen J, Chervenak F, Skupski D. Reduction of cesarean delivery rates after implementation of a comprehensive patient safety program. *J Perinatal Med* Vol 41, Issue 1, pp51-55, Oct 2012.

**8)** Grunebaum A, Chervenak F, Skupski D. Effect of a comprehensive obstetric patient safety program on compensation payments and sentinel events. *Am J Obstet Gynecol* 2011;204:97-105.

**9)** Paul, et al; *Pediatrics* 2013; http://pediatrics.aappublications.org/content/early/2013/02/26/peds.2012-2147.full.pdf Accessed 5/12/14.

**10)** Matthey S, Valenti B, Souter K, Ross-Hamid C. Comparison of four self-report measures and a generic mood question to screen for anxiety during pregnancy in English-speaking women. *J Affect Disord*. 2013 Feb 2.

**11)** Keller VF, Carroll JG. A new model for patient-physician communication. *Patient Education and Counseling* 1994:23;131-140.

**12)** Centers for Disease Control and Prevention. Pregnancy Mortality Surveillance System. http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html#5 Accessed 5/12/14.

**13)** Smaill FM, Gyte GM. Antibiotic prophylaxis versus no prophylaxis for preventing infection after cesarean section. Cochrane Database Syst Rev. 2010.

**14)** Mousa HA, Alfirevic Z. Treatment for primary post-partum haemorrhage. Cochrane Database Syst Rev 2003; CD003249.

**15)** Sheineret et al. *J Matern Fetal Neonatal Med* 2005; 18:149-54.

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