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P.U.R.E. Communication: A Strategy to Improve Care-Coordination for High Risk Birth

Sheila M. Gephart, BSN, RN¹ and Meghan Cholette, MScN, RN^{1,2}

¹College of Nursing, The University of Arizona, Tucson, Arizona.

²College of Nursing, The University of Arizona and Rouge Valley Health System, Scarborough, Ontario Canada.

Abstract

High-risk birth can be an emotionally-charged and sometimes emergent event that requires a cohesive multidisciplinary team. Communication breakdowns in perinatal emergencies are known to contribute to errors and adverse patient outcomes. One approach to breaching these barriers is the Purposeful, Unambiguous, Respectful, and Effective, P.U.R.E. process. P.U.R.E. is a method of communication that emphasizes coordination and recognizes the contributions of each member of the team. The purpose of this article is to describe how the P.U.R.E. process works and how teamwork strategies, group skills training, and structured communication techniques complement it.

Keywords

Perinatal-neonatal collaboration; P.U.R.E. communication; high risk birth; care-coordination; SBAR

In perinatal care, interdisciplinary teams interact and collaborate to provide the best care to expectant mothers, with the ultimate goal of delivering a healthy baby to a healthy mom. In addition to managing obstetric complications, nurses support patient safety by acting on complications and intercepting errors before they happen.¹⁻³ Conditions such as preterm labor, shoulder dystocia, inadequate prenatal care, maternal co-morbidities, and staffing challenges can impact birth outcomes. Timely, clear, comprehensive and respectful communication is necessary to achieve cohesive teamwork in the perinatal setting.⁴⁻⁶

With the variety of professional backgrounds, (Table 1), and competing professional priorities, engaging in effective communication needed to produce good perinatal outcomes can be challenging. The Joint Commission reports that over half of sentinel events in infants leading to death or severe morbidity cite organizational culture as a root cause of the event.⁷⁻⁸ Communication breakdowns common in near-misses and perinatal emergencies include: 1) a lack of clear and direct expression of concerns, 2) problems stated in ambiguous terms, 3) proposed action not taken, and 4) decisions were delayed, not reached,

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Corresponding Author: 1. Sheila M. Gephart, RN, BSN, PhD candidate The University of Arizona College of Nursing P.O. Box 210203 Tucson, AZ 85721-0203 sgephart@nursing.arizona.edu FAX : 520-626-7891 Phone : 520-303-6568 .

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or not acted on.⁹ From a family's perspective inadequate explanations and the perception of being ignored, rushed, or devalued may drive them to initiate malpractice suits when outcomes are poor.⁹

Anticipating maternal-fetal conditions that require neonatal resuscitation is important to ensure necessary expertise is readily available (Table 2). Perinatal/neonatal units should have clear policies outlining when to call and how to call the neonatal resuscitation team. Risk factors in the mother, the infant and the course of labor that require the resuscitation team to attend delivery are described by several organizations including the Institute for Healthcare Improvement¹⁰ and American Academy of Pediatrics.¹¹ Using standard processes to communicate the need and reason for neonatal resuscitation at a delivery will reduce the likelihood of miscommunication between team members.¹⁰ Additionally, team members function best if they know their environment, anticipate problems and plan for them, delegate the work, use all available information and resources, call for help if needed and maintain professional composure.¹¹

P.U.R.E. COMMUNICATION

One approach to clear communication in the perinatal and neonatal setting is the P.U.R.E. process.¹²⁻¹⁴ P.U.R.E. conversations are purposeful, unambiguous, respectful, and effective. The intent of the P.U.R.E. process is to assure that the message is delivered, understood, received and acted upon by the team.¹² Effective communication is a 2-way reciprocal process but is influenced by preconceived notions, differing perceptions and interpretations, distracting physical environments, cultural differences, and time constraints. P.U.R.E. is a flexible approach that can incorporate well known tools such as SBAR (Situation, Background, Assessment, Recommendation) (See Table 3).¹²⁻¹⁶

Purpose

In the P.U.R.E. process, communication begins by clearly articulating the *purpose* for contacting another team member or requesting additional resources.¹² Purpose is defined as a target, a goal, or a desired end for which an action is undertaken.¹⁷ For example, the perinatal nurse decides on the reason and intended effect of his or her call before contacting the obstetrician or midwife to come to the bedside and review the Electronic Fetal Monitoring (EFM) strip or alerting the neonatal resuscitation team to attend a high-risk birth.¹⁴

Unambiguous

Communication should be clear and unambiguous. Ambiguous words lead to different meanings or interpretations, are hard to understand and lack clarity.¹⁷ Unambiguous words are direct and clear. Providing an SBAR report regarding the EFM tracing and recommended actions are an example of unambiguous communication. Nursing units who frequently communicate may use scripted SBAR reports (verbal or written).¹⁵⁻¹⁶ An example of an SBAR scripting the contact between the perinatal nurse and the neonatal nurse is included in Figure 1.

Respectful

Inherent to *respectful* communication is recognizing the value of the other individual even if they are not acting in a manner that deserves respect. Respect is defined as holding in high regard in such a way that shows honor, proper acceptance and courtesy.¹⁷ Unfortunately, disrespectful behaviors are a significant problem in healthcare. Such behaviors include overt actions (verbal outbursts, threats, intimidation) and covert responses (reluctance to answer questions, return calls, using condescending tones of voice, and impatience).¹⁸

Organizational cultures that allow hierarchal, and intimidating behavior lead to poorly functioning teams and can be detrimental to patient safety.^{7-8,13,18} Actions to reduce disrespectful behavior can include education, holding all members of the team accountable to model respectful and professional behavior, and implementing a just culture that encourages reporting of processes that threaten patient safety. All organizations are now accountable by the Joint Commission to demonstrate that they have a code of conduct that defines behaviors that are acceptable, disruptive or inappropriate.¹⁸ Further, the Joint commission requires leaders to form and implement a process to manage disruptive behaviors.¹⁸

Effective

Effective conversations accomplish a goal that both the sender and receiver of the message understand.¹⁷ They function to produce an effect, achieve a purpose, leave a lasting impression, and allow for preparations to be made to carry out an action.¹⁷ It is important to evaluate the effectiveness of communication on an ongoing basis. This can be done using informal debriefing or formal methods. Areas to evaluate include: adequacy of preparation, accuracy of data given, consistent use of SBAR, clarity of request, if a reasonable response was obtained and if other forms of conflict resolution were needed.¹²⁻¹⁴

TEAMWORK

Team training is one strategy to improve the ability of a team to respond effectively. For the past six years the Rouge Valley Health System's perinatal team has engaged in a comprehensive, accredited program, Managing Obstetrical Risk Efficiently (MOREOB).¹⁹ This international program emphasizes patient safety and team performance while encouraging effective communication and professional development.¹⁹ Components of the program include evidence-based learning modules, skills, emergency drill practice, and evaluation mechanisms. MORE OB includes review of evidence to support practice, critical thinking, written and hands-on testing, and interdisciplinary teamwork.¹⁹ Ultimately, we have found our teams to respond quicker when obstetrical emergencies occur and staff believes the program has positively influenced how we deliver care. Over time, we expect that it will improve our outcomes and lead to fewer litigious claims. MOREOB is undoubtedly a key strategy in how nurses, midwives, and physicians can better prepare, manage, and respond to pregnancy, labor and delivery complications.

Similarly, TeamSTEPPS training, adopted in healthcare from the United States Department of Defense, has been widely adopted to improve teamwork and communication (more information is available on the TeamSTEPPS website).²⁰ Team STEPPS reinforces the non technical skills (both cognitive and interpersonal) required to manage emergencies and resolve conflict.²⁰⁻²¹ A recent study found that when teams were trained using TeamSTEPPS and practiced the skills using simulation, perinatal morbidity decreased by 37% compared to those trained in the classroom without the simulation practice. Simulation practice of non-technical skills appears to be a necessary step to improve team function in perinatal care.²¹

Example of an Effective Team

Collins and colleagues described their team's preparation for a high risk delivery and long-term management of a very ill mother who was transferred to their tertiary hospital from a small, rural hospital.²² At 27 weeks gestation, she had severe pneumonia, Adult Respiratory Distress Syndrome (ARDS), pre-eclampsia, active lupus, coagulation disorders, and renal failure. Due to her severe illness, the care of this mother required the complex interaction of multiple professionals across many disciplines and units. Individuals who cared for this

mother-infant dyad included colleagues from diverse nursing units (including critical care, maternal child, neonatal intensive care, surgery, rehabilitation, case management, wound care and anesthesia), medical specialties (rheumatology, pulmonology, obstetrics, neonatology, nephrology, hematology, anesthesiology), and other disciplines (social work, pastoral care, respiratory care, pharmacy, blood bank, dietary services and administration). When the mother delivered, two separate teams were on-site to care for the mother (anesthesia, obstetrics, pulmonology, rheumatology, and perinatal nursing) and the premature infant (neonatologists, neonatal nurse practitioners, anesthesiologists and neonatal nurses). In this case, the surgical intensive care unit charge nurse actively engaged the perinatal charge nurse to rehearse different delivery scenarios and to anticipate resources before delivery.

Although describing this experience as an exemplar of team competence, Collins and colleagues reflected that the experience required them to acknowledge and respect the unique knowledge and skills that others' possessed. They found that, "The critical care nurses acted like air traffic controllers, making sure that all medical teams and disciplines were in constant communication with the patient, her family and each other- together we learned new respect for the depth of knowledge and skill set each team member possessed" 22, p. 142. Their secret to team competence was a common goal to *care* in such a way that it drove their decision-making and their interaction with each other. 22

Example of an Ineffective Team

Imagine a busy night with an understaffed NICU. The neonatal resuscitation team has been called to attend the birth in room four but wasn't given a reason on the phone. The resuscitation team (RN, RT, and NNP) arrive to find the mother pushing unsuccessfully with maneuvers underway to correct a shoulder dystocia. The Obstetric (OB) technician has turned on the warmer and checked to make sure the equipment was functional before the team arrived. Soon after, the infant is born hypotonic and apneic. After a successful resuscitation, she is observed in the NICU. A formal handoff report including maternal history was not given on admission to the NICU from the perinatal unit. At two hours of age, the infant is tremorous with a normal blood sugar. After a thorough review of the maternal records, the NNP discovers the mother's use of prescription narcotics for chronic back pain during her pregnancy and morphine is prescribed for the infant to reduce the symptoms of narcotic withdrawal. The treatment delay may have been avoided if a clear, concise, and structured handoff procedure had been used (see Figure 2).

CONCLUSION

To improve care and outcomes for high-risk women and newborns, tools including SBAR and P.U.R.E. have been shown initially to support clear and effective communication in clinical practice. MORE^{OB} and TeamSTEPPS are additional training options to enhance team functioning, specifically the non-technical skills to communicate and collaborate in emergencies. Research has shown that a program that emphasizes non-technical skills is more effective when supplemented with simulation practice. More research is needed to identify if structured communication and team training across disciplines and units improve birth outcomes.

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S	Situation Hello my name is _____ I am calling about _____ in room _____ We will need NICU at delivery because of _____
B	Background Significant Maternal History Gestational Age _____ Known anomalies _____ Received antenatal steroids? _____ How many doses? _____ Prenatal complications _____ GBS Status _____ Number of doses of antibiotics prior to birth _____ Planned C/S (Reason) _____ Time _____ Ruptured membranes at _____ Meconium? _____ Prenatal care adequate? _____ Significant lab results _____
A	Assessment (Give your conclusion about the present situation): Cervical assessment (Dilatation) _____ cm Maternal temperature _____ Fetal monitor strip assessment _____
R	Recommendation (Clarify expectations) For example, "We need you to come to room _____ now to see this baby," or "We will go to OR in 15 minutes, please be ready when we call you. "

Figure 1.
NICU notification for high risk delivery

S	Situation (Infant) Transfer from L/D ☐ Operating Room ☐ Mother-baby ☐ Gestation(weeks) _____ Weight (g): _____ Apgar (1") _____ (5") _____ Resuscitation at birth _____ Reason for NICU admission _____ Admitting physician _____ Time called _____
B	Background (Mother) G__ P__ Provider _____ Dad's name _____ Delivery: Time: _____ ☐ SVD ☐ Vacuum ☐ Forceps ☐ C/S Reason for C/S: _____ Ruptured membranes > 18 hours ☐ Yes ☐ No # hrs _____ Maternal fever ☐ Yes ☐ No Highest temperature _____ History of drug abuse ☐ Yes ☐ No Type _____ Last used _____ Received antenatal steroids ☐ Yes ☐ No # doses _____ Time of Last Dose _____ Complications: _____ Pertinent Lab Tests Blood type _____ RH _____ GBS status: ☐ Pos ☐ Neg ☐ Unknown Antibiotics given: ☐ Yes ☐ No # doses _____ time of last dose _____ Hepatitis B status: ☐ Pos ☐ Neg ☐ Unknown HBIG needed ☐ Yes ☐ No HIV: ☐ Pos ☐ Neg ☐ Unknown Actions taken: _____ Rubella: ☐ Immune ☐ Non-immune ☐ Equivocal ☐ Unknown
A	Assessment (Infant) Temp _____ HR _____ Resp _____ Time _____ Needs drug screen ☐ Yes ☐ No Blood sugar _____ Time _____ Apnea ☐ Yes ☐ No Narcan Given ☐ Time _____ Void ☐ Meconium ☐ Comments: _____
R	Recommendations ☐ Observation ☐ Routine admission ☐ Critical admission ☐ Follow-up tests _____ Social services consult needed ☐ Infant feeding plan ☐ breastfeed ☐ bottlefeed Orders received that need to be completed _____

Figure 2.
Handoff with NICU admission

Table 1

Team members involved in high risk birth

Discipline	Specific roles
Medicine	Obstetrician, Anesthesiologist, Neonatologist, Medical residents,
Nursing	Certified Nurse Midwife (CNM), Neonatal Nurse Practitioner (NNP), NICU R.N., Perinatal bedside nurse, Perinatal charge nurse
Others	Respiratory therapist, Obstetric surgical technician, NICU Pharmacist, Physician Assistant (PA-c)

Table 2

Risks Related to the Need for Neonatal Resuscitation (Compiled from 10,11)

Maternal risk	Risks in the Unborn Child	Intrapartum Risk
<ul style="list-style-type: none"> Bleeding in 2nd or 3rd trimester Oligohydramnios, Polyhydramnios Maternal congenital heart disease Isoimmunization with complications Diabetes (Type I, Type II, Gestational) Pre-eclampsia, Eclampsia, Chronic Hypertension Lupus Placenta Previa Other acute medical conditions (e.g. cancer, cardiac, endocrine, infection, etc.) History of active substance abuse Medications (e.g. Magnesium, Meperidine/Morphine, Adrenergic Agonists) within 4 hours of delivery Previous fetal or neonatal death Premature rupture of membranes (> 18 hours before delivery) No prenatal care Age > 35 	<ul style="list-style-type: none"> Multiple gestation Size-dates discrepancy Any known lifethreatening fetal abnormality detected on ultrasound Suspected severe intrauterine growth restriction (IUGR) Premature (< 36 weeks, highest risk with lowest gestation) Immature pulmonary indices Post-dates (> 42 weeks) Congenital anomalies Macrosomia (increased risk for shoulder dystocia, hypoglycemia, birth injuries) Fetal hydrops Decreased fetal movement 	<ul style="list-style-type: none"> Complicated vaginal delivery (forceps, vacuum, breech, arrested, prolonged or dysfunctional labor) Emergency cesarean delivery Non-reassuring fetal heart rate tracing (Category 2 or 3) Shoulder dystocia Prolapsed umbilical cord Meconium stained amniotic fluid Chorioamnionitis Precipitous labor Prolonged labor (> 24 hours) General anesthesia Uterine hyperstimulation with fetal heart changes Abruptio Placenta Significant bleeding in labor

Table 3

Application of P.U.R.E. Approach to Communication

P.U.R.E.	NICU-Perinatal Care-Coordination
P: Purposeful	<ul style="list-style-type: none"> • Perinatal nurse calls neonatal nurse to alert to possibility of high risk delivery. • High risk nursery notification slip is organized in SBAR format (see example-Figure 1). • Obstetric and neonatal teams are aware for the reason for neonatal resuscitation team at delivery.
U: Unambiguous	<ul style="list-style-type: none"> • Perinatal team uses SBAR to alert NICU to delivery and faxes a written form, followed by phone call. • Team members needed at delivery is clear because of standard organizational procedure outlining who is to attend high risk delivery. • 3. Specific requests are clear.
R: Respectful	<ul style="list-style-type: none"> • Zero-tolerance policy for bullying or unprofessional behavior. • Culture of care that stresses importance of reporting disrespectful communication, does not allow retaliation. • Foster relationship-building across units and disciplines (Joint break rooms, social events, set-aside time for team-building).
E: Effective	<ul style="list-style-type: none"> • Team de-briefing (NICU and perinatal staff) when outcomes are less than optimal (15). • Was conflict resolution necessary? • Was the patient outcome good? • Ongoing evaluation of process of communication during high risk events.