Rapid Response for Perinatal Safety

Rapid Response Systems

Purpose of the tool: This tool describes the key perinatal safety elements that support rapid response systems. The key safety elements are presented within the framework of the Comprehensive Unit-based Safety Program (CUSP).

Who should use this tool: Nurses, physicians, midwives, anesthesiology providers, neonatal providers, and other labor and delivery (L&D) unit staff responsible for antepartum, intrapartum, and postpartum care.

How to use this tool: Review the key perinatal safety elements with L&D leadership and relevant unit staff to determine how the elements will be implemented at your hospital. Consider any existing hospital procedures, policies, or processes related to rapid response systems.

Key Perinatal Safety Elements

Standardize When Possible (CUSP Science of Safety)	
Key Perinatal Safety Elements	**Examples**
Establish a unitwide approach for responding to a request for a rapid response for urgent maternity care issues.	A rapid response system includes four components:[1,2] • A mechanism for activating a rapid response. • A clinical team that can rapidly respond to and manage maternity care conditions. • A system for feedback to improve future rapid responses. • An administrative structure to implement, train, and monitor activities. A unitwide approach could be part of a hospital's larger rapid response system, with modifications to be specific to responding to maternity care issues, or could be separate. A unitwide approach means that there is a uniform way that primary staff (or patients or family) request a rapid response from other clinicians. When a request is made, staff individually and collectively know who is responsible for responding and expectations of the response, uniform expectations

Standardize When Possible (CUSP Science of Safety) (continued)	
Key Perinatal Safety Elements	**Examples**
	for documentation of the rapid response event exist, and a system for feedback exists to monitor and improve the approach.
Establish standard criteria for activation of a rapid obstetrical response.	Rapid response activation criteria can be general or specific. General activation criteria: • An emergent or potentially emergent maternity care condition • An event that requires a team response • An acute situation that the physician or nurse or patient or family members believe needs immediate evaluation and response to avoid fetal or maternal harm or further deterioration Specific activation criteria: • Category III fetal heart rate tracing • Bright red vaginal bleeding • Severe abdominal pain • Uterine tachysystole • Inability to complete delivery (e.g., with a shoulder dystocia) • Cord prolapse • Hypotension • Consistently rising blood pressure • Severe headache • Inability to control pain • Seizure Activation can done by anyone—a nurse, maternity care provider, or a patient or family member—who senses that something is not “right” or has a concern that there is a risk for a worsening condition. Note: Coordination with other hospital rapid response or emergency response (i.e., “code” teams) is critical. Patients on perinatal units can experience cardiopulmonary and metabolic events or deterioration that require a response from nonmaternity care rapid responders. Perinatal staff and maternity care rapid responders should have standard criteria for activating other rapid and emergency response teams.
Use standard rapid response kits or carts.	Rapid response kits or carts that are stocked with supplies, equipment, and cognitive aids that might be used for the more common situations that might activate a rapid response.

Create Independent Checks (CUSP Module)	
Key Perinatal Safety Elements	**Examples**
Have multidisciplinary rapid responders who can respond to requests for a rapid response to emergent or potentially emergent maternity care conditions.	Rapid responders offer a strategy for getting a second opinion, additional resources, and another set of "eyes" on the situation to prevent further deterioration and "failure to rescue." Rapid responders may include staff L&D nurses, nurse midwives, obstetricians, and anesthesiology providers. Rapid responders should— • possess specialized maternity care clinical skills, knowledge, and equipment; • be able to assess and manage a maternity patient who has deteriorated physiologically; and • be able to intervene to minimize risk of serious harm and further deterioration.

Learn From Defects (CUSP Module)	
Key Perinatal Safety Elements	**Examples**

Debrief and analyze near misses and adverse events, regardless of whether a rapid response was activated.
 	
Debrief among clinical team after rapid response, regardless of outcome.
	• Unit can decide its approach to debriefing events based on seriousness of event, expertise available, and data monitoring and tracking capabilities.
	  ○ Informal debriefings by clinical team immediately following event using an approach that does not shame or blame individuals. This allows for understanding of what went well, what could have gone better, and what could be done differently next time.
	  ○ Regular forum with a multidisciplinary team can help the unit learn from defects and sensemaking using the following tools:
	  ▪ Discovery form
	  ▪ Root cause analysis
	  ▪ Eindhoven model
	  ▪ Failure mode and effects analysis
	  ▪ Probabilistic risk assessment
	  ▪ Causal tree worksheet
	  ▪ Interdisciplinary case reviews
	• Information learned from debriefing and analysis is used to improve the rapid response system (e.g., activation criteria, process for response).

Learn From Defects (CUSP Module) (continued)	
Key Perinatal Safety Elements	**Examples**
Have a process in place to review severe maternal or neonatal morbidity and mortality events, regardless of whether rapid response was activated.	• Unit can decide its approach to reviewing cases of severe maternal or neonatal morbidity or mortality. This might include an existing medical peer-review process or review by a perinatal safety or quality committee. • A sample process and forms for a committee review are available at the Council on Patient Safety in Women's Health Care, http://www.safehealthcareforeverywoman.org. Select "Get SMM Forms" menu.
Share outcomes or process improvements from the informal (debriefing) and formal analysis with staff to achieve transparency and organizational learning.	Sites can decide how often, how much, and with whom this information will be shared and whether this is specified in a unit policy or is handled more informally.

Simulation (SPPC Program Pillar)	
Key Perinatal Safety Elements	**Examples/customizable components**
Sample Scenarios: • Several scenarios include opportunities for use of a rapid response system	• Many of the sample scenarios available through the Safety Program for Perinatal Care can be used to train teams on rapid response processes. These scenarios reinforce teamwork and communication related to— ○ situational awareness; ○ ability to get additional help quickly and activate a rapid response based on unit-established criteria and processes for activation; ○ communication between primary care team and rapid responders; ○ communication with patient/family; and ○ use of briefings, huddles, and debriefings.

Teamwork Training (TeamSTEPPS®)	
Key Perinatal Safety Elements	**Examples**
Have situational awareness.	Situational awareness refers to all staff caring for the patient— • knowing what the patient's plan is through briefings and team management, • being aware of what is going on and what is likely to happen next, • verifying and checking back on information, and • providing ongoing updates In the context of rapid response, situational awareness may often result in a decision to activate a rapid response.
Use SBAR (**S**ituation, **B**ackground, **A**ssessment, and **R**ecommendation), callouts, huddles, and closed-loop communication techniques.	Use SBAR, callouts, huddles, and closed-loop communication among team members. In the context of a rapid response, these techniques are particularly useful— ○ for communicating a sense of urgency when requesting other unit personnel and provider for help responding to a situation, ○ for communicating changes in maternal or fetal status, ○ when giving and receiving new orders to manage the situation, ○ when briefing new care team members who arrive to support a rapid response, and ○ when regrouping to discuss plan of care if patient fails to respond to initial measures.
Communicate during transitions of care.	Use of transition communication techniques assures a shared mental model of plan of care and perceived risks between shifts, between units, and between care teams within a unit. This includes communication between primary team and rapid responders, or between rapid responders and other unit personnel (e.g., operating room team).

Teamwork Training (TeamSTEPPS®) (continued)	
Key Perinatal Safety Elements	**Examples**
Have high-reliability teams. • Anyone can sound an alarm, request help, or challenge the status quo. • Hierarchy is minimized. • Communication is continuous, valued, and expected.	• Team members protect each other from work overload and place requests or offers for assistance in the context of patient safety. It is expected that assistance will be actively sought and offered. A rapid response system offers a formalized way of requesting assistance. • Team members will advocate for the patient when one person's viewpoint does not coincide with another's. ○ Assert a corrective action in a firm and respectful manner ○ Use CUS language: "I am **c**oncerned. I am **u**ncomfortable. This is a **s**afety issue." ○ Use the Two Challenge rule, repeat the concern, and inquire whether concern has been heard. ○ Use a predetermined "stop the line" phrase. • Team members manage conflict using a constructive positive approach to emphasize "what is right, not who is right": ○ **D:** Describe the specific behavior or situation. ○ **E:** Express how the situation makes you feel or concerns you. ○ **S:** Suggest other alternatives. ○ **C:** Consequences stated in terms of team goals, not punishment.

Patient and Family Engagement (CUSP Module)	
Key Perinatal Safety Elements	**Examples**
Use mechanism for patient activation of a rapid response.	• Units may consider including patient and family member activation criteria for a rapid response in addition to patient- or family-specific instructions for activating, which are explained upon admission or after unit transfers.

Patient and Family Engagement (CUSP Module) (continued)	
Key Perinatal Safety Elements	**Examples**

Communicate with patient and family during episode involving possible maternal or fetal deterioration.	• The patient and family are part of the team.
	  ○ Ensure a shared mental model with patient and family as well as the clinical team.
	  ○ Have training and policies for L&D staff to provide timely, clear information to patient and family to explain what is happening, what needs to happen next, risks, benefits, and processes for obtaining consent.
	  ○ Provide reassurance continuously.

Disclose any unintended outcomes.	Unit-established process for disclosing unintended outcomes. This may include the following: • Prompt, compassionate, and honest communication with the patient and family • Investigation • Ongoing communication with the patient and family • Apology and remediation • System and process improvement • Measurement and evaluation • Education and training

References

1. Devita MA, Bellomo R, Hillman K, et al. Findings of the first consensus conference on medical emergency teams. Crit Care Med. 2006 Sep;34(9):2463-78. PMID: 16878033.

2. Jones DA, DeVita MA, Bellomo R. Rapid-response teams. N Engl J Med. 2011 Jul 14;365(2):139-46. PMID: 21751906.

Appendix

Every effort was made to ensure the accuracy and completeness of these resources. However, the U.S. Department of Health and Human Services makes no warranties regarding errors or omissions and assumes no responsibility or liability for loss or damage resulting from the use of information contained within.

Sample: Obstetrical Rapid Response System Planning Worksheet

This worksheet is designed to provide guidance in establishing an obstetrical rapid response system at your facility.

A. Afferent Components (Response Activation)

The afferent component of a rapid response system involves establishing activation criteria and an activation mechanism.

Activation Criteria

Activation criteria for an obstetrical rapid response should be clearly defined for all staff members, patients, family members, and those who support them during the birthing process (e.g., doulas). Some facilities may choose to use generalized activation criteria, while others may choose to use very specific conditions for activating a rapid response.

Some examples of general activation criteria include—

- An emergent or potentially emergent obstetric condition
- An event that requires a team response
- An acute situation that the provider or nurse or patient or family member believes needs immediate evaluation to avoid fetal or maternal harm

Some examples of specific activation criteria include—

- Category III fetal heart rate tracing
- Bright red vaginal bleeding
- Severe abdominal pain
- Uterine tachysystole
- Inability to complete delivery (e.g., shoulder dystocia)
- Cord prolapse
- Hypotension
- Consistently rising blood pressure (BP) or systolic BP > 180 mm Hg or diastolic BP > 120 mm Hg
- Severe headache
- Inability to control pain
- Seizure
- Mother unresponsive (may also require activation of medical rapid response or emergency response team)

ACTION: Determine criteria for activating a rapid response at your facility.

Activation Mechanism

A mechanism for an individual to activate a rapid response must be established, and all staff must know this mechanism and communicate it to patients and family members at admission. Activation mechanism may differ for staff as compared with patients and family members. Examples of activation mechanism include—

- Calling a specific pager number
- Calling the charge nurse
- Pressing a call button
- Calling the hospital operator

In addition, coordination with other hospital rapid response teams is essential. For example, some situations may require the activation of both an obstetrical rapid response and a neonatal rapid response. Other situations may require anesthesiology support, or a medical emergency (i.e., "code") team response.

ACTION: Determine activation mechanism, and coordination with other hospital rapid response and emergency response teams.

B. Efferent Components (Response Deployment)

The efferent component of a rapid response system includes the timeliness of response, scope, staff types for response, and supplies and equipment.

Timeliness of Response

Service-level expectations for response time should be established. A goal or unstated expectation may be for rapid responders to arrive as quickly as possible, but written service-level expectations help foster a shared mental model of how quickly staff need to respond once a response is activated.

ACTION: Determine service level expectations for timeliness of responding to a rapid response activation.

Scope

Defining the scope and limits of the staff responding to a request for a rapid response is essential. Different models exist. Rapid responders can simply provide role backup and task assistance to the primary maternity care provider and L&D or postpartum nurse, or rapid responders may assume responsibility for directing patient care. The scope and role may vary depending on the unit to which the rapid responders deploy (e.g., antepartum, postpartum, ED, etc.). Limits to the situations rapid responders are qualified to address and interventions they are able to execute should also be articulated as part of the scope of a rapid response. Defining responsible parties for documentation is also part of defining the scope and limits for rapid response staff.

ACTION: Determine the scope and limits for rapid response staff.

Staff Types Responding

The specific types and numbers of rapid responders may vary depending on your facility's size, in-house staff availability, and existing rapid response systems. Use the table below to discuss options with your unit leadership and staff.

Title	Role During a Rapid Response	Method of Contact for Rapid Response
Physician(s)		
Nurse midwife(s)		
L&D staff nurse(s)		
Anesthesiology		
Charge nurse		
L&D technician		
Lab/Blood bank		
Pharmacy		
Other		

Supplies and Equipment

Rapid responses are facilitated by readily available supplies and equipment. Depending on the scope determined and staff types identified for response, identify any supplies and equipment that can be made readily accessible for rapid responders. Identify a standardized location for this equipment, and ensure a process for checking functionality and restocking after use. Determine a process for transporting equipment for when rapid responses are activated outside of L&D.

ACTION: Determine plan for supplies and equipment for use during rapid response.

C. Patient Safety/Process Improvement Component

This component involves education and training for deployment, along with debriefing, monitoring, and feedback that can be used for process improvement.

Education and Training

Prior to going "live" with a rapid response system, staff will need to receive education and training. Training and education should be tailored depending on whether staff are rapid responders, or "users" of the rapid response system. In addition to training current staff, a plan for training new staff and providing refresher training at periodic intervals is also necessary. Lastly, a routine approach for communicating the process for patient/family member rapid response activation should be included as part of the admission process.

ACTION: Develop a rapid response training and education plan for current staff, new staff, and patients/family members.

Debriefing

Debriefing is a crucial part of all rapid responses. Debriefing provides an opportunity for all individuals involved in the incident to reflect, assess, get questions answered, evaluate the process, and make changes to the process if appropriate. It also helps everyone understand why the event occurred and how it could be prevented in the future.

ACTION: Determine the approach rapid responders will use to debrief following a rapid response call, including any documentation requirements, such as completing a rapid response call log.

Monitoring

Monitoring use of a rapid response system with respect to both process and outcome can help with process improvement. Examples of items to monitor:

- Number of rapid response activations
- Reasons for activations
- Timeliness of rapid response
- Nature of assistance provided during response
- Whether a debriefing with primary team occurred
- Action items from debriefings
- Maternal and fetal outcomes in cases where response was activated

ACTION: Determine items and measures to monitor the rapid response system. Determine how these items and measures will be collected, such as with a rapid response call log.

Feedback From Staff and Patients

Solicit feedback from unit staff who are "users" of the rapid response system and unit staff who function in rapid responder roles. It is also important to obtain feedback from patients and families and doulas to give them a chance to offer their opinions about either the availability of a rapid response system to them, or their direct experience with activating it in order to provide recommendations from the patient perspective.

ACTION: Determine how to collect staff and patient feedback about the rapid response system process in place within your facility.

Sample Rapid Response Call Log

Unit activating:	
Call date:	
Call time:	
Arrival time:	

Charge nurse notified: ❑ Yes ❑ No
Nurse manager notified: ❑ Yes ❑ No
Attending M.D. or midwife notified: ❑ Yes ❑ No

Rapid Response Activator Information

Name:
Check one of the following:

❑R.N. ❑Midwife
❑Resident physician ❑Student
❑Attending physician ❑Patient/Family
❑Other _____ ❑Doula

Rapid response R.N.:_____

Rapid response provider (midwife or physician):_____

Maternal Information

Age: G___P___
EGA:
Relevant obstetric history:

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(Check all that apply)

Reason for Call	Diagnostics/Interventions	Outcomes
❑Category II FHR tracing _____ _____ ❑ Category III FHR tracing _____ _____ ❑ Cord prolapse ❑ Shoulder dystocia ❑ Vaginal hemorrhage ❑ BP > 180 mm Hg systolic ❑ BP > 120 mm Hg diastolic ❑ Consistently rising blood pressure ❑ Sudden low blood pressure ❑ SaO_2 < 90% ❑ Uterine tachysystole ❑ Severe abdominal pain ❑ Seizure ❑ Severe headache ❑ Difficult to control pain/agitation ❑ Mother unresponsive ❑ Other (specify): _____ _____	❑Labs drawn (specify) ❑Diagnostic tests (specify): *Interventions:* ❑ Repositioned ❑ Suctioned ❑ Oral/nasal airway ❑ Oxygen (NC/FM/NRB)) ❑ Bag mask ventilation ❑ Nebulized med (specify): ❑ IV access ❑ IV fluid bolus ❑ Blood product ❑ Tocolytic ❑ Methergine ❑ Other medications (specify): ❑ Assisted vaginal delivery (specify): ❑ Expedited c-section delivery ❑ Other intervention (specify):	❑ Vaginal delivery ❑ C-section delivery ❑ No delivery Maternal status: ❑No transfer ❑Transfer to L&D PACU ❑Transfer to antepartum unit ❑Transfer to L&D ❑Transfer to ICU ❑Other_____ Neonatal status: ❑Infant to NICU ❑Infant to newborn nursery ❑Infant in room with mother ❑Infant deceased ❑Mother deceased Other comments:_____ _____ _____ _____

BP = blood pressure; c-section = cesarean section; FHR = fetal heart rate; FM = face mask; ICU = intensive care unit; IV = intravenous; L&D = labor and delivery; NC = nasal canula; NICU = neonatal intensive care unit; NRB = non-rebreather PACU = post-anesthesia care unit; SaO_2 = oxygen saturation

Rapid response team debriefing (day/time):_____

Participants in debriefing:_____

_____

Rapid response team concerns: _____

_____

Action items from debriefing (if applicable): _____

_____

Submit form to [Insert name of Safety Data Coordinator or Quality Manager here].

DO NOT PLACE IN PATIENT CHART.

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