



Using Simulation Training to Enhance Communication During Code Events in the Cardiac Catheterization Lab

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Learner Objectives

1. Identify effective communication styles during code events and how it contributes to patient care.
2. Understand benefits of facilitated simulation process to improve quality indicators.

Strategy and Implementation

The focus was to improve communication among team members. All cath lab staff, cardiologists and cardiac anesthesiologists participated in "crew resource management" (CRM) training offered thru Safer HealthCare. Participation provided the foundation for discussion of concerns related to patient care and effective communication during codes. The cath lab leadership team implemented these process improvements:

- 1) reference document describing specific roles during codes;
- 2) facilitated simulation training sessions utilizing "sim baby";
- 3) identification of the characteristics within the cath lab environment impacting safety, such as angiographic equipment and limited direct access to the patient.

The cath lab team now routinely utilizes the Crew Resource Management process including safety checklists, huddles, hand-offs and de-briefings focusing on effective communication. Code simulation using "Sim Baby" is an innovative strategy for the cath lab team. Strategies expanded to implement closed-loop communication at all times during codes.

Implementation for Practice

Participation in simulated code events in a supported learning environment contributes to safer patient care during actual code events. Closed-loop communication and CRM eliminates barriers to effective communication. Increased staff awareness and accountability improves patient outcomes.

Evaluation

Participants in the simulation codes completed an on-line evaluation survey after each simulation. Questions focused on perceived value of the simulation and how participation in the simulated codes contributed to improved outcomes during actual codes.

Outcome communication tool

Cath Lab Code Algorithm

- > All patients having cath procedure—Pre-cath huddle with Cardiologist, Anesthesiologist, Cath lab team leader to discuss daily anesthetic plans
- > Child in CICU—Pre cath huddle with Cardiologist, Anesthesiologist, Interventist and team leader
- > Arrives in cath lab
 - Placed on monitor/draped
 - Child codes—Cardiologist calls code or rapid response team (RRT)
 - RRT—member person notifies CICU charge RN x 64804
 - CODE—in blue button
- Physician Code Leader
 - Cardiologist—is leader for code
 - Anesthesiologist—leads in managing airway and administering drugs
 - Interventivist & Consultant
 - Surgeon—responds to procedure request
- > Communication between Anesthesiologist and Cardiologist
 - Increased communication regarding treatment of patient in response to hemodynamic changes as a result of planned procedure
 - Early warning signs
 - Isotonic
 - Edema
 - Vital sign changes
 - Breath administration

Roles in the cath lab during RRT

| Cath lab staff | Responsibilities |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surgeon | arrives at vital signs |
| Consultant | arrives with area and PFT/area support arrives, helps in room as needed |
| Member | arrives with PFT & 2119 for RRT or CODE |
| Team | calls for team leader (TL) help |
| Team leader | Team leader or other person assigned <ul style="list-style-type: none">controls & all staff entering cath labthinks area, removes consultant allowing consultant to assist whereassists where to administer drugs |
| PFT | positioned at entrance to CCL, communicates information, TFL |
| Code | arrives where to administer drugs |
| Communicator | positioned at entrance to CCL, communicates information, TFL |
| Non staff | Cath lab staff releases documentation |

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Roles in the cath lab during CODE

| Cath lab staff | Responsibilities |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surgeon | arrives at vital signs |
| Consultant | arrives with area and area support arrives, helps in room as needed |
| Member | press code blue button or area phone to announce CODE or CODE 2096 |
| Team | calls for team leader (TL) help |
| Team leader | Team leader or other person assigned <ul style="list-style-type: none">controls & all staff entering cath labthinks area, removes consultant allowing consultant to assist whereassists where to administer drugs |
| PFT | positioned at entrance to CCL, communicates information, TFL |
| Code | arrives in CCL, enters CCL and delivers to Cardiologist remains as consultant |
| Communicator | arrives in CCL, communicates procedure to (Interventivist) remains as consultant |
| CICU Charge RN | arrives in CCL, communicates procedure to (Interventivist) remains as consultant |
| Interventivist | could be CCL staff or other, discusses CODE, delivers |
| PFT | arrives, removes consultant allowing consultant to assist where |
| CICU Charge RN | arrives, removes consultant allowing consultant to assist where |
| CICU staff | arrives, removes consultant allowing consultant to assist where |
| CV surgeon | arrives, enters CCL, removes consultant allowing consultant to assist where |
| Non staff | set or in pre print as needed |

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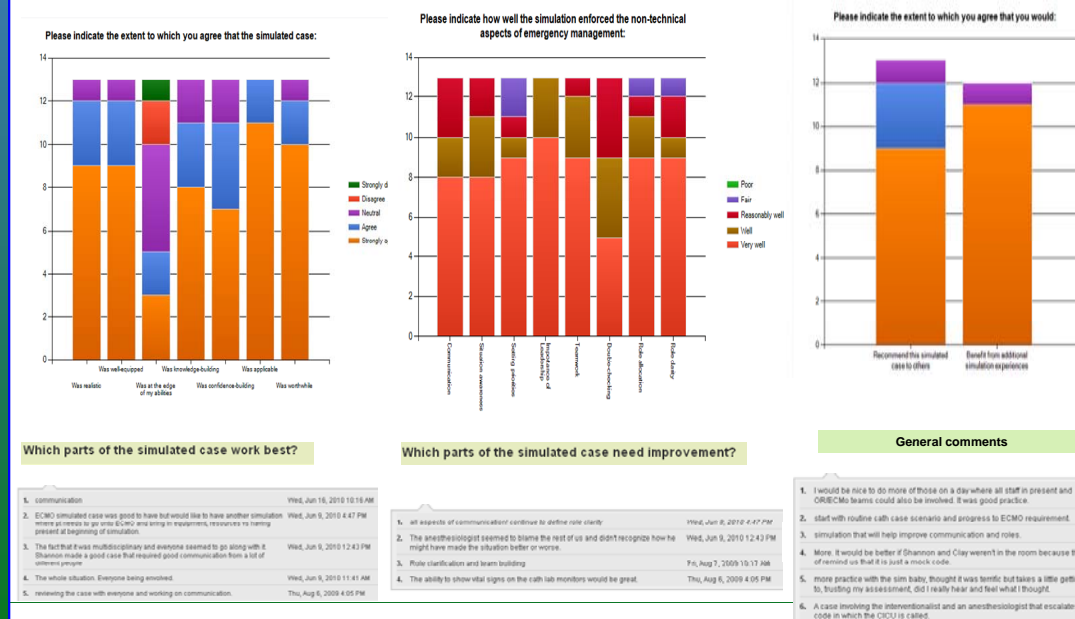
Purpose

- To improve communication among care givers during code events in the cardiac catheterization (cath) lab through participation in facilitated simulation code scenarios.
- Demonstrate how participation in simulation code events will lead to improved patient care outcomes, advance quality of care and enhance collegial nurse-physician relations.

Significance:

The unique environment in the cardiac catheterization lab creates challenges for care givers participating in codes due to lack of role clarity and unclear communication. Delays in response to life threatening emergencies ultimately compromise patient care and optimal treatment outcomes.

Results Online survey results



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