

Introduction / Current State

- Intraoperative emergencies, while rare, require effective communication, preparedness, and rapid response times.
- At LPCHS, perioperative CPR occurs approximately once a month.
- Over time, multiple pathways for intraoperative help were developed at our institution depending on clinical urgency (Figure 1).
- These pathways were not 'official.'
- Feedback from nurses and anesthesiologists revealed that it was difficult to understand which pathway to enact during the urgency.
- These "home-grown" systems were leading to confusion during practical application, resulting in suboptimal patient care.

Current State - Homegrown Pathways for Perioperative Urgencies

1. Call Anesthesia Attending ASCOM 2. If no response, call 1-	9705 (ARC) 3. If no response, call 1-0289 (PARC)		
Staff Emergency			
OR RN push 'staff emergency button' 2. Variable peop Just an 'in-OR' Code	* denotes process defined by Code Committee		
OR RN push 'code blue button' 2. OR personnel, including 211-OR Code*	PACU and Pharmacists arrive		
OR RN push 'code blue button' and call 211, ask for OR code	2. OR, PACU, pharmacy personnel + Core PICU team (PICU attd/fellow, PICU pharm, PICU RN, ANS)		
A 'real code'	(
1. OR RN push 'code blue button' and call 211, ask for code blue	2. Overhead hospital announcement and blast page. Hospital- wide members of the code team arrive		
ECMO code*			
1. OR RN call 211, ask for ECMO code	2. No overhead announcement. Blast page to alert ECMO team		

Figure 1

Causes

- People
 - 0 High staff turnover has led to high-volume, rapid orientation of new staff.
 - Given the low incidence of OR codes, education regarding the 0 current process is difficult to routinize.
 - Surgeons are not PALS certified.

Redesigning a Multidisciplinary Intraoperative

Emergency Response Team

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Causes (cont.)

- Process
 - 0 Multiple pathways - some home-grown, some sponsored by code committee - have made the system very confusing
- Equipment
 - 0 All personnel on the page response system must be able to receive a page via phone
- Technology

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o Code button electronic response inaudible or ineffective

Countermeasures



Results

- Assessment given to all OR staff after education/sims to new process:
- Average score 96% 0

Figure 2

- 100% answered correctly: what is your role in an OR code?
- 100% answered correctly: Do you feel comfortable performing my 0 role in an OR code?
- Reports of subsequent OR codes being run very smoothly





Code team paging list reviewed and updated, roles clarified

- Multidisciplinary team consists of PICU attending, fellow, PICU RN, Pharmacist, and nursing supervisor in addition to perioperative personnel.
- Truncated hospital team is consistent 24/7 to offload multiple anesthesia 0 responsibilities
- Increase pager system reliability with mobile phone paging
- Optimize audible code and staff emergency electronic alarms
- Mock codes with perioperative staff and entire code team
- New dichotomous system easy to teach, easy to remember (Figure 3)

Next Steps

- Monthly OR sims that occur during the day in order to prevent education decay
- Competency assessment for new perioperative employees
- Ongoing educational activities for current perioperative staff with follow-up assessments
- Ongoing evaluation and optimization of code response team
- CV ICU MD has also joined code team

OR code response education plan

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/28-5/13	5/16-5/27	5/30-6/10	6/13-6/24	6/26-7/1
N Huddles, handouts, R aides, Anesthesia nails, surgicalemails fter 5/9	Test code initiations: RN push appropriate buttons and call 211 and 19706. People stationed at care areas to alert would-be responders. 5/16-5/20: REVIVE resuscitation week. Role review.	OR staff comprehensive training (minus outside responders): Planned mock codes daily 4/- mannequin to identify roles and 4/- practice CPR. Preferably once weekly for 2 weeks.	Planned mock codes with outside responders (PICU providers, nurse supervisor, main pharmacy). Preferably once weekly for 2 weeks.	Competency exams throughout perloperative provide PDCA based on prior learning from earlier weeks. Unannounced mock OR code x 2 arranged by Revive team.