Simulated Code Interdisciplinary Team Training (SCITT)

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SCITT

Simulated

Code

Interdisciplinary

Team **T**raining

SCITT Goal

Our goal is to train ***high performing teams*** to efficiently and expertly manage complex and dynamic crisis situations

WHY?

- Baseline Code Team Performance
- Background
- Evolving Culture of Safety in Medicine
- “To Err is Human”, 1999
- Joint Commission, 2005
  - Ineffective communication is a root cause for nearly 66% of *all sentinel events reported*
  - In one perinatal setting 72% of errors leading to serious patient morbidity or mortality were attributed to errors in communication
- American Heart Association, 2010

We know that

…we are more prone to error in a crisis.

…our communication skills deteriorate during a crisis.

…our resuscitation skills deteriorate over time.

…we often fail to adhere to established resuscitation guidelines

…we make errors in rhythm analysis

…delay appropriate defibrillation

…often deliver suboptimal CPR

…….and often ***we are not aware of it***

It all started in the Aviation Industry……

Why Simulation?

- Errors unrecognized
- Team Training: Interdisciplinary/ Interprofessional opportunity
- Mimic intensity of Critical Event: real time, hands on

- Practice cognitive, technical and behavioral skills, all at once… *like in real life*.

Simulated Code Interdisciplinary Team Training (SCITT)

In–Situ Simulated or mock codes

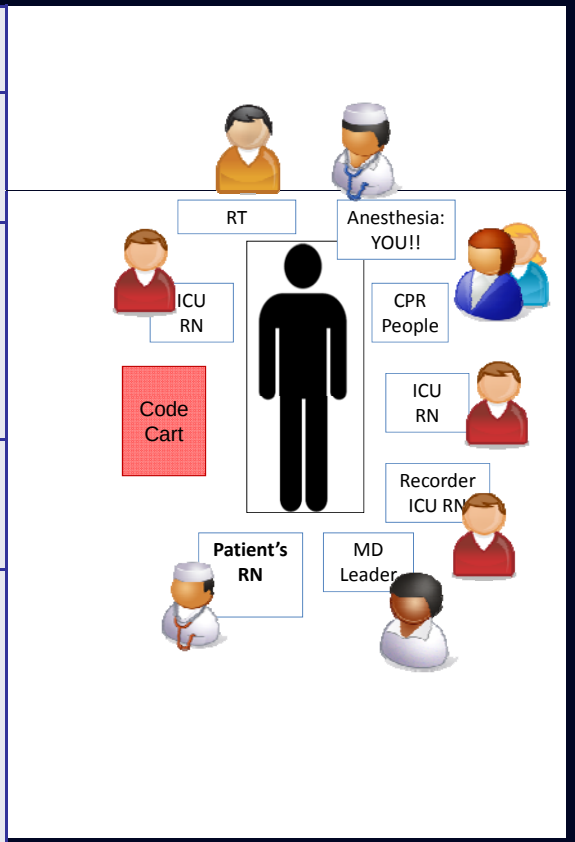
- Surprise!
- Pagers: “MOCK CODE”
- 45 minutes SCITT session
- SimMan Classic Patient Simulator
  - Capabilities
- Various patient locations
- Mandatory

SCITT Team

- Crisis Resource Management (CRM) Debriefer
- ACLS Debriefer
- Simulation operation specialist
- 2 actors for RN first responders

OHSU Code Blue Team

INDIVIDUAL	ROLE	NUMBER
MICU FELLOW MD	Code Leader	15
ANESTHESIOLOGY MD	Secures Airway; Backup to team leader	22
RESPIRATORY THERAPY	Airway	90
ICU RN	Documentation*	50
ICU RN	Defibrillator	
ICU RN	Drugs	



SCITT Tools

CRM evaluation tool

- Clinical Teamwork Scale
- Team evaluation tool
- Likert scale
- Behavioral

Critical Action Checklist

- 3-5 critical actions by role
- Created by SCITT interprofessional committee

Crisis Resource Management (CRM)

Role Responsibility

- Role clarity
- Performance as leader / helper

Communication Strategies

- Directed communication
- Closed-loop communication
- Transparent thinking
- Orient self/ other members

Situational Awareness

- Resource allocation
- Target fixation

Decision Making

- Prioritization

Tools to collect the data-CTS

CTS - Clinical Teamwork Scale™ (Global)

Please note: **Not relevant**- The task was not applicable to the scenario.

Overall	Not Relevant	Unacceptable	Poor			Average			Good			Perfect
1. How would you rate teamwork during this delivery/emergency?	☐	0	1	2	3	4	5	6	7	8	9	10

Communication	Not Relevant	Unacceptable	Poor			Average			Good			Perfect
Overall Communication Rating:	☐	0	1	2	3	4	5	6	7	8	9	10
1. Orient new members (SBAR)	☐	0	1	2	3	4	5	6	7	8	9	10
2. Transparent thinking	☐	0	1	2	3	4	5	6	7	8	9	10
3. Directed communication	☐	0	1	2	3	4	5	6	7	8	9	10
4. Closed loop communication	☐	0	1	2	3	4	5	6	7	8	9	10

Situational Awareness	Not Relevant	Unacceptable	Poor			Average			Good			Perfect
Overall Situational Awareness Rating:	☐	0	1	2	3	4	5	6	7	8	9	10
1. Resource allocation	☐	0	1	2	3	4	5	6	7	8	9	10
2. Target fixation	☐ Yes	☐ No										

Decision Making	Not Relevant	Unacceptable	Poor			Average			Good			Perfect
Overall Decision Making Rating:	☐	0	1	2	3	4	5	6	7	8	9	10
1. Prioritize	☐	0	1	2	3	4	5	6	7	8	9	10

Role Responsibility	Not Relevant	Unacceptable	Poor			Average			Good			Perfect
Overall Role Responsibility (Leader/Helper) Rating:	☐	0	1	2	3	4	5	6	7	8	9	10
1. Role clarity	☐	0	1	2	3	4	5	6	7	8	9	10
2. Perform as a leader/helper	☐	0	1	2	3	4	5	6	7	8	9	10

Other	Not Relevant	Unacceptable	Poor			Average			Good			Perfect
1. Patient friendly	☐	0	1	2	3	4	5	6	7	8	9	10

Additional Notes (Anything regarding individual performance, assertion of position, etc?):

On-Site Reviewer *Print Name* *Sign* *Date*

The CTS- Clinical Teamwork Scale™ was developed by the STORC OB Safety Initiative Team (www.storc.org) through support of the Agency for Healthcare Research and Quality (1 U18 HS015800-02). Guise J-M, Deering S, Kanki B, Osterweil P, Li H, Mori T, Lowe N. STORC OB Safety Initiative: Development and Validation of the Clinical Teamwork Scale to Evaluate Teamwork. Simulation in Healthcare, 3 (4): 217-223, 2008

Clinical Teamwork Scale™ (Global) Descriptive Anchors

TEAMWORK COMPONENT	DESCRIPTIVE ANCHOR
Overall	
1. How would you rate teamwork during this delivery/emergency?	What is your gut feeling about the overall quality of teamwork in this situation/scenario?
Communication	
1. Orient new members (SBAR)	As each new team member joined the scenario, they were oriented to the patient situation through a systematic communication, for example using the SBAR format (full or condensed as appropriate): S (Situation): What is going on with the patient B (Background): Pertinent medical background data A (Assessment): Current problem we are dealing with R (Response): What I/we need you to do
2. Transparent thinking	The team members use "think aloud" communication so that all team members share the same mental model of the situation.
3. Directed communication	Team members assign requests (including orders) either verbally or visually to a specific person.
4. Closed loop communication	Team members acknowledge request and report back to the person issuing an order or requesting a specific action when the task is complete.
Situational Awareness	
1. Situational Awareness	Team members vigilantly survey surroundings to be aware of all human and technological resources available and how to access them quickly.
2. Resource allocation	The team efficiently management human and material (equipment) resources. Example: As new team members appear a specific role or function is assigned.
3. Target fixation	Team members do not exhibit tunnel vision that prevents progress from being made in the management of the entire clinical situation.
Decision Making	
1. Prioritize	Clear, proper identification and ranking of items, actions, and/or issues pertinent to the management of the clinical situation
Role Responsibility (Leader/Helper)	
1. Role clarity	Leaders and helpers were identified among the team members (roles can change)
2. Perform as leader/helper	Effectiveness of performance of team members as leaders and/or helpers (roles can change)
Other	
1. Patient friendly teamwork	Communication and care were mindful of the patient

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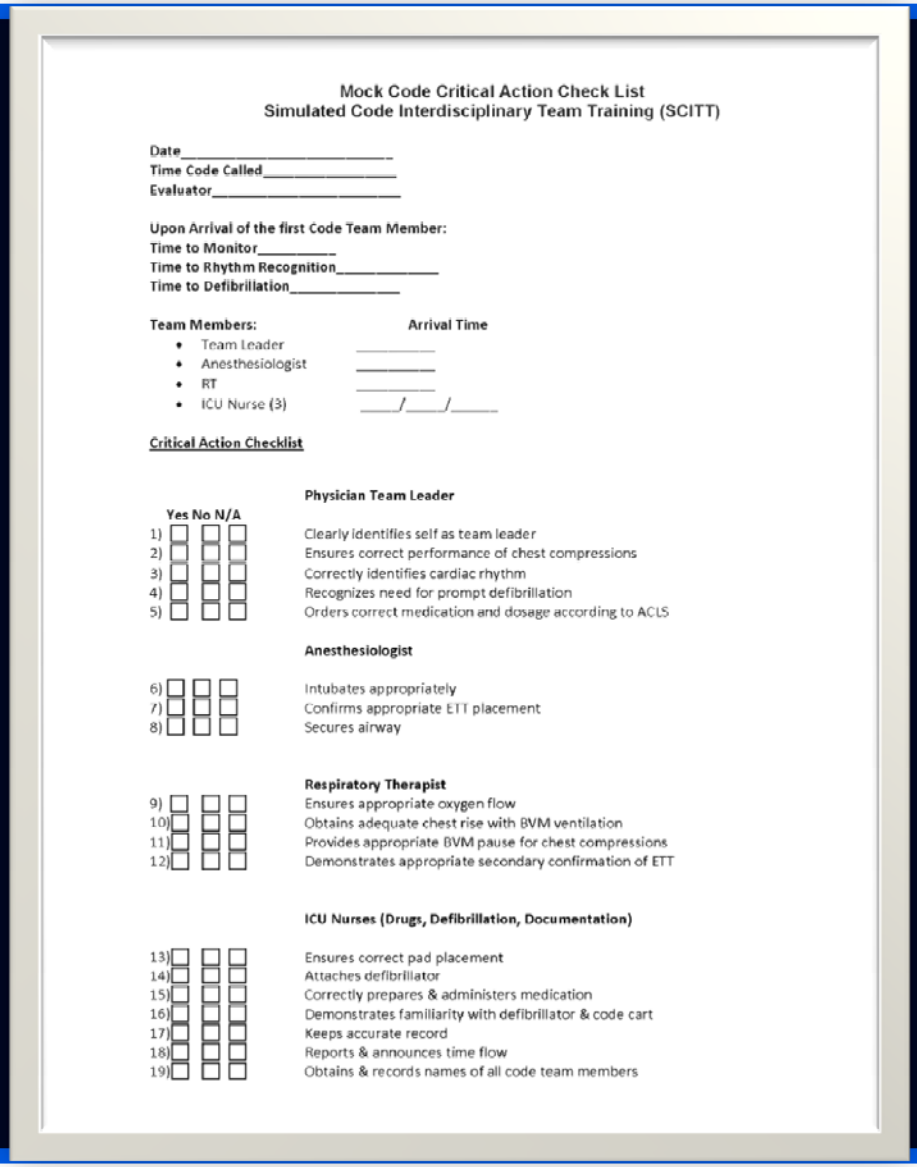
Tools to collect the data-CAC



Mock Code Critical Action Check List
Simulated Code Interdisciplinary Team Training (SCITT)

Date_____
Time Code Called_____
Evaluator_____

Upon Arrival of the first Code Team Member:
Time to Monitor_____
Time to Rhythm Recognition_____
Time to Defibrillation_____

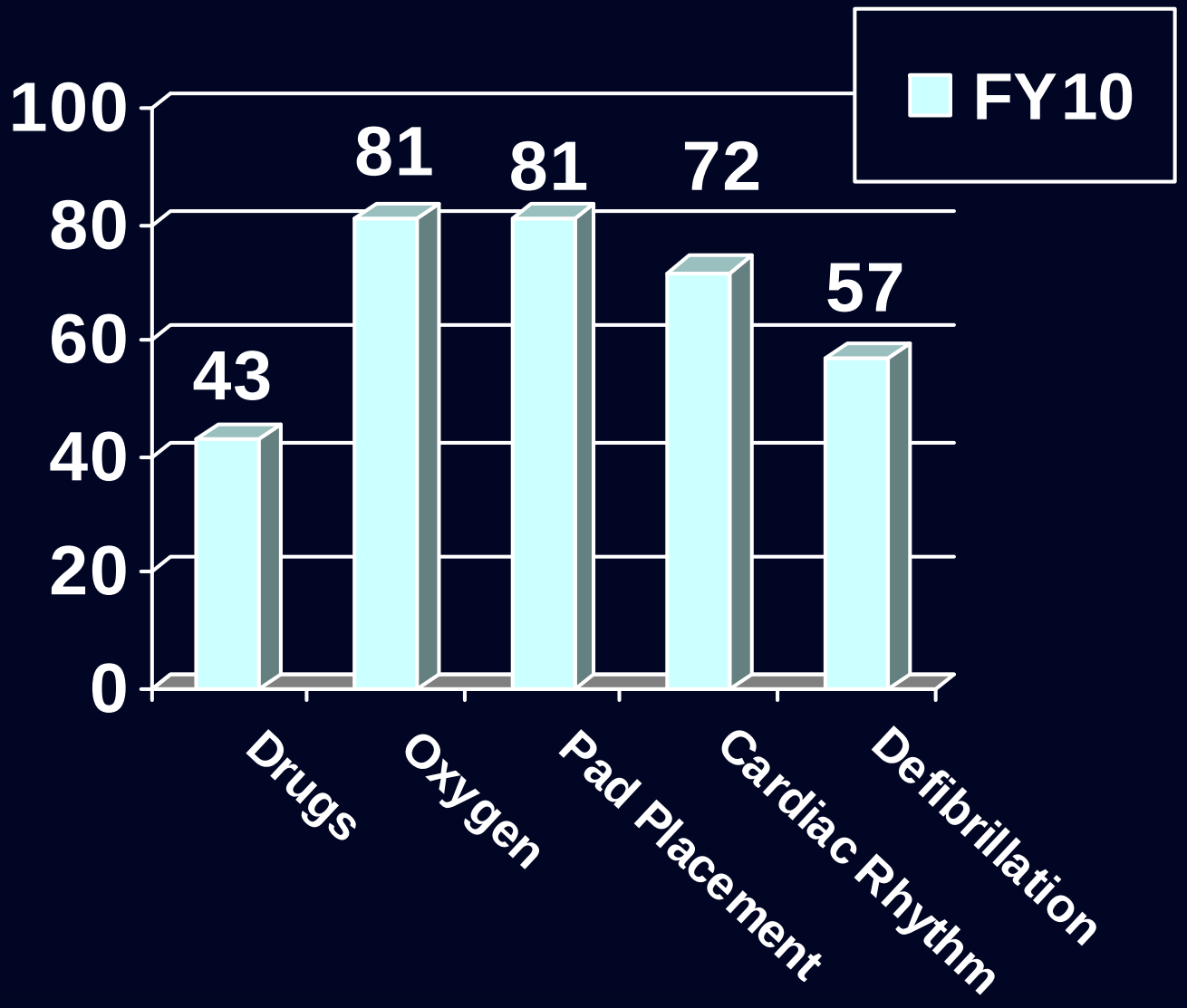
Team Members: Arrival Time

- Team Leader _____
- Anesthesiologist _____
- RT _____
- ICU Nurse (3) ____/____/_____

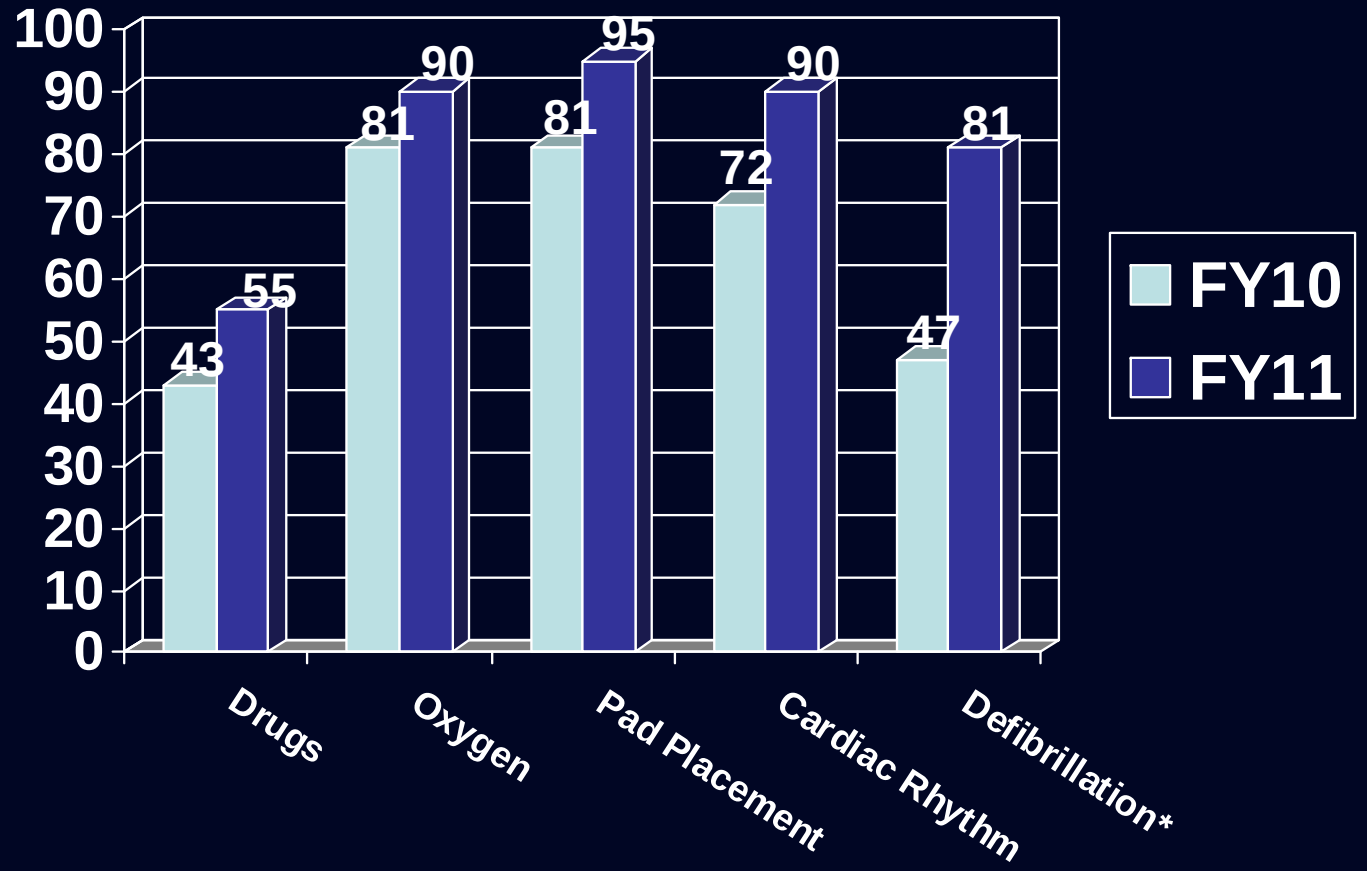
Critical Action Checklist

	Yes	No	N/A	
				Physician Team Leader
1)	☐	☐	☐	Clearly identifies self as team leader
2)	☐	☐	☐	Ensures correct performance of chest compressions
3)	☐	☐	☐	Correctly identifies cardiac rhythm
4)	☐	☐	☐	Recognizes need for prompt defibrillation
5)	☐	☐	☐	Orders correct medication and dosage according to ACLS
				Anesthesiologist
6)	☐	☐	☐	Intubates appropriately
7)	☐	☐	☐	Confirms appropriate ETT placement
8)	☐	☐	☐	Secures airway
				Respiratory Therapist
9)	☐	☐	☐	Ensures appropriate oxygen flow
10)	☐	☐	☐	Obtains adequate chest rise with BVM ventilation
11)	☐	☐	☐	Provides appropriate BVM pause for chest compressions
12)	☐	☐	☐	Demonstrates appropriate secondary confirmation of ETT
				ICU Nurses (Drugs, Defibrillation, Documentation)
13)	☐	☐	☐	Ensures correct pad placement
14)	☐	☐	☐	Attaches defibrillator
15)	☐	☐	☐	Correctly prepares & administers medication
16)	☐	☐	☐	Demonstrates familiarity with defibrillator & code cart
17)	☐	☐	☐	Keeps accurate record
18)	☐	☐	☐	Reports & announces time flow
19)	☐	☐	☐	Obtains & records names of all code team members

Critical Action Checklist, Results, % Done Correctly-Fiscal Year (FY)10



Critical Action Checklist
% Done Correctly-Fiscal Year (FY) 10-11



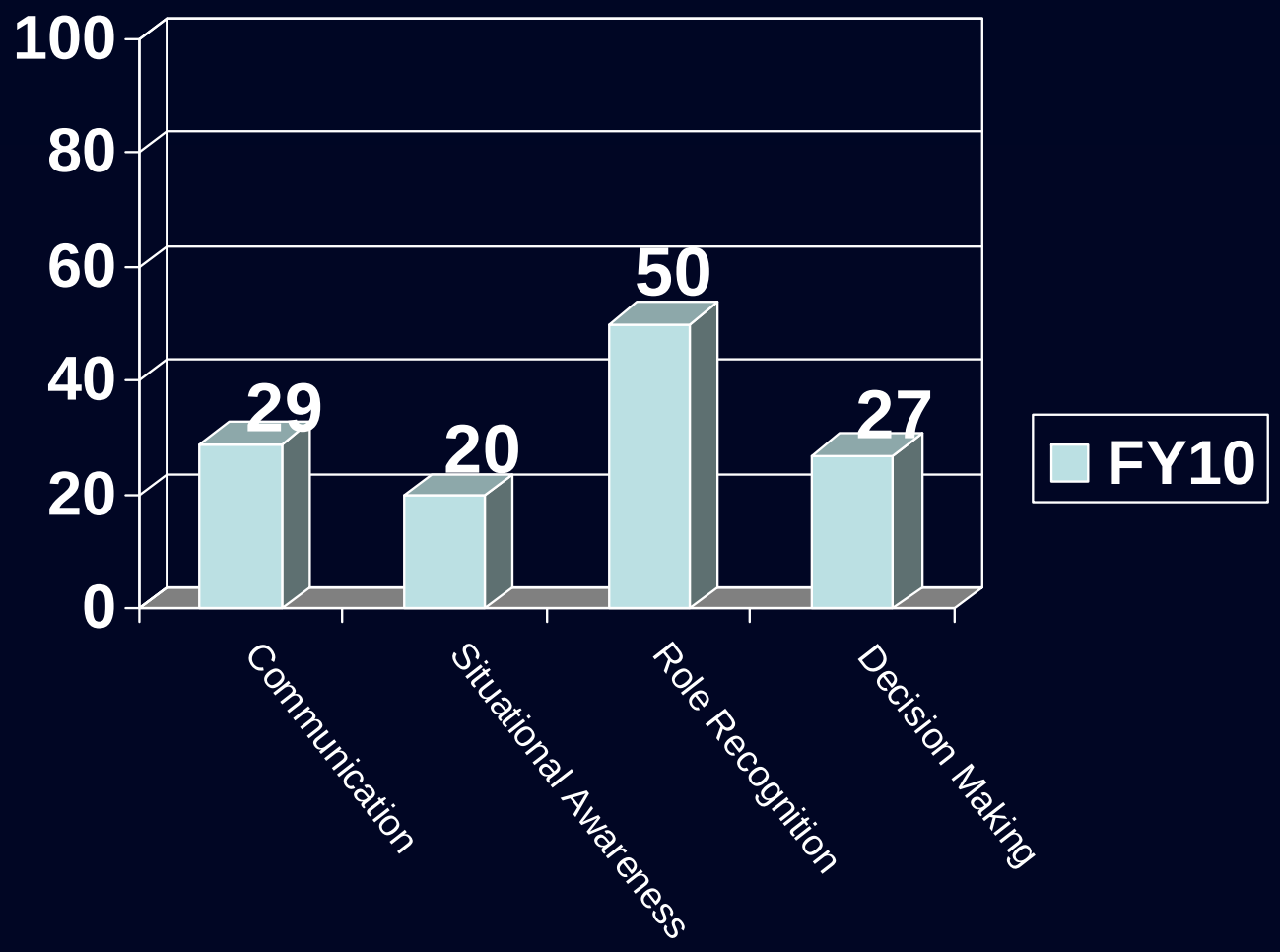
CAC Statistical Significance

Team Leader:

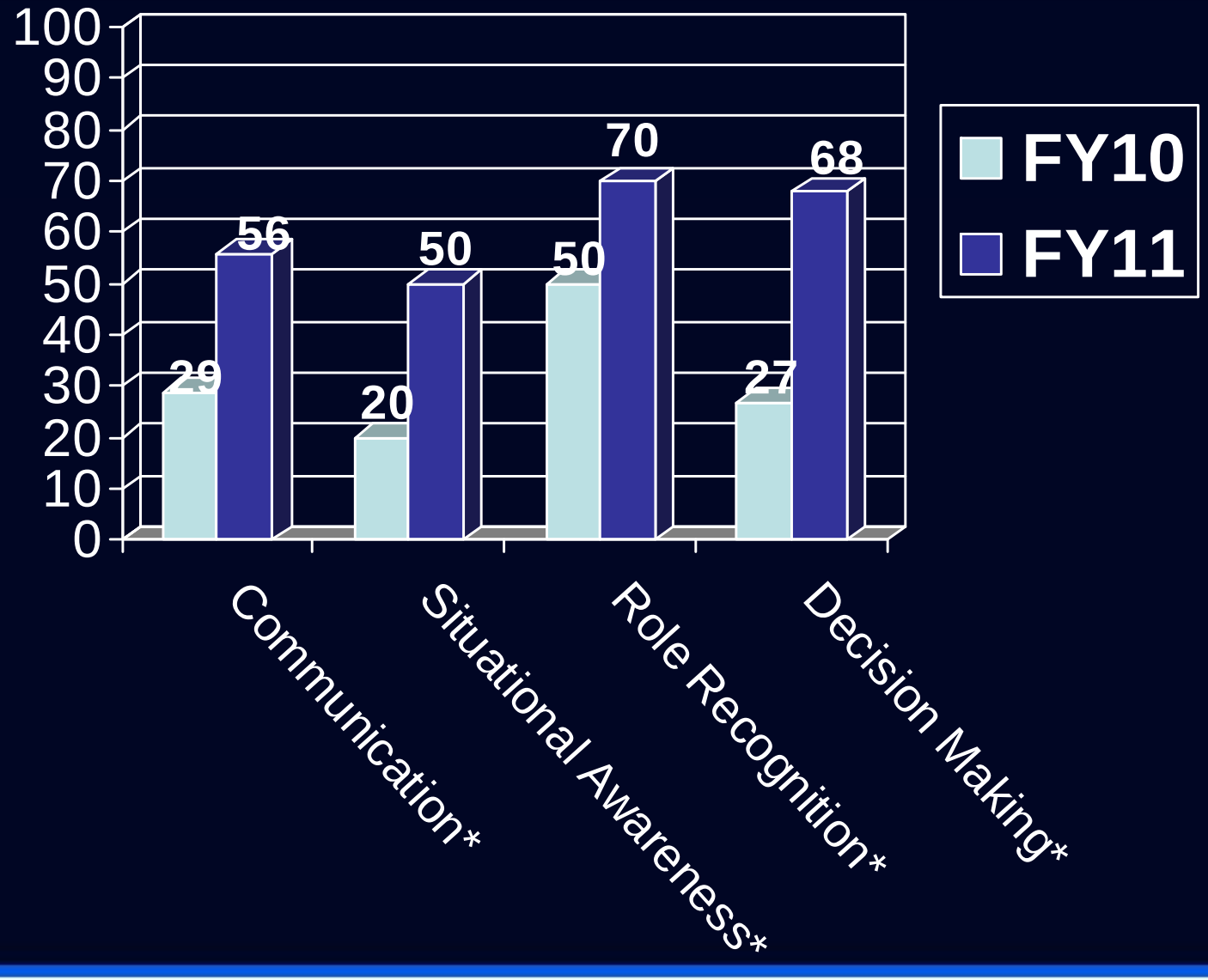
Recognizes need for prompt defibrillation

FY ’10 = 47% FY ’11 = 81% **Pr=0.016**

Clinical Teamwork Scale, Results
% Good or Very Good



Clinical Teamwork Scale, Results
% Good or Very Good



Scale:

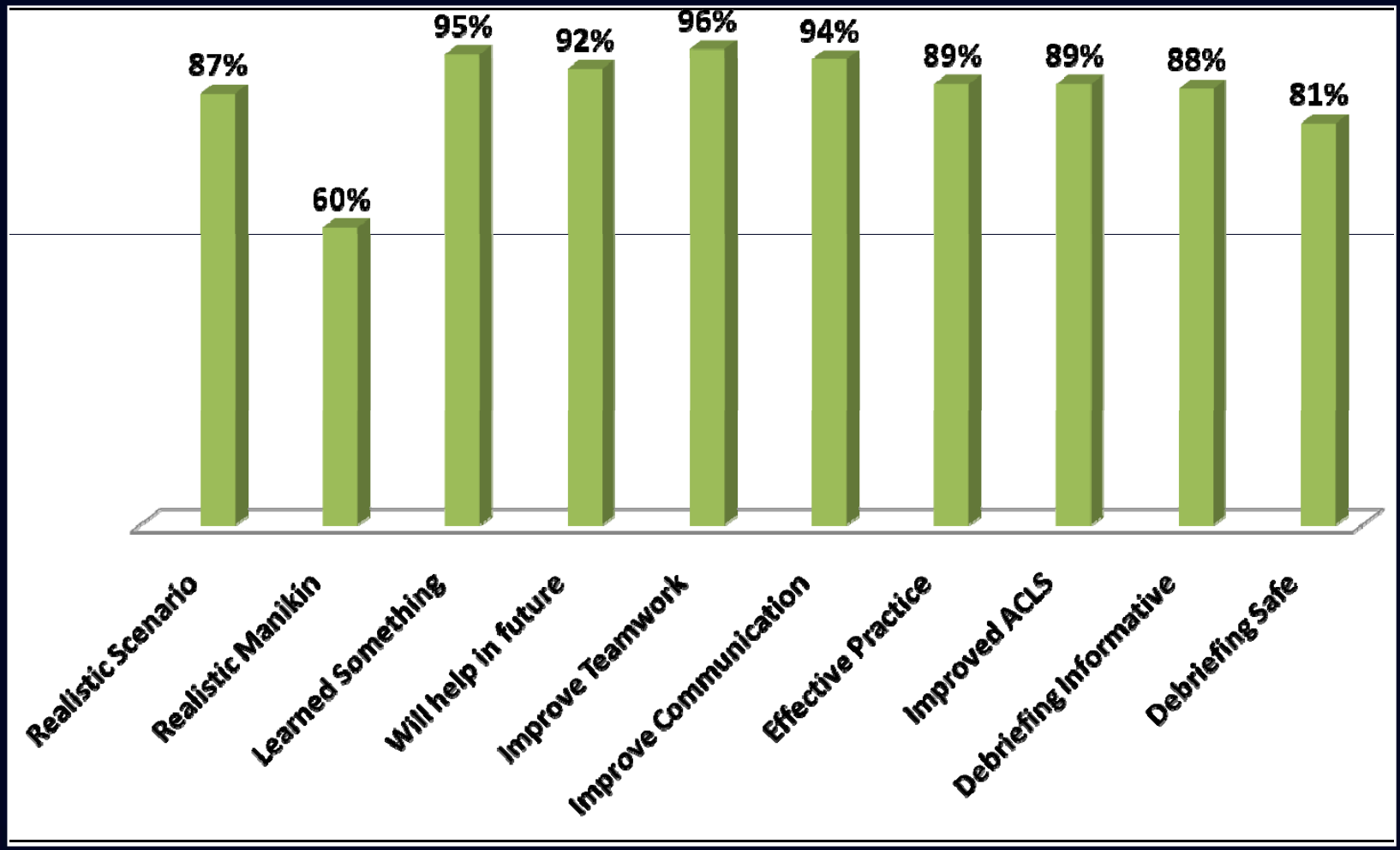
CTS Statistical Significance

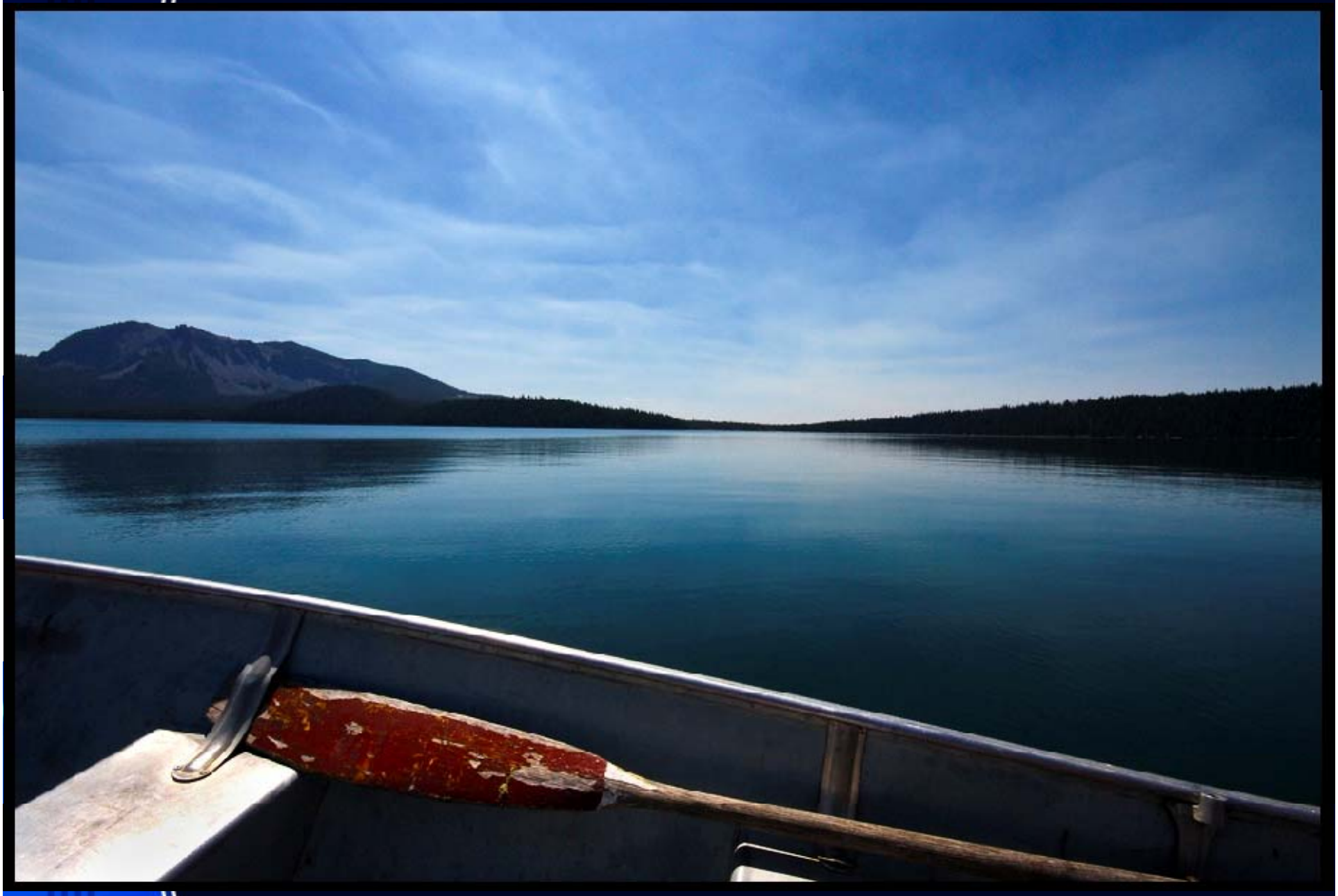
Clinical Teamwork Scale (CTS)	FY10 (baseline)	FY11	Significant?
Overall Teamwork	5.36	6.17	0.08
Overall Communication	4.69	5.8	0.03
Orient new members	3.35	5.23	0.002
Transparent Thinking	3.36	5.94	.0001
Directed Communication	4	5.11	.0624
Closed Loop Communication	4.93	5.74	0.1711
Overall Situational Awareness	4.43	5.69	0.0377
Resource Allocation	4.43	5.86	0.0481
Overall Decision Making	5.79	5.91	0.4252
Prioritize	4.85	5.74	0.1356
Overall Role Responsibility	6	6.61	0.2304
Role clarity	5	6.57	0.0223
Perform as a leader/helper	5.69	6.13	0.3134

Scale:

0	1	2	3	4	5	6	7	8	9	10
Unacceptable	Poor			Average			Good			Perfect

SCITT Evaluation Summary





Next Steps – FY ‘13

- Projected: 36-40 code sessions
- Expand to include pediatrics
- Increase complexity of SCITTs
- Based on data from the first 2 years, focus on “Identified Team Leader” and “Correct Medication Administration”
- Review and revise data collection tools to include information that affects outcomes (e.g. Time to defibrillation)

References

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Questions?