Lessons Learned via Medical Simulation

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Learners

Emergency Medicine (Lifespan)
Family Medicine (Memorial)
Internal Medicine (Lifespan)
Medical Students (Brown)
Military (MA + RI units)
Outpatient / Private Clinicians
Pediatric Emerg. Medicine (HCH)
Pediatrics (HCH)
Neurosurgery (RIH)
Radiology (RIH)
Pediatric ICU (HCH)
Labor and Delivery (W&I;KCH)
W&I Triage (W&I)
Surgical Services (W&I)
National Youth Leadership Forum
## Multidiscipline CRM via Medical Simulation

*Rhode Island Hospital Simulation Center 2007-2009*

<table>
<thead>
<tr>
<th>Area</th>
<th>Location</th>
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<tbody>
<tr>
<td>Surgical Services</td>
<td>Women &amp; Infants Hospital Providence, RI</td>
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<tr>
<td>Labor and Delivery</td>
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<tr>
<td>Triage/ED</td>
<td></td>
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<tr>
<td>Neurosurgery</td>
<td>Rhode Island Hospital Providence, RI</td>
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<tr>
<td>Emergency Department</td>
<td>Kent Community Hospital Warwick, RI</td>
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<tr>
<td>Emergency Department</td>
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<tr>
<td>Pediatric Intensive Care Unit</td>
<td>Hasbro Children’s Hospital Providence, RI</td>
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Integrated Brown CRM Simulation

Pediatric Emergency Medicine Fellowship
Emergency Medicine Residency
Internal Medicine Code Team Training
Pediatric Residency
Topics

The Wish List

Teaching via Medical Simulation

Activating Your Learners
Teaching Goals
Demonstration Video
Scenario Planning
Elements of Debriefing
What this is not…

Educational theory review.

Survey of technology.

Programming manikins.

Discussion of metrics.
The Wish List
The Wish List
Careful what you wish for…
Behind the Curtain

Dedicated control room
Hard-wired AV system with playback
Dedicated technician(s)
Library of images

Fixed revenue stream
Library of Images

Display images on demand
Add color, or drive the case
CT scans
XRays
Ultrasound
Obtaining a Fixed Revenue Stream

Educate your administration on the yield of activated learners.

Demonstrate the engagement of a simulation.

Engage a variety of departments.

Risk Management can be your friend.
Wish List of Infrastructure

Dedicated control room.
Hard-wired AV system with playback.
Dedicated technician(s).
Library of images.

Fixed revenue stream.
Teaching via Medical Simulation
Activated Learners

HIGH ENERGY

alert, energetic, lively,
stimulated, vigorous,
enthused, high team spirit

nervous, farful, anxious,
angry, frustrated, upset
vengeful

PLEASANT A B UNPLEASANT

C

tired, fatigued, weary
exhausted, out of gas

bored, disinterested
annoyed, irritated

LOW ENERGY

fig. 2
Activating Your Learners

Specific learning objectives.

Engage the audience

Provide learner(s) the opportunity to make judgments.

Guide a discussion.
Activated Learners
Activated Learners

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fig. 2
Plan, Prep, and Practice

Assess your audience.

Clarify your teaching goals.

Plan the narrative.
Assess Your Audience

EMS
Nursing
Medical Student
Intern
Resident
Fellow
Attending

(Administrators)
Clarify your teaching goals

Communication skills
History taking
Family Interactions
Teamwork
Procedure skills
Acute care
Plan the narrative

43 year-old male
Unrestrained driver
T-boned, rollover
MVC
Wait! What are the teaching goals?

ATLS algorithms?

Proper primary and secondary surveys?

Pelvic fracture management?

Tertiary decision-making?
Ethical Dilemma

43 year-old male
Unrestrained driver
T-boned, rollover MVC
Awake, talking, and...

Patient’s father is on the phone.

They are Jehovah’s Witnesses.
Open-book pelvic fracture.

Blood pressure: 74/42

Massive blood transfusion requirement.

Jehovah’s Witness.
Plan for Possible Outcomes

Patient agrees to transfusion and surgery.

Patient makes informed refusal of blood products.

Father and son talk by phone until patient expires.
Debriefing Matters

Decompress the participants.

Where the learning occurs.
Debriefing Matters.

Credit their emotional stress.

Acknowledge their complaints ("get the laugh out").

Soften the reaction.
Then:

Transition from reaction to reflection.

Guide the discussion.

Introduce content experts.
Questions thus far?

Build your narrative around the teaching points.

Control for the possible outcomes.

Decompress your participants before proceeding with the discussion.
Demonstration Video
Video Reflections
Scenario Planning

Confront the participants with the decisions you want them to address.

Clarify and limit your teaching points.

Control the flow.
Decide on Decisions

What decisions should the participants face?
Clarify the teaching points.

Syncope + Rapid Afib:

- Trauma
- On-scene care vs transport
- EKG interpretation
- Medications
- Anticoagulation
- Stable/Unstable
- Cardioversion
- Conscious Sedation
Scenario Planning

Limit of 2-3 teaching points.

Consider running multiple cases.
Control the flow.

Cordon off digressing pathways.
(e.g. keep manikin talking to avoid intubation.)

Consider level of training.

Plan for what they might do, not just what they should do.
Transition Points

What information moves a case forward?

History

Exam findings

Vital sign changes

Mental status change

Medication effect
Control the Flow

Auditory Cues
- Pulse-ox
- Phone calls
- Consultants
- Nursing
- Props
- Family members
- Patient/manikin
Control the Flow

Inexorable case progression
Plan, Prep, and Practice.

Walk through scenario.

Choreograph case progression and interruptions.

Resolve losses of momentum.

Decide on end point of case.
Facilitators

Technician

Provide exam findings:
Rash, diaphoresis, pallor, syncope.

Confederate RN

Direct or redirect:
“He just passed out...hey, what’s that rhythm on the monitor?”

Faculty
Beware of Death
Death = Failure

Provide rescue options.

Monitor self esteem.

Avoid loss of teaching credibility.

Prepare to teach about death and dying.
Strategies for Debriefing
Strategies for Debriefing

How long should you wait for a question to be answered?

Leverage silence.

Learn how to stop talking.

Listen and ask.
Strategies for Debriefing

How Long Should You Wait for a Question to be Answered?
Leverage Silence

Let your question hang there.

Avoid the impulse to fill the void.
If you are talking, they are not.

If necessary, repeat the question.

Do not answer your own question.
How to Stop Talking

1. Shut up.

2. Keep shutting up.

3. See Nos. 1 and 2...
How to Stop Talking

Have a list of talking points.

Avoid interrupting a participant. Make notes, if necessary.

If you answer your own questions, no one else will.
Now Listen and Ask

Ask the questions that get them to leap to your conclusions.

1. Know your teaching point.
2. Ask a leading question.
3. Ask them to elaborate on their answer; or get a second opinion.
4. Agree with their insight and analytic skill.
5. Only if necessary, fill in your own viewpoint, and then explain your rationale.
Set them up to succeed.

Give them some thinking time when posing a question.

Repetition helps.

“What did you think of that order........John?”

versus

“Sylvia, that decision that the other doctor made, at the beginning of the case, what was your take on that decision?”
Strategies for Debriefing

How Long Should You Wait for a Question to be Answered?
Teaching without a Manikin

Standard Patient

Resusci-Annie

Task Trainer
Lessons Learned via Medical Simulation

Wish List: Infrastructure

Teaching:
- Clarify your teaching goals.
- Create scenarios to foster discussion.
- Plan, prep, and practice.
- Control the flow.
- Learn to stop talking during the debriefing.