Leadership & Training in Simulation

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Disclosures

• Neither I nor any member of my immediate family has a financial relationship or interest with any proprietary entity producing health care good or services related to the content of this CME activity

• My content will not include discussion/reference of any commercial products or services

• I do not intend to discuss an unapproved/investigative use of commercial products/devices
Objectives

1. Explore the concepts of leadership and why it continues to be a challenge in acute health care.

2. Discuss leadership’s impact on patient care outcomes.

3. Describe educational interventions designed to improve leadership in resuscitation.
The Leadership Quandary

If leadership is so simple, why is it so hard?
The Leadership Quandary

- Leadership is far from “simple”
- Emphasis for resuscitation training primarily focused on teamwork
- In acute health care, we are “teaming”
- While codes happen often in intensive care, code leadership at the individual level is often rare
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Teaming

- “Teamwork on the fly”
- Coordinate, collaborate, and communicate to triage and treat patients without a stable, bounded team

Edmondson AC. Harvard Business Review, 12/2015
The Leadership Quandary

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Leadership in Acute Health Care

- No formal leadership training in undergraduate or graduate medical education
- Physicians perceive their own lack of leadership skills in leading acute care teams
“Lighthouse Leadership”
Importance of non-technical skills in cardiac arrests

Adapted LBDQ (Form XII): LBDQ (initially validated by Kellerman et al.

1. The leader let the team know what was going on and why (through direction and command)
2. The leader demonstrated the use of the unifying concept
3. The leader displayed a positive attitude
4. The leader decided what should be done
5. The leader decided how things should be done
6. The leader assigned group members to tasks
7. The leader made sure that his part in the task was understood by the team members
8. The team leader planned the work to be done
9. The team leader maintained definite standards of performance

* Each item scored using the following scale:
  A = Always (4); B = Very often (3); C = About half the time (2); D = Seldom (1); E = Never (0).

<table>
<thead>
<tr>
<th>Item</th>
<th>Correlation</th>
<th>Probability</th>
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<tbody>
<tr>
<td>Mand</td>
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<td>0.000*</td>
</tr>
<tr>
<td>Goal</td>
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<td>0.013*</td>
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<tr>
<td>Initiating</td>
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<td>0.005*</td>
</tr>
<tr>
<td>Team dy-</td>
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<tr>
<td>Team task</td>
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<td>0.099**</td>
</tr>
<tr>
<td>Follower</td>
<td>0.2619</td>
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<tr>
<td>External</td>
<td>0.3386</td>
<td>0.072**</td>
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<tr>
<td>And ex-</td>
<td>−0.1837</td>
<td>0.219</td>
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Cooper, Wakelam; Resuscitation 1999
Leadership in Acute Health Care

“Teamwork and leadership training have been shown to improve subsequent resuscitation performance in simulation studies and actual clinical performance. As a result, teamwork and leadership skills training should be included in advanced life support courses (Class I, LOE B).”
Strong Leadership is a Patient Safety Imperative

- Inadequate leadership was a contributing factor in more than 50% of sentinel events in acute health care (JCAHO, Jt Comm Perspect, 2006; Parker et al, American Journal of Surgery 2013)

- 9% of reports in Danish Patient Safety Database mentioned poor coordination or leadership in resuscitations (Andersen et al, Resuscitation, 2010)
Preventing infant death and injury during delivery

Root causes identified

In the 47 cases studied, communication issues topped the list of identified root causes (72 percent), with more than one-half of the organizations (55 percent) citing organization culture as a barrier to effective communication and teamwork, i.e., hierarchy and intimidation, failure to function as a team, and failure to follow the chain-of-communication. Other identified root causes

Root causes estimated communication breakdowns and deficient leadership as contributing to 70% of perinatal deaths and injuries.
Leadership Training in Health Care Action Teams: A Systematic Review

Elizabeth D. Rosenman, MD, Jamie R. Shandro, MD, MPH, Jonathan S. Ilgen, MD, MCR, Amy L. Harper, MLIS, and Rosemarie Fernandez, MD

Academic Medicine, Vol. 89, No. 9 / September 2014

Purpose
To identify and describe the design, implementation, and evidence of effectiveness of leadership training interventions for health care action (HCA) teams, defined as interdisciplinary teams whose members coordinate their actions in time-pressured, unstable situations.

Conclusions
Leadership training targeting HCA teams has become more prevalent. Determining best practices in leadership training is confounded by variability in leadership definitions, absence of supporting frameworks, and a paucity of robust assessments.
Leadership Tools

A Systematic Review of Tools Used to Assess Team Leadership in Health Care Action Teams

Elizabeth D. Rosenman, MD, Jonathan S. Ilgen, MD, MCR, Jamie R. Shandro, MD, MPH, Amy L. Harper, MLIS, and Rosemarie Fernandez, MD

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Purpose
To summarize the characteristics of tools used to assess leadership in health care action (HCA) teams. HCA teams are interdisciplinary teams performing complex, critical tasks under high-pressure conditions.
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Conclusions

Leadership assessment tools applied to HCA teams are heterogeneous in content and application. Comparisons between tools are limited by study variability. A systematic approach to team leadership tool development, evaluation, and implementation will strengthen understanding of this important competency.
Summary of the Challenge

- Leadership is hard!!!
- Physicians perceive their own lack of leadership skills
- AHA & NRP highlight the importance of leadership training
- Strong leadership leads to better adherence of algorithms and improves team performance
- Deficient leadership contributes to patient safety events and poor patient outcomes
- No consensus exists for leadership definitions or leadership assessment tools
My Mother Always Said...

- If you aren’t part of the solution, you are part of the problem
- If you are not helping to make it right, stop complaining about it being wrong
- Complaining about a problem without proposing a solution is called whining (Teddy Roosevelt)
Framing Leadership Training

- Leadership and leader qualities are teachable  
  (Cooper & Wakelam, Resuscitation 1999; Cooper, Resuscitation 2001; Thomas et al, J Perinatol 2007; Hunziker et al, Crit Care Med 2010)

- Control the controllable

- Impacts patient outcomes
Leadership Training Strategies

- Situational Leadership
- The Arc of Resuscitation
- Leadership while teaming
- Curriculum design

**Theme = Focus on individual performance**
Contrary to popular belief...
Situational Leadership

Leadership Training Strategies
Situational Leadership

Delegating/Distributed

• Routine/common clinical experience
• Experienced team
• Minimal time pressure

Directive/Decisive

• Novel situation
• Inexperienced team
• Significant time pressure
The Arc of Resuscitation

Leadership Training Strategies
The Arc of Resuscitation

- Team Pre-Briefing
- Initiation of care
- Action Processes
- Resolution
- Team Debriefing
The Arc of Resuscitation

Team Pre-Briefing

- Assemble team
- Identify self as leader
- Gather pt info
- Learn individual and team limitations
- Identify, delegate roles

- Workload management
- Define patient care goals
- Determine probable upcoming tasks
- Discuss contingency plans
- Set expectation for information/concern reporting
The Arc of Resuscitation

Initiation of Care

- Determine patient status
- Prioritize patient needs
- Anticipate patient needs

- Ensure delegated tasks initiated
- Maintain performance standards
The Arc of Resuscitation

**Action Processes**

- Prioritize information and patient needs
- Interpret and integrate clinical information into planning
- Review pt information to ensure accuracy and prevent cognitive bias
- Create shared mental model by communicating findings, observations, changes in pt condition
- Clinical decision making
- Iterative assessment and plans
- Maintain situational awareness and manage workload
- Monitor team performance and maintain standards
- Communicate with team and family
- Coach and support team members
The Arc of Resuscitation

Resolution

- Discuss patient status and plan with receiving team and family
- Determine timely interventions, studies, consultations
- Monitor for fatigue and emotional distress of self and others
- Ensure team has same shared mental model of resuscitation events
The Arc of Resuscitation

Team Debriefing

- Determine time/place for debrief
- Facilitate review of events and rationale for decision making and facilitate understanding

- Facilitate discussion of strengths and weaknesses of team & individuals
- Facilitate identification of solutions to weaknesses and errors
Prior Experience As A Resuscitation Leader Does NOT Make You A More Effective Leader!

- Experience ≠ Expertise
- Accurate feedback is necessary to develop skills.
- The trouble is that most leaders don’t ask and team members fear giving it!
- Feedback must become standard of care
Leadership While Teaming

Leadership Training Strategies
Effective “Teaming”

LEADERS NEED TO:

1. Overcome old frames

"Effective Teaming" + "Overcome old frames" = "Optimal Care"
Effective “Teaming”

LEADERS NEED TO:

1. **Reframe** the work for others
Effective “Teaming”

LEADERS NEED TO:

2. Make it safe
Effective “Teaming”

LEADERS NEED TO:

2. Make it safe
Effective “Teaming”

LEADERS NEED TO:

3. **Create** and **Use** Facilitating Structures

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**Delivery Room Checklist for VLBW resuscitations**

Version date: June 8, 2017

**BEFORE DELIVERY**

**Thermoregulation (for infants less than 1500g)**
- Gel mattress activated and in place for EFW < 1500g
- Overhead warmer on and servo-temperature set at 37°C
- Room temperature set at 77°F
- NeoWrap and plastic wrap for the head laid out on the bed

**Respiratory Management (for infants <32 weeks)**
- NeoPuff set at a PIP of 20 and PEEP of 5
- RFM (Respiratory Function Monitor) probe is in-line and recording is started
- Appropriately sized preemie mask on the NeoPuff
- Oxygen blender set at 30%
- Review indications for intubation
- Check flow-inflating bag to ensure no malfunction

**Monitoring**
- Video recording activated
- Appropriately sized EKG leads available

**Clinical Condition**
- Reviewed the pertinent perinatal history
- Discuss any specific concerns based on history
- Establish clear roles and responsibilities and review role specific cards
- Is this baby a candidate for delayed cord clamping?
- Are there any clinical indications to deviate from routine NRP?
Curriculum Design

Leadership Training Strategies
Curriculum Design

- Focus on one phase of leadership at a time
- Frequent sessions to reinforce important behaviors, skills, processes
- Rapid cycle, deliberate practice
- Explicit leadership exercises
# Simulation Exercises for Each Resuscitation Phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning</strong></td>
<td>• Pre-briefing before an anticipated difficult delivery (ELBW, congenital anomaly, palliative care)</td>
</tr>
<tr>
<td></td>
<td>• Pre-briefing before sick infant arrives to NICU via transport team</td>
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<tr>
<td></td>
<td>• Pre-briefing prior to anticipated further clinical decompensation of an unstable neonate</td>
</tr>
<tr>
<td><strong>Initiation</strong></td>
<td>• Initiate resuscitative efforts in the delivery room for a neonate previously felt to be non-viable</td>
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<tr>
<td></td>
<td>• Determine tasks and priorities for diagnosis and management of a newly unstable neonate</td>
</tr>
<tr>
<td><strong>Action Processes</strong></td>
<td>• Coaching and coordination of CPR using NRP algorithm</td>
</tr>
<tr>
<td></td>
<td>• Coaching and coordination of cardioversion/defibrillation for unstable ventricular tachycardia</td>
</tr>
<tr>
<td></td>
<td>• Management of critical airway when intubation is unsuccessful</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>• Abort resuscitative efforts for an asystolic neonate</td>
</tr>
<tr>
<td></td>
<td>• Transfer care of unstable patient from delivery to admitting team</td>
</tr>
<tr>
<td></td>
<td>• Develop management action plan once sick patient stabilized</td>
</tr>
<tr>
<td><strong>Team Debriefing</strong></td>
<td>• Lead team debriefing after unexpected patient death</td>
</tr>
<tr>
<td></td>
<td>• Lead team debriefing after successful resuscitation of ELBW infant</td>
</tr>
<tr>
<td></td>
<td>• Lead team debriefing where both team and individual performance was poor</td>
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Curriculum Design

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Rapid Cycle, Deliberate Practice

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- Explicit leadership exercises
Explicit Leadership Exercises

- Sensory deprivation exercises enhance closed loop communication, trust, mutual respect, crowd control, peer coaching
Explicit Leadership Exercises

- "Lighthouse Leadership"
Be the kind of leader that you would follow.