Teamwork in Emergency Medicine

Fernandez, R. (PI), Kozlowski, S. W. J. (Co-I) et al. *Improving patient safety through simulation research*. Agency for Healthcare Research and Quality (HS20295). June 2011 to September 2015. [$1,050,000 total costs].

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This multidisciplinary research team is collaborating to bring the science of team effectiveness to emergency medicine.

Our project group is developing an infrastructure to create “synthetic” experiences by designing event-based scenarios, behavioral measures, and video data capture so the patient simulator at UW can serve as an experimental platform to research team processes and effectiveness.

We are investigating the effects of team interventions (team training & leadership) on team processes and performance effectiveness with a high level of realism.
Scenarios; Process & Performance Metrics: Get Developed and Validated

**Event 1**
Diagnosis

- **Begin (E1)**
  - Team enters room

- **O2 reaches 85%**

- **OR**
  - O2 below 85% for 1 min.

  - Prompt intubation

**Event 2**
Intubation/Stabilization

- **End (E1)/Begin (E2)**
  - O2 ≤ 85% → Intubate

  - Intubation complete/
    Consult call made

  - OR

  - No call within 1 min.

  - Intubation complete/
    Prompt consult call

**Event 3**
Arrest

- **End (E2)/Begin (E3)**
  - V-Fib rhythm → Resuscitate

  - End (E3)

  - Sinus rhythm established

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Scenario Event Sequence
Team Process Taxonomy

**Planning/Transition Processes**
- Mission Analysis
- Goal Specification via Role Fulfillment
- Strategy Formulation & Planning

**Action Processes**
- Team Monitoring and Backup Behavior
- Coordination
- Systems Monitoring

**Interpersonal Processes**
- Team Leadership Behaviors

Diagram: Time flow from Planning/Transition to Action to Planning/Transition to Action to Interpersonal.
Theory and Research


Following medical convention, senior authors Kozlowski & Chao appear last.