

# 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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#### Teamwork in Emergency Medical Teams

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

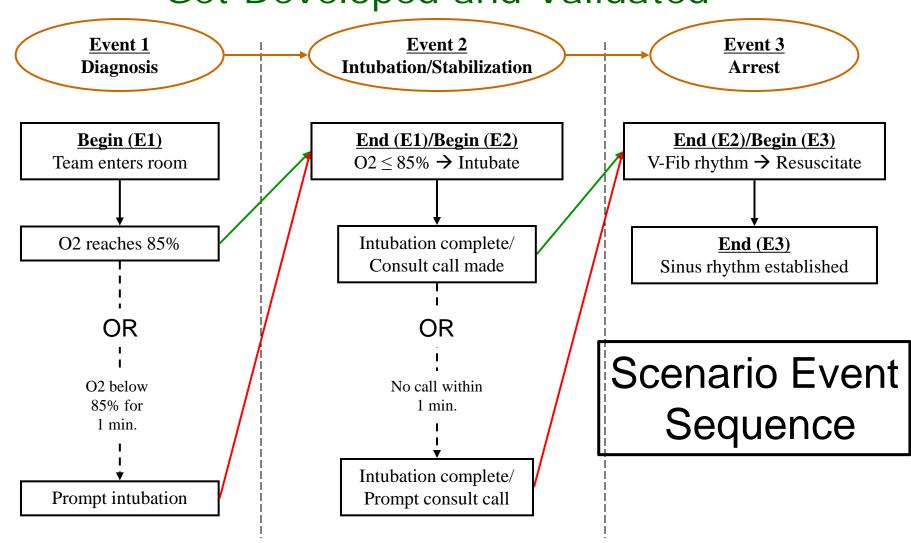
Our project group is developing an infrastructure to create "synthetic" experiences by designing event-based scenarios, behavioral measures, and video data capture so the patient simulator at UW can serve as an experimental platform to research team processes and effectiveness

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



## Team Process Taxonomy

#### Planning/Transition Processes

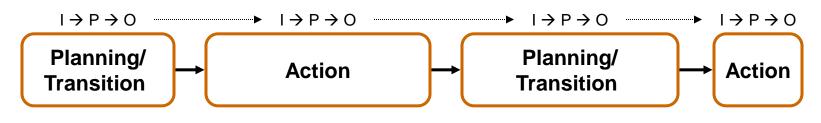
- Mission Analysis
- Goal Specification via Role Fulfillment
- Strategy Formulation & Planning

#### Action Processes

- Team Monitoring and Backup Behavior
- Coordination
- Systems Monitoring

#### Interpersonal Processes

 Team Leadership Behaviors



Time

#### Interpersonal

### Theory and Research

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- Bell, B. S., & Kozlowski, S. W. J. (2011). Collective failure: The emergence, consequences, and management of errors in teams. In D. A. Hoffman & M. Frese (Eds.), *Errors in organizations* (pp. 113-141). New York, NY: Routledge Academic.
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- Fernandez, R., Pearce, M., Grand, J.A., Rench, T.A., Jones, K.A., Chao, G.T., & Kozlowski, S.W.J. (2013). Evaluation of a computer-based educational intervention to improve medical teamwork and performance during simulated patient resuscitations. *Critical Care Medicine*, *11*, 2551-2562.

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

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- Grand, J. A., & Kozlowski, S. W. J. (2013). Eight basic principles for adaptability training in synthetic learning environments. In C. Best, G. Galanis, J. Kerry, & R. Sottilare (Eds.), *Fundamental issues in defense training and simulation* (pp. 97-113). Surrey, UK: Ashgate.
- Grand, J.A., Pearce, M., Rench, T., Fernandez, R., Chao, G.T., & Kozlowski, S.W.J. (2013). Going DEEP: Guidelines for building simulation-based team assessments. *BMJ Quality & Safety*, 22(5), 436-448.