

Optimizing Outcomes with Immersive Technology | 17 August

# Distributed, Fully-Immersive VR Medical Simulation Training for Team-Based Care

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**iFEST**  
#ADLiFE  
ST





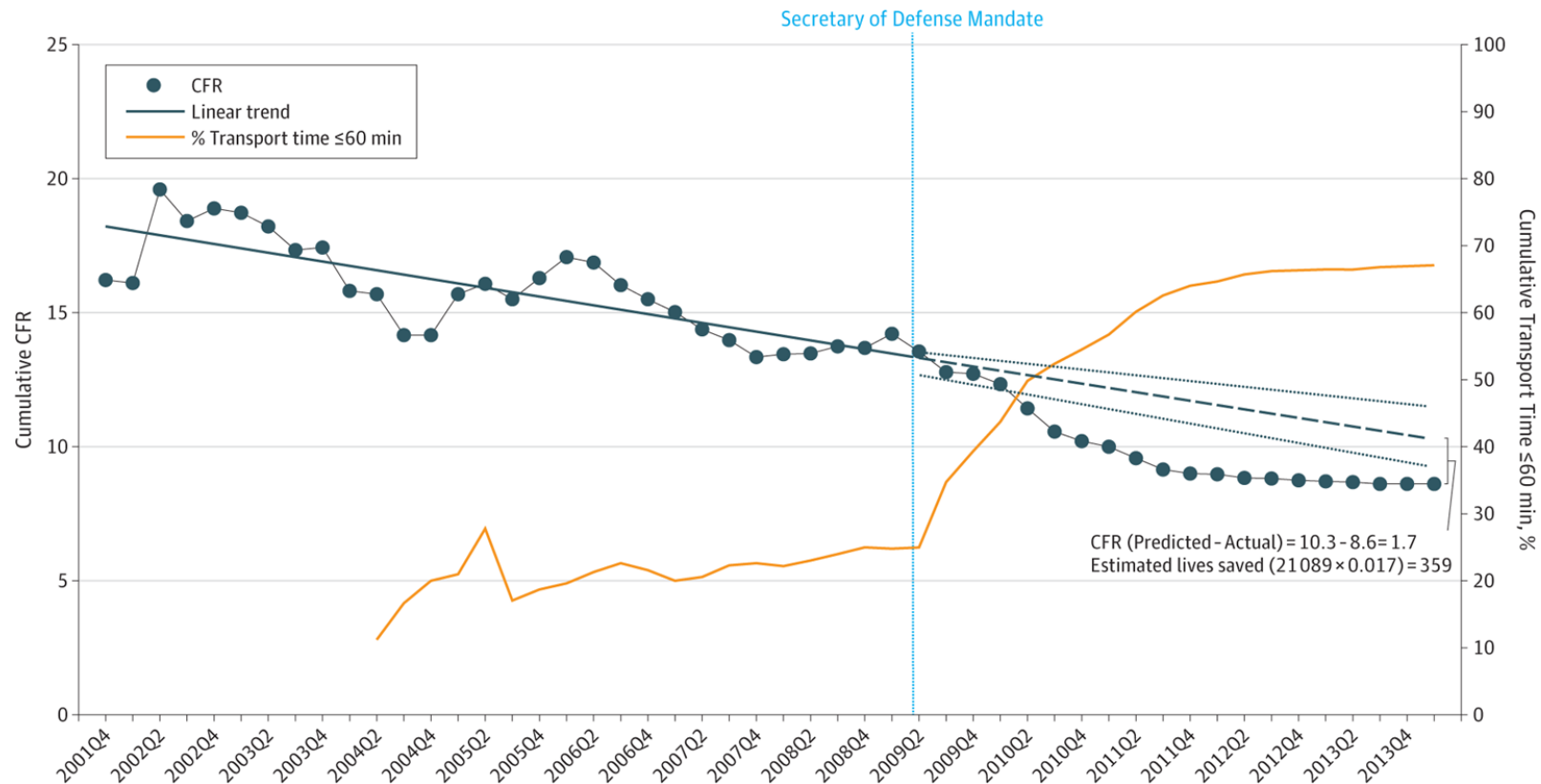
# Distributed, Fully-Immersive VR Medical Simulation Training for Team-Based Care





# Strategic Background

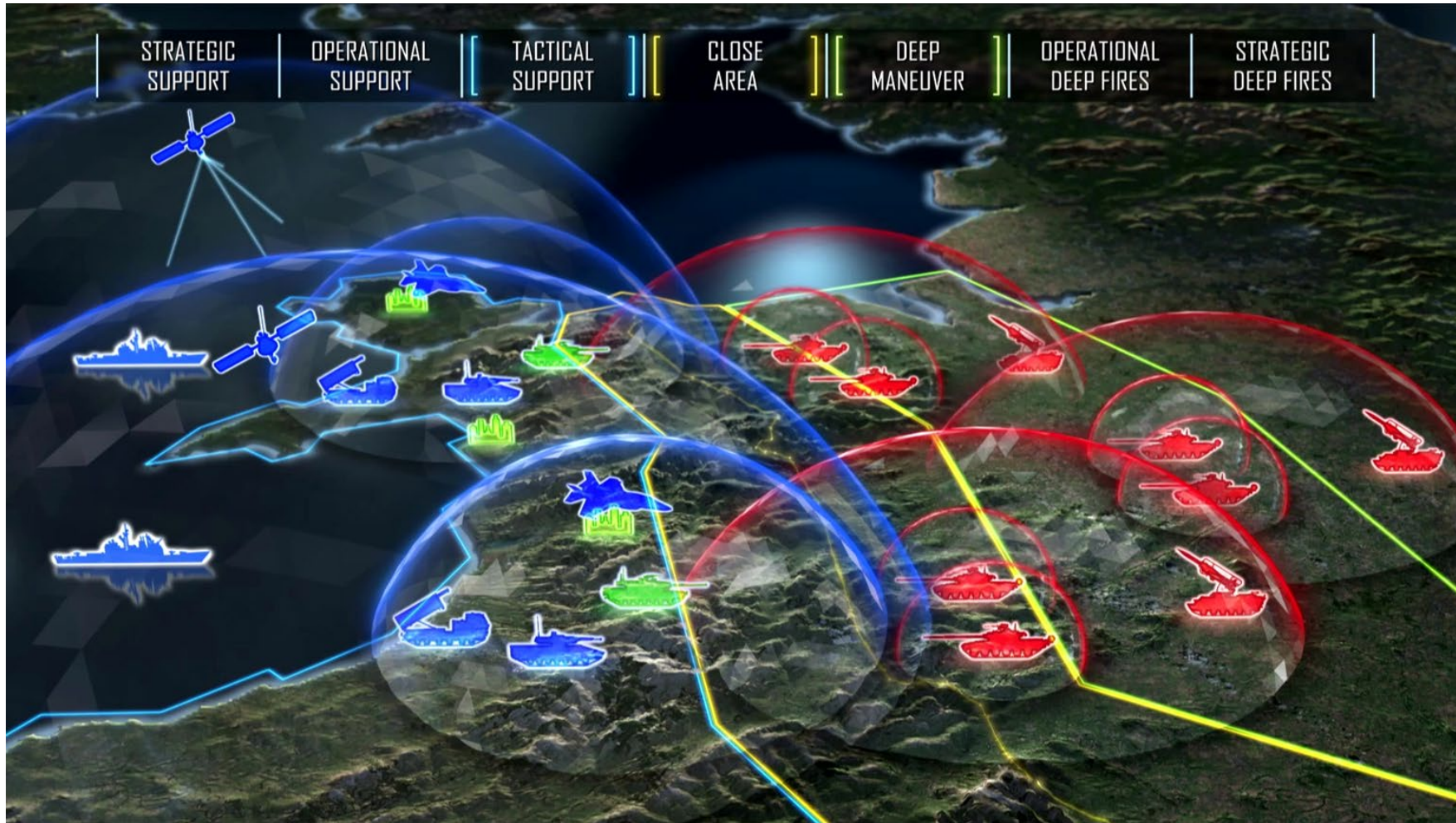
## The “Golden Hour”





# Strategic Background

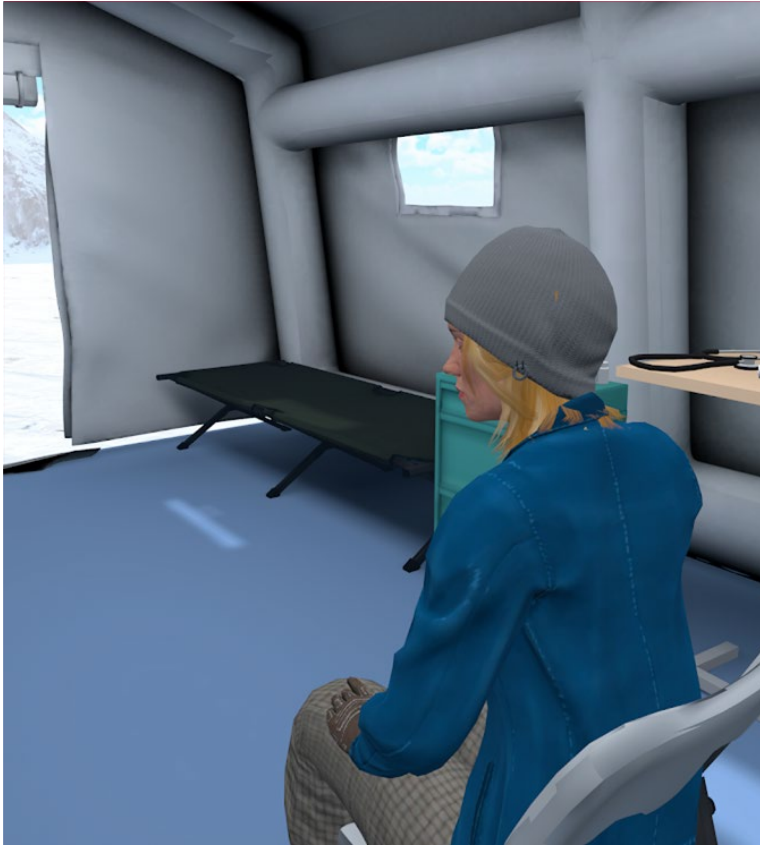
## Joint All-Domain Operations





# Program Objectives

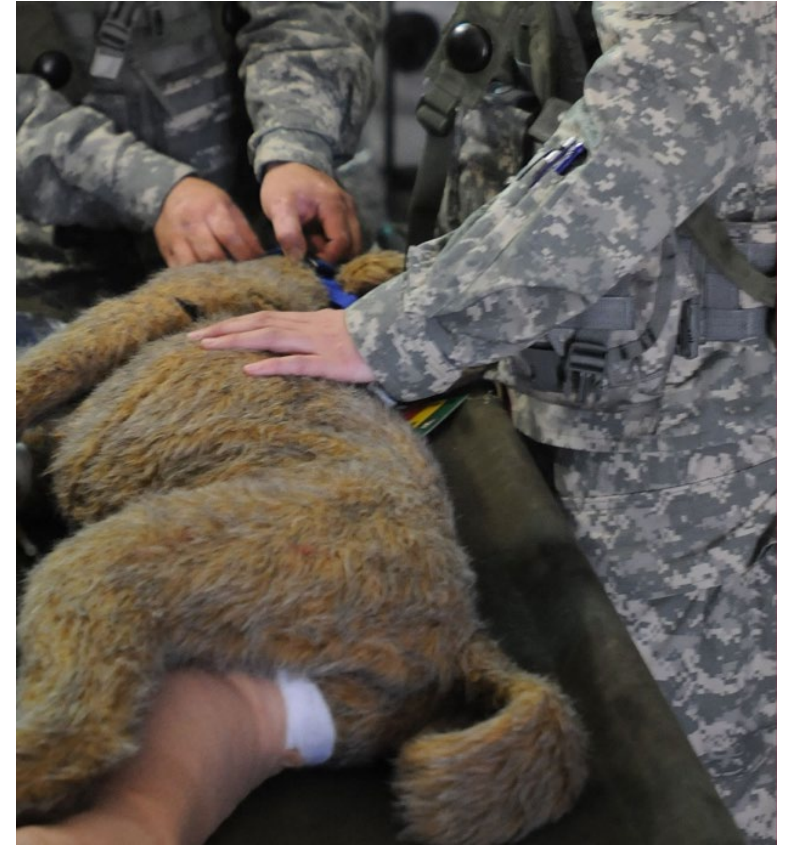
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Improve Realism



Increase Flexibility



Reduce Cost

# DOD Program Efforts To Date

## CORE CAPABILITIES (\$2M)



AIO/XR2  
Compatibility



Austere /  
Disconnected  
Usability



Battlefield  
Environments



Debriefing /  
Tracking



Sets, Kits and  
Outfits

## FLEXIBILITY (\$2M)



Non-Collocated  
Multi-Team  
Training



Dynamic Scenarios,  
Loadouts and  
Environments



ATO Readiness



Ease of Use



Hand-Offs and  
Transitions

## CURRICULA (\$7M)



AE/CCAT



TCCC



C-TCCC



ARC



PSMCC



CBRNE



EMS



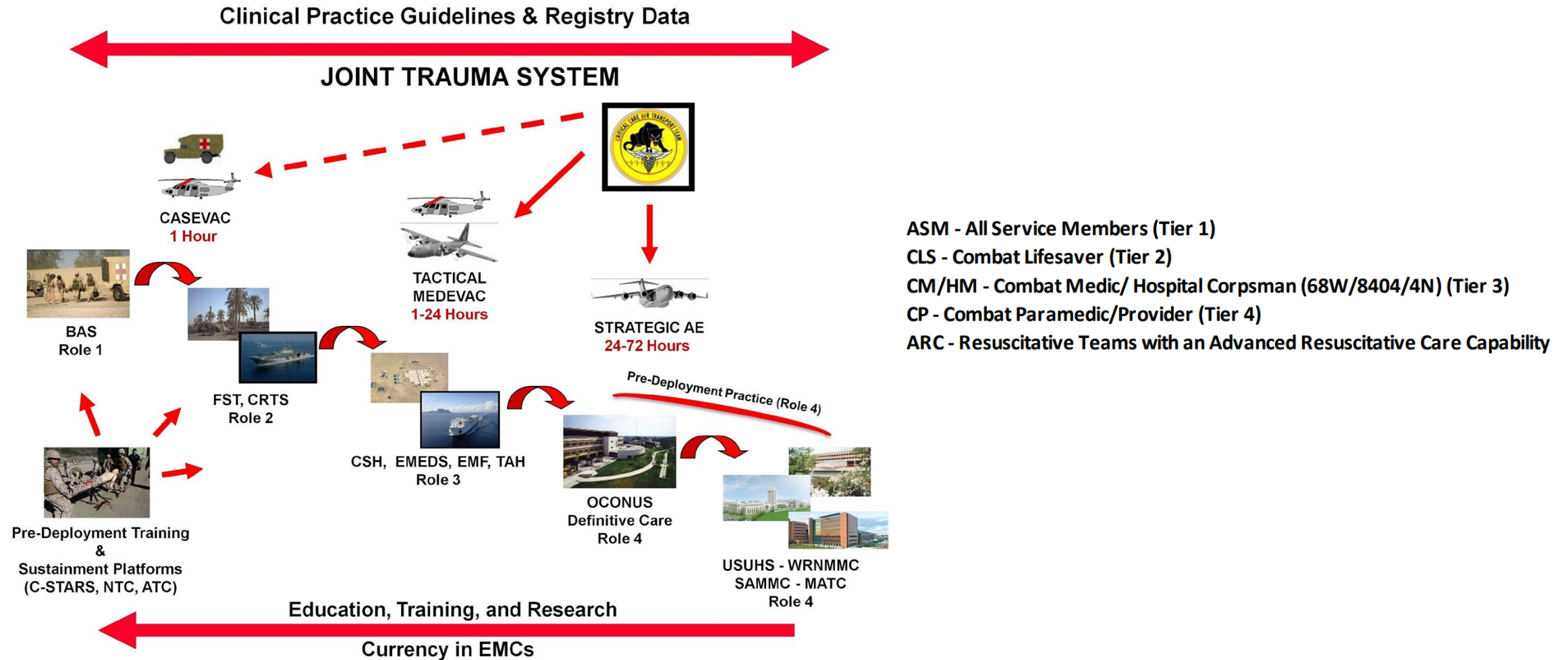
# TCCG-Directed Simulation Training

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# TCCC Roles and Tiers of Care



# AIO VR for Enhanced Portability

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# Multi-Site Telepresence for Hand-Offs

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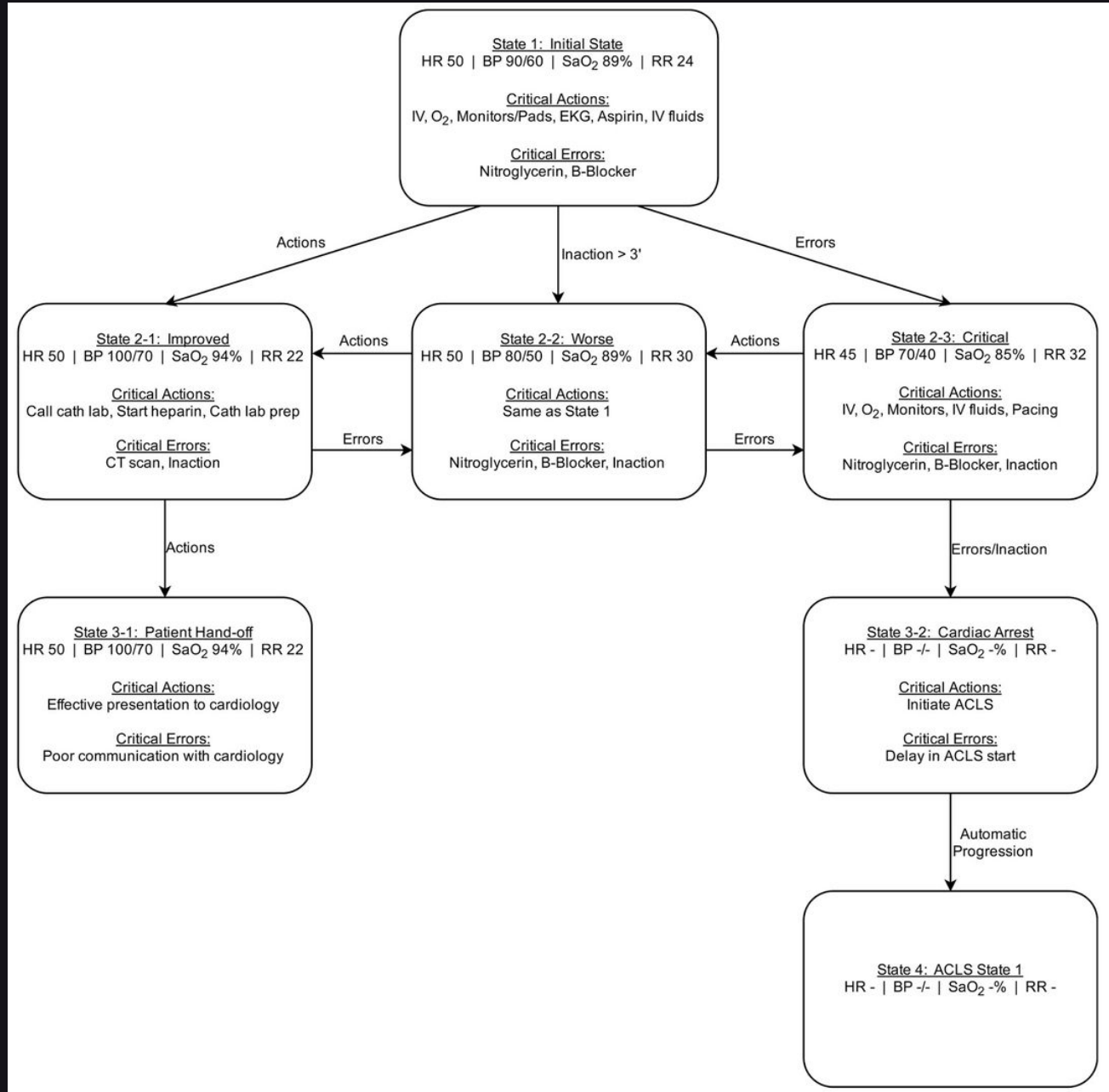
# Transferrable In-Simulation Clinical Documentation

Battlefield Assisted  
Trauma Distributed  
Observation Kit  
(BATDOK)





# State-Based Reusable, Pluggable Simulation Framework



# Real Time Assessment & Readiness Tracking

Integration with Airman Data Analysis and Performance Tracking System (ADAPTs)



cerebral edema, provide the right medications, call for transport, and place the patient in a gamow bag.

vomiting, and confusion. The trainees are expected to gather a history, perform a physical exam (including a neurologic exam) diagnose high altitude pulmonary edema with some developing

## Critical Actions

State 1 - Initial Assessment			
1.	Gather Appropriate History	✓	10/10 pts
2.	Take Vitals - Cardiac Leads - BP Cuff - Pulse Ox - Thermometer	✓	10/10 pts
3.	Apply O2	✗	0/5 pts
4.	Stethoscope Exam	✓	5/5 pts
5.	Cranial Nerve Exam	✗	0/5 pts

Score: 71.4%



3.	Required case Camp Prompting for meds	✓	5/5 pts
4.	Explain Diagnosis to Patient	✗	0/5 pts
5.	Call for Transport	✓	10/10 pts
State 3 - Altitude Chamber			
1.	Gamow Bag to 2 PSI	✓	10/10 pts
2.	Explain Gamow Bag to Patient	✓	5/5 pts

## All Actions

Timestamp	Action	Performed by
State 1		
16:44:12	Case start	Moderator
16:44:36	Patient audio: I'm Hillary Climber	Moderator
16:44:49	Patient audio: I'm feeling really out of br...	Moderator



# Thank you!

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Live  
demonstration  
available in the  
expo!



## VR and AR Medical Simulation Training



Wireless, multiplayer virtual reality.

Any patient, any case, any environment.

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