



NO HOCUS IN POCUS: DELINEATING  
METRICS FOR COMPETENCY

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BOSTON EMS

## DISCLOSURE for Continuing Medical Education Purposes

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HOW DO I START AN ULTRASOUND  
PROGRAM IN MY SYSTEM?

# PREHOSPITAL ULTRASOUND USAGE

Increased 5 fold in the past 10 years

But how are they implementing these programs?

What does their curriculum look like?

## Impact of Prehospital Ultrasound Training on Simulated Paramedic Clinical Decision-Making

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DOI: 10.5811/westjem.18439

### RESEARCH

### Open Access

## Effectiveness of a simulation-based point-of-care ultrasound course for prehospital providers - a single group quasi-experimental study



Ariana Weber<sup>1,2\*</sup>, Asit Misra<sup>3,4\*</sup>, Richard D. Rodriguez<sup>3</sup>, Angel "Al" Brotons<sup>3</sup>, Maria Antonietta Mosetti<sup>5</sup>, Resa E. Lewis<sup>6</sup>, Eduard Tiozzo<sup>7</sup> and Ivette Motola<sup>3,4</sup>

## Butterflies in the Field: Introducing Point-of-Care Ultrasound to Paramedics in Rural and Wilderness Emergency Medical Services

Gavin B. Faulkner<sup>a</sup>, McKenzie J. Eakin<sup>b</sup>, William R. Smith<sup>c,d</sup>, Albert R. Wheeler III<sup>e</sup>, H. Hill Stoecklein<sup>e</sup>, Michael J. Carr<sup>b</sup> and Anna Q. Yaffee<sup>b</sup>

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Observational Study > *Prehosp Disaster Med.* 2022 Feb;37(1):39-44.

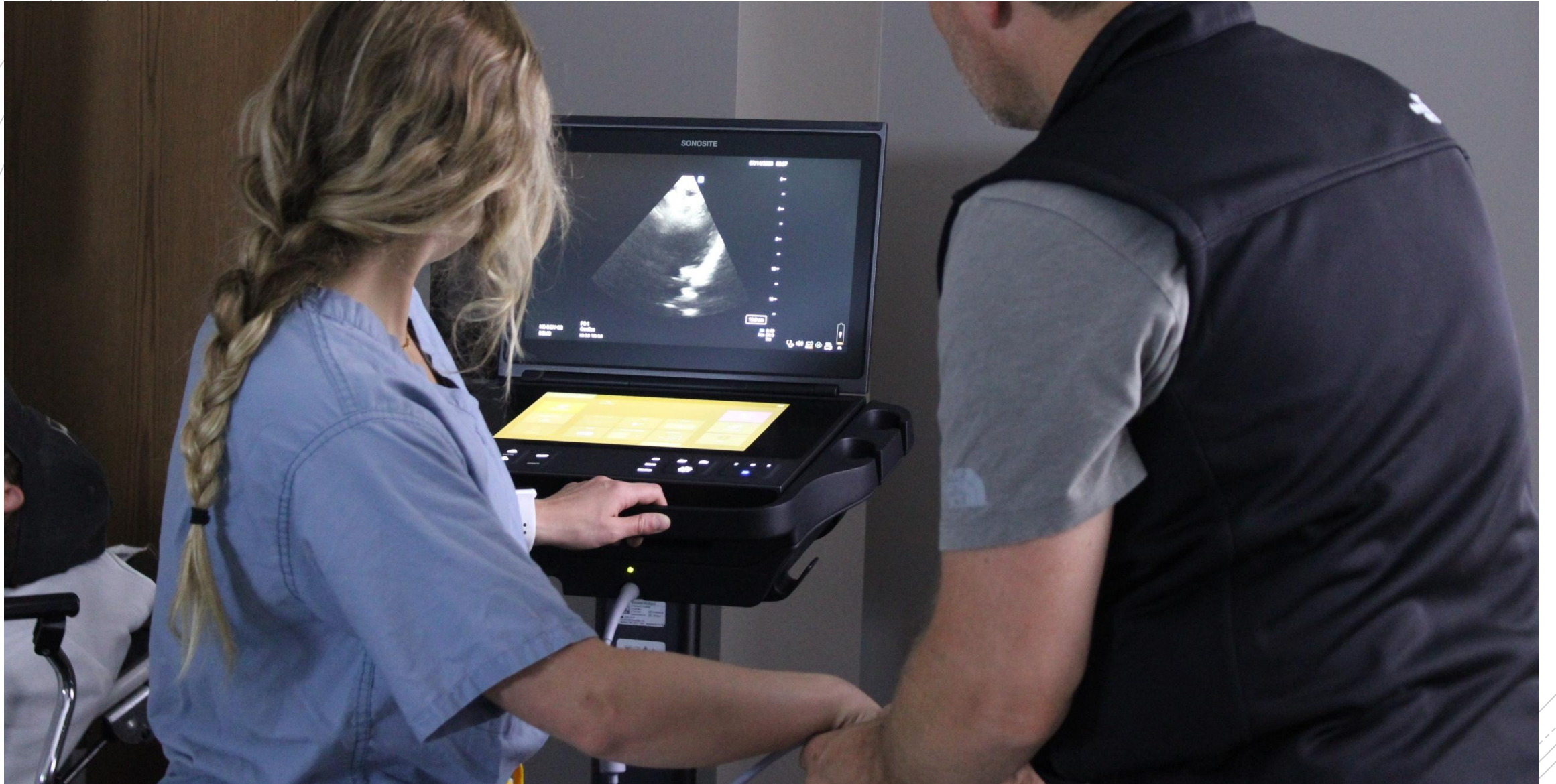
doi: 10.1017/S1049023X21001357. Epub 2022 Jan 7.

## Point-of-Care Ultrasound Use by EMS Providers in Out-of-Hospital Cardiac Arrest

Michael A Kreiser<sup>1</sup>, Brianna Hill<sup>1</sup>, Dikchhya Karki<sup>1</sup>, Elke Wood<sup>1</sup>, Ryan Shelton<sup>1 2</sup>, Jodi Peterson<sup>1 2</sup>, John Riccio<sup>2 3</sup>, Isain Zapata<sup>4</sup>, Paul A Khalil<sup>5 6</sup>, Dean Gubler<sup>7</sup>, Anthony J LaPorta<sup>8</sup>, Genie E Roosevelt<sup>9</sup>, Amanda G Toney<sup>1 9</sup>

Affiliations + expand

PMID: 34994342 DOI: [10.1017/S1049023X21001357](https://doi.org/10.1017/S1049023X21001357)

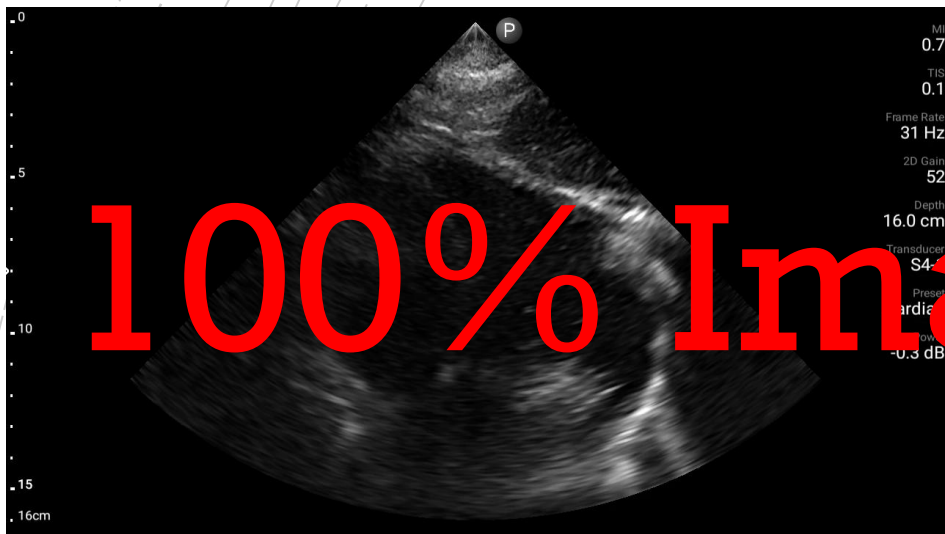








# 100% Image Review



## Boston EMS Ultrasound Program Milestones

Operator Name:

Imaging Modality	Novice	Intermediate	Advanced	Expert	Interpreting	Instructor
Lung sliding						
Lung parenchyma						
Subxiphoid Cardiac						
Parasternal long cardiac						
Parasternal short cardiac						
IVC view						

**Novice operator:** Able to appropriately hold and position the probe in the appropriate position for the modality in question

**Intermediate operator:** Able to obtain appropriate images with hands on assistance from the instructor

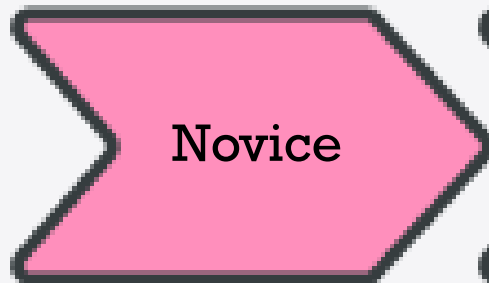
**Advanced operator:** Able to obtain appropriate images with either no or minimal prompting from the instructor

**Expert operator:** Able to successfully obtain appropriate images in a moving vehicle

**Interpreting operator:** Able to not only obtain images but interpret the images obtained

**Instructor operator:** Operator has reached the level of expertise required to teach others

# 6 MONTHS



Novice



Intermediate



Advanced



Expert



SO WHAT HAVE  
WE LEARNED?

Education is **VERY**  
intensive

Start small and expand  
from there

Hands on training is  
critical



# QUESTIONS??

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# Wax the Task: How Well Can Low-Cost Trainers Work?



Dustin J. Calhoun, MD FAEMS  
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Associate Professor  
University of Cincinnati

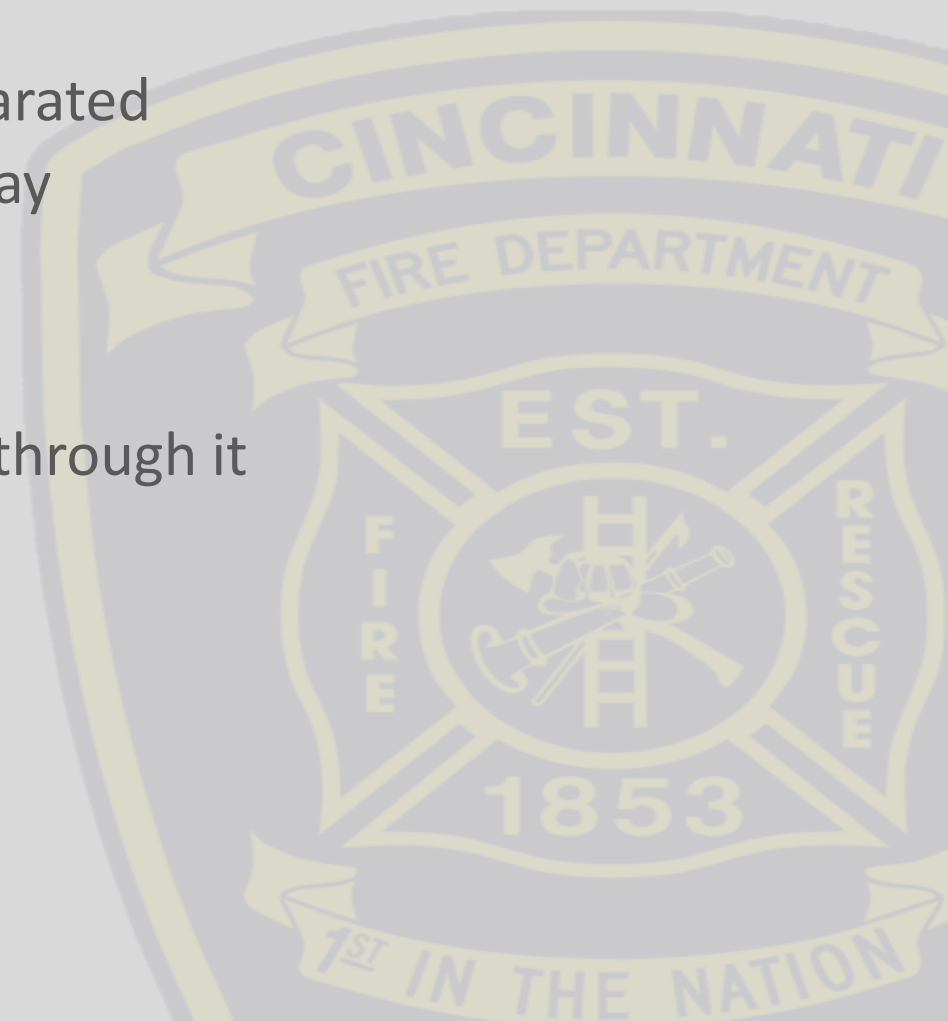
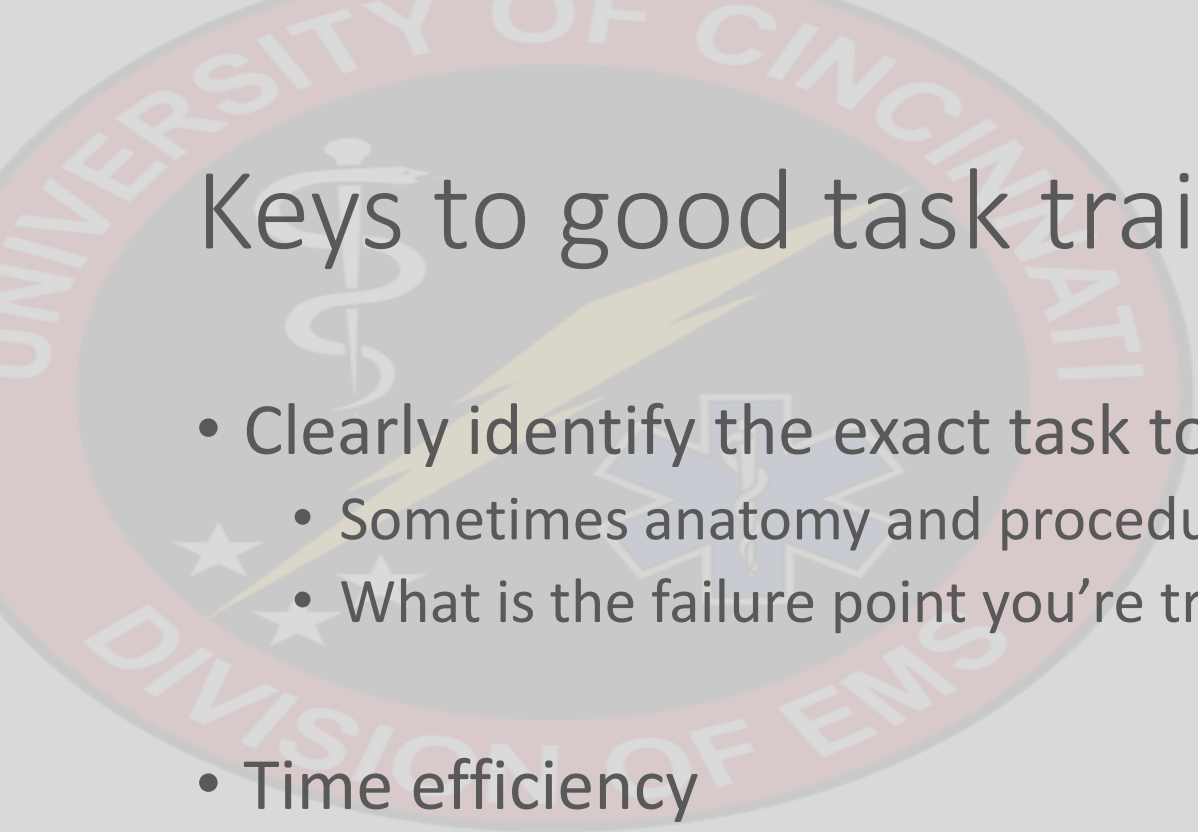


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# Keys to good task training

- Clearly identify the exact task to be trained
  - Sometimes anatomy and procedure are best separated
  - What is the failure point you're trying to train away
- Time efficiency
  - If it's a hassle to reset, how do you get everyone through it
- Cost efficiency
  - Frequency of training correlates with retention



# Cricothyrotomy



# Cricothyrotomy



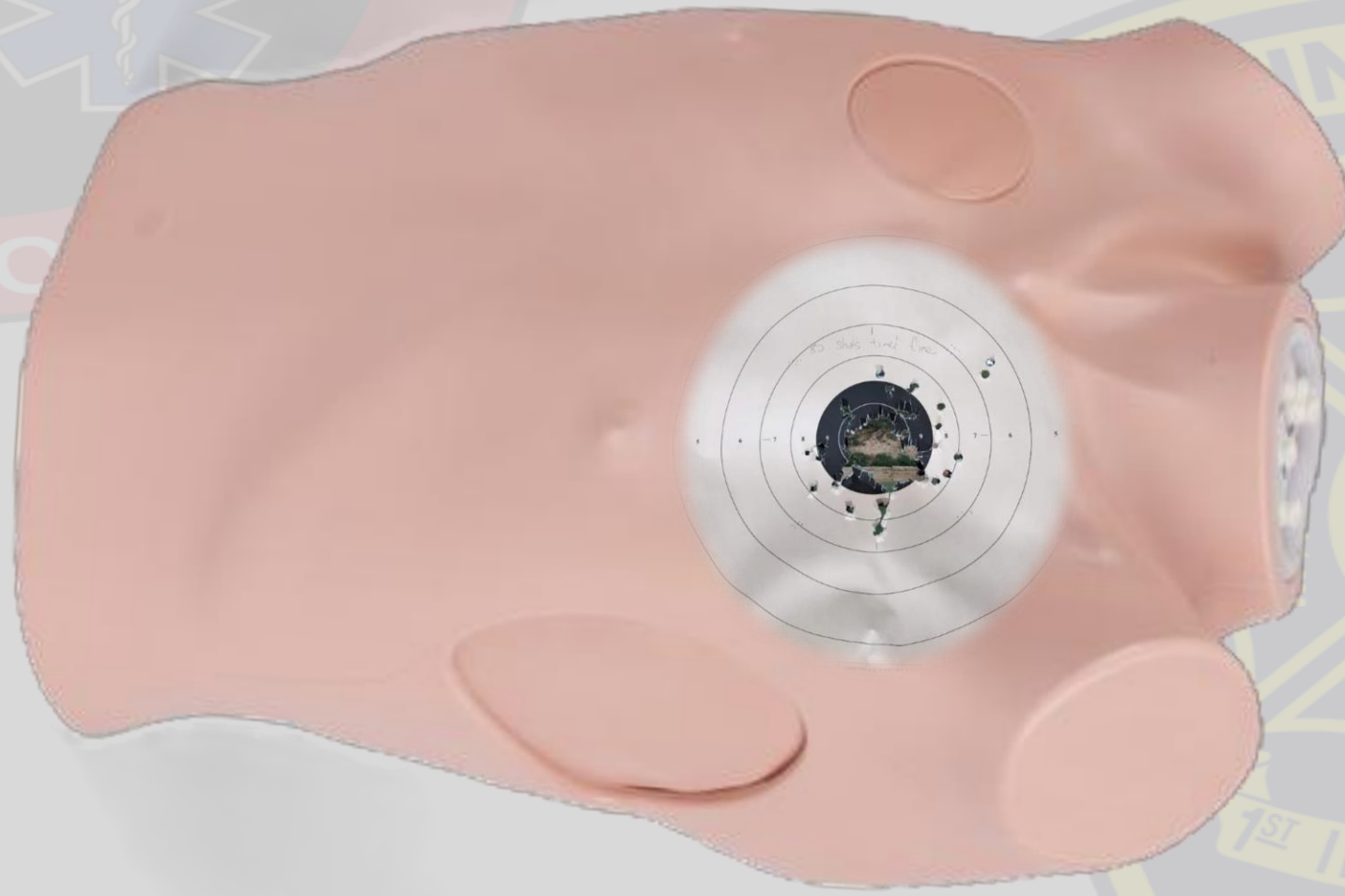
# Cricothyrotomy



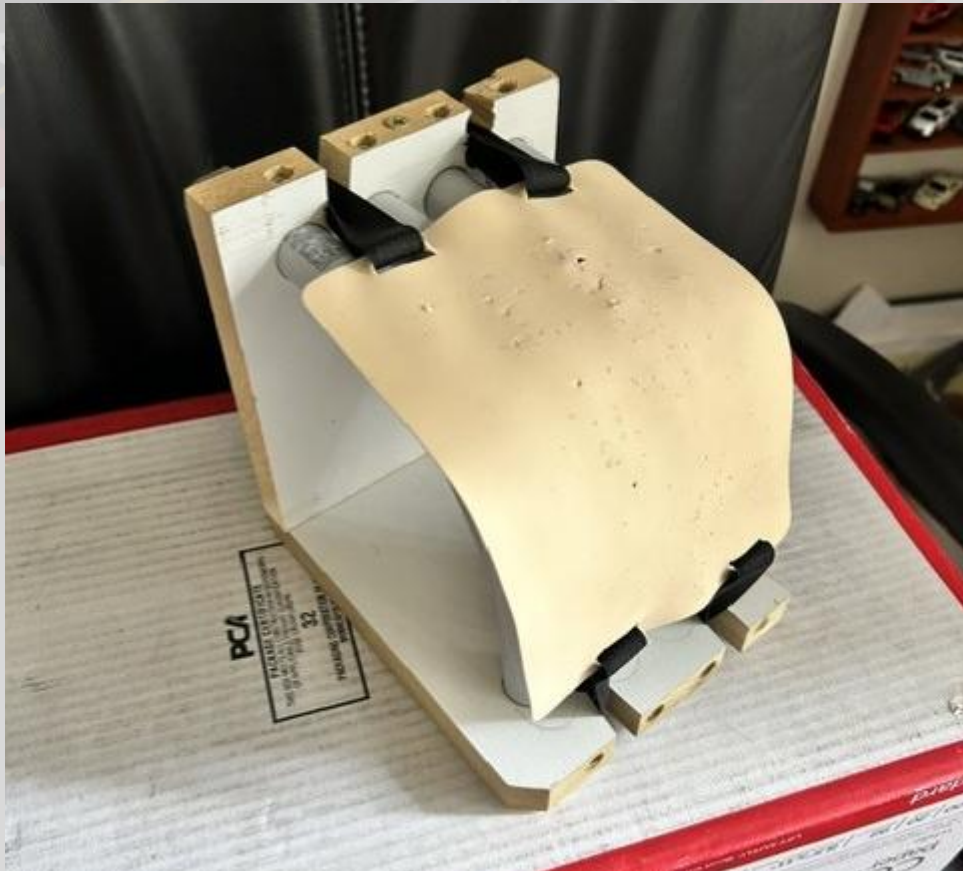
# Cricothyrotomy

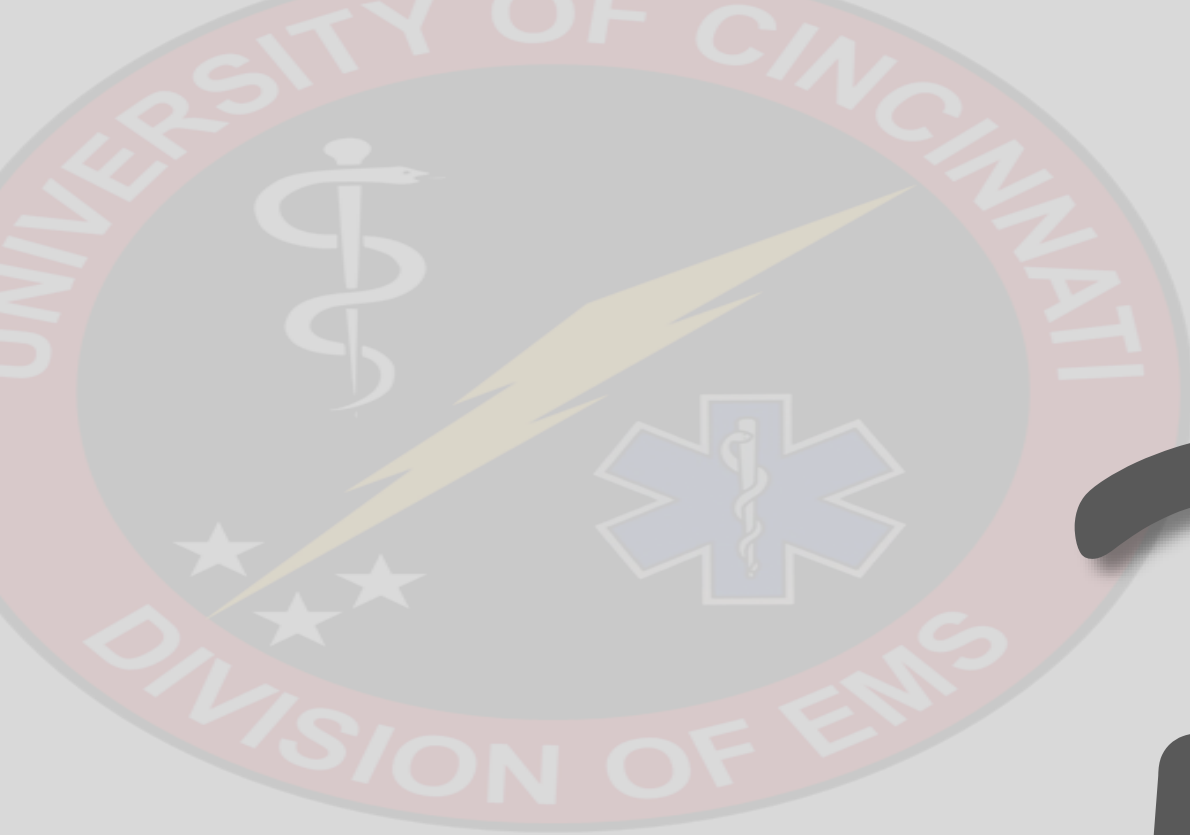


# Needle Thoracostomy



# Needle Thoracostomy





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***Maintaining, Retaining, and Retraining: Having  
Confidence in Competence***

***W. Scott Gilmore, MD, FACEP, FAEMS  
Chair, Board of Directors***

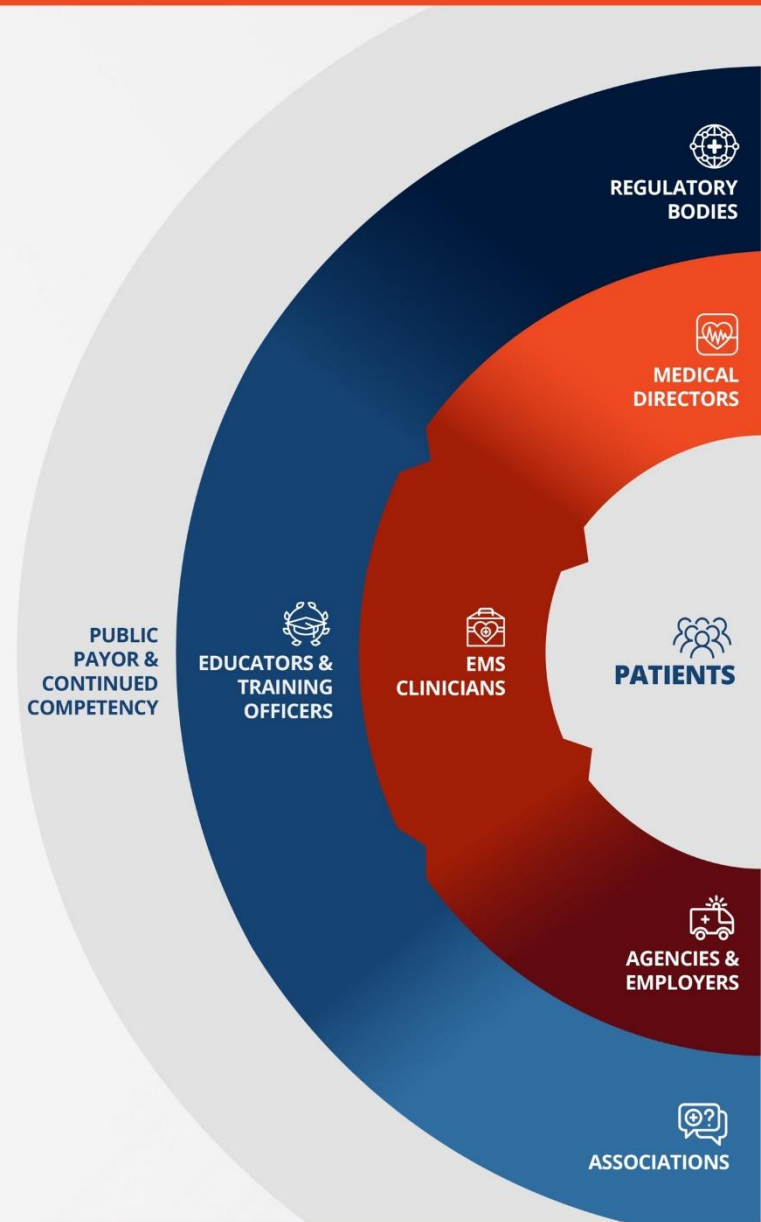
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Emergency Medical Services

# CONTINUED COMPETENCE AGENDA FOR THE FUTURE:

A Systems Approach



# Agenda Steering Committee

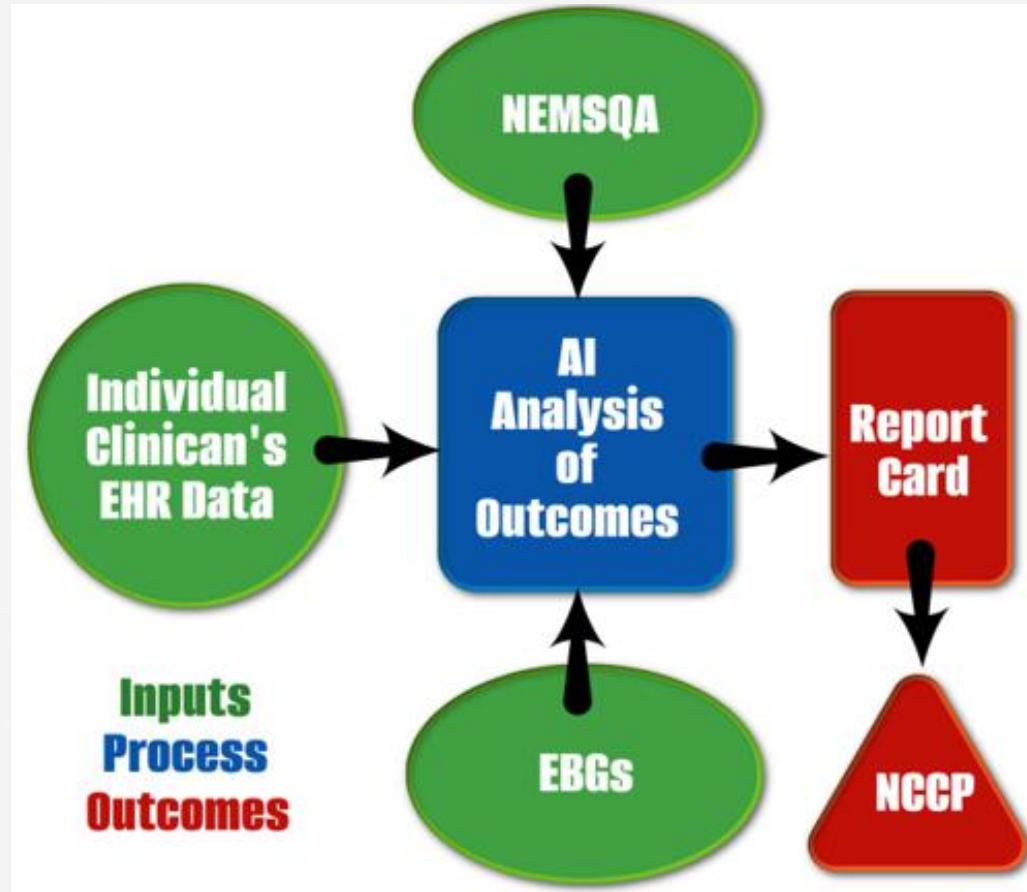


# Timeline

- *Draft 17 under internal review*
- *Fall 2025 reconvening of Agenda Steering Committee*
- *Winter 2025 seeking of organizational approval*
- *Spring/Summer 2026 release of Agenda*



# Credit for Work Completed



# National Continued Competency Program (NCCCP)

Level	National	Local	Individual	Total Hours
EMR	8	4	4	16
EMT	20	10	10	40
AEMT	25	12.5	12.5	50
NRP	30	15	15	60



# Questions that Have to Be Answered

- *How many of a call type to prove continued competency?*
  - *What about smaller agencies that have a smaller run volume*
- *How is new knowledge obtained?*
  - *Still a need for continuing education*
  - *Local and Individual Level*

# How Can I Help

- *Talk with your ePCR/EHR vendor*



# Questions?

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*Thank You!*



# *How Can We Foster and Supervise Critical Thought Processes in EMS*

Robert Lowe, MD FACEP FAEMS



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DIVISION OF FIRE

# Critical Thinking

- How do we move the provider from proceduralist to critical thinker
- More importantly , how do we teach thinking?
- Are you prepared to supervise a “thinker”

# How do we move the provider from proceduralist to critical thinker

- Historically we built a practice on Protocol
- Education has historically focused on procedural competency

# How do you define Critical Thinking

- Objective, analytical, evaluation, synthesis
- Forming a reasoned judgement
- Logic and data over instinct or emotion
- Free from bias
- Many definitions have degree of ethics

# How do we teach it

- Movement toward guidelines and less emphasis
- Building decision points in “protocol”
- Teaching risk benefit/ analysis
  
- Teaching providers to be “uncomfortable”

# How do we teach it

- Scenarios training with decision and break points.
- Case reviews
- Practice – give me most serious and 2 most likely ...

# Difficult for Medical Director or Supervisor

- Time investment
- Requires team to understand your thought process, tolerance, risk calculation, etc.
- Support for the providers decision
  - Was the “reasoning” appropriate





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