Anesthesia Competency for Difficult Airway

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What is a Difficult Airway?

Background

Management of difficult airways is a leading cause of anesthesia deaths and malpractice claims in the US. Primary causes are:

- Poor adherence to guidelines and a decline in retention of knowledge after training
- Rarity of events:
  - 6.2% - difficult intubations
  - 1.5% - difficult intubation & ventilation
  - 0.3% - impossible intubation & difficult ventilation.
  - 0.07% - unable to intubate & ventilate

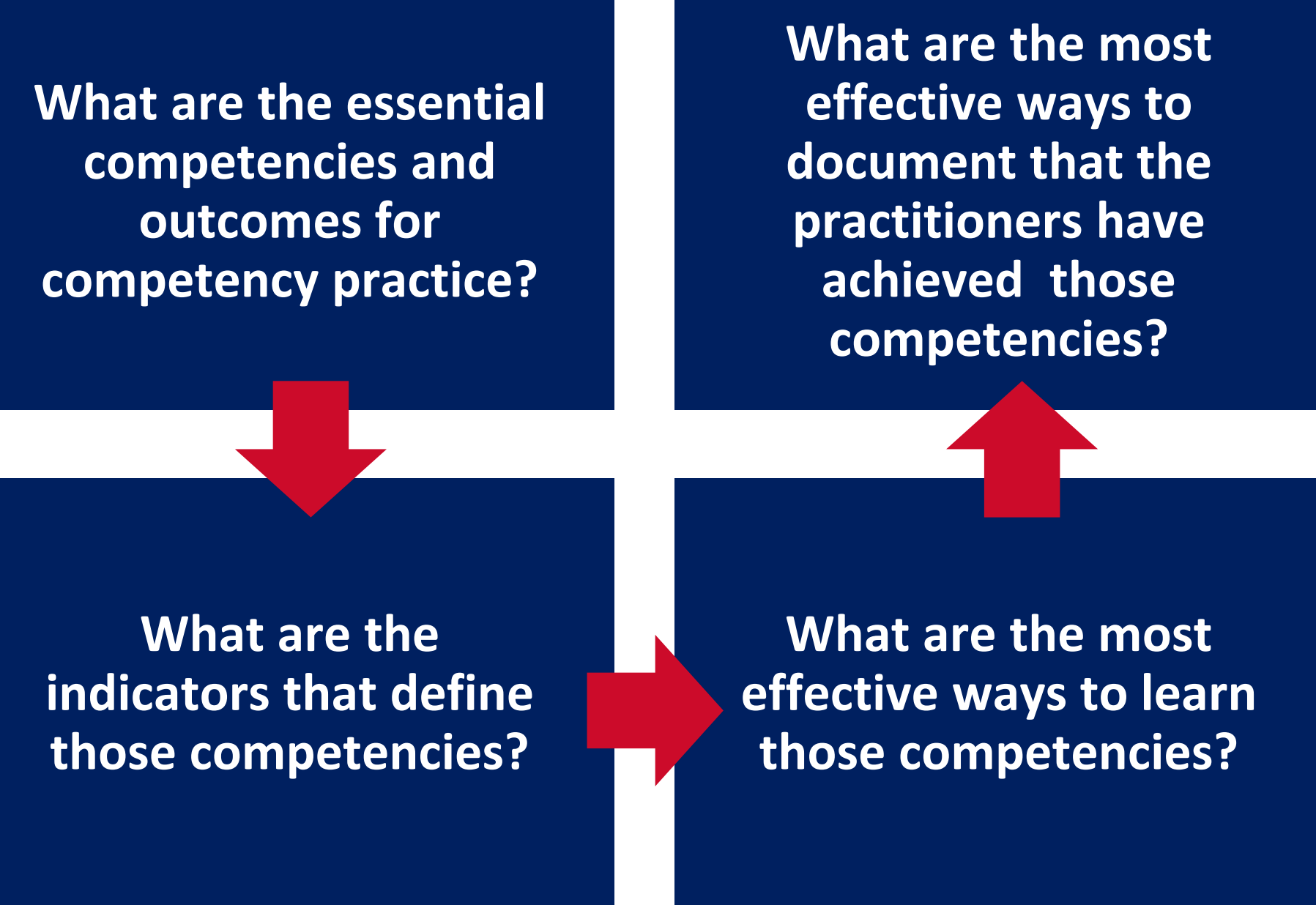A quality review of difficult airway events during the past three years found:

- Obtaining adequate help & initiating interventions took longer than expected
- Operating room staff were unsure what to do

Purpose

Develop a practice improvement project for anesthesia providers and OR staff to enhance and attain skills addressing difficult airways (complying with the national ASA DAA guidelines).
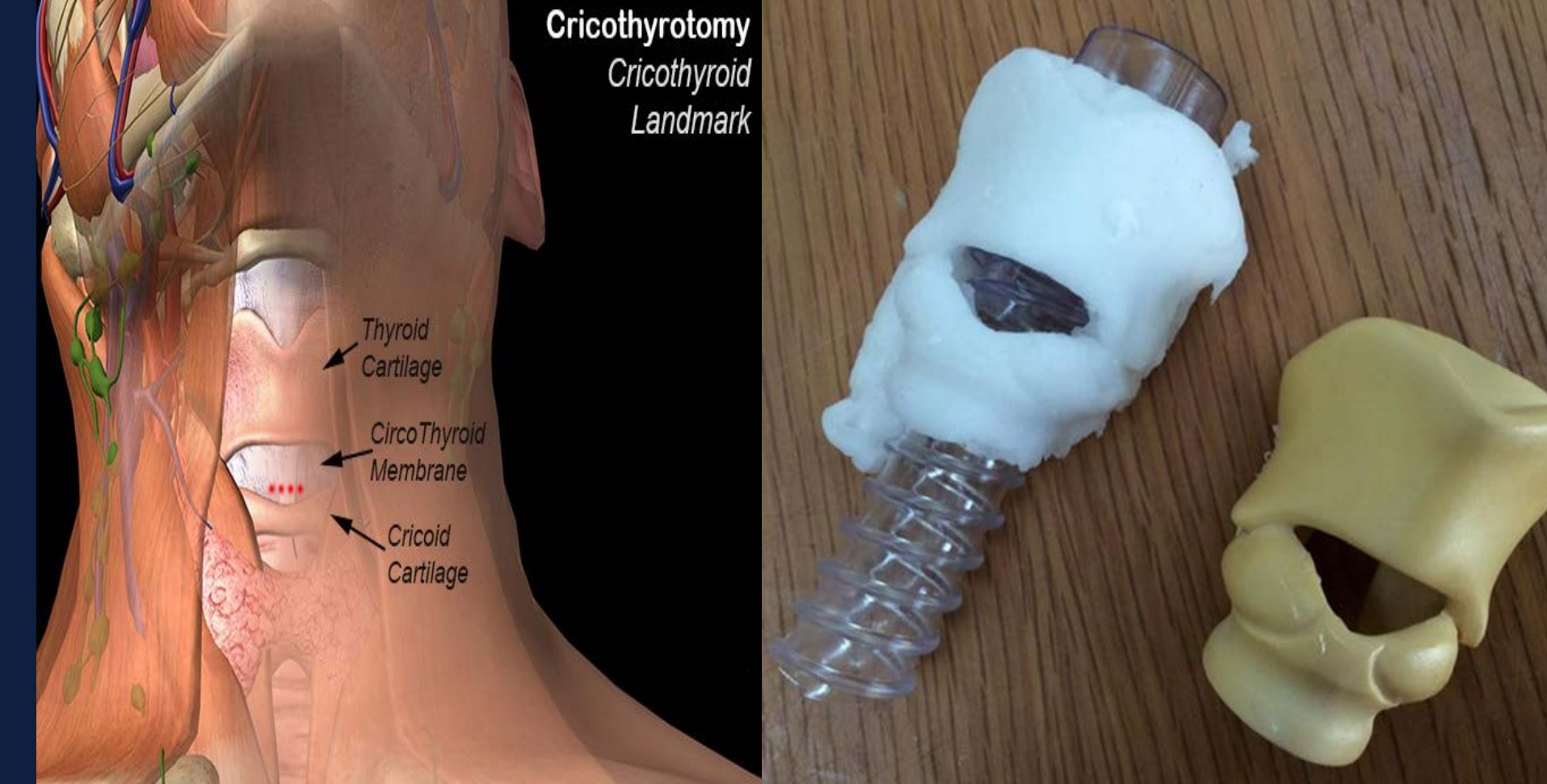
Framework

Competency Outcomes & Performance Assessment (COPA) Model

What are the essential competencies and outcomes for competency practice?	What are the most effective ways to document that the practitioners have achieved those competencies?
What are the indicators that define those competencies?	What are the most effective ways to learn those competencies?

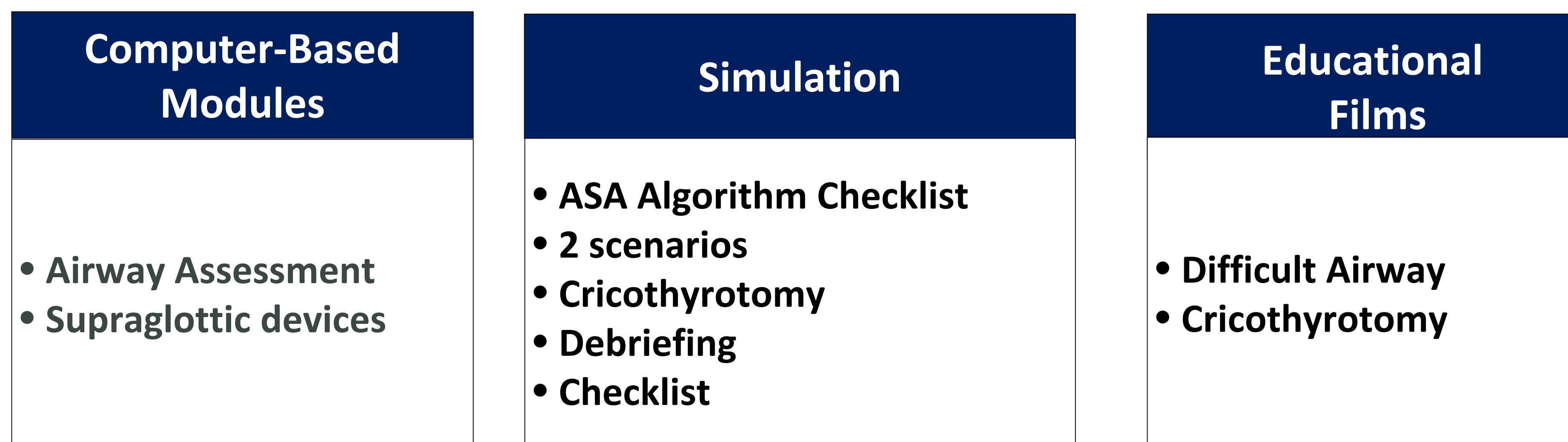developed by Lenburg (1999)

Cricothyrotomy

Teaching Activities

- Computer-based modules
- Educational films
- Checklists
- Simulations
- Debriefing

Problem Based Learning: Interactive Learning Strategies

Computer-Based Modules

- **Airway Assessment**
- **Supraglottic devices**

Simulation

- **ASA Algorithm Checklist**
- **2 scenarios**
- **Cricothyrotomy**
- **Debriefing**
- **Checklist**

Educational Films

- **Difficult Airway**
- **Cricothyrotomy**

Evaluation/Simulation Validation Check-off

Competency Curriculum Outline

- Review Airway anatomy
- Airway Assessment/ screening tools & prediction powers
- Assessing and predicting:
  - Difficult ventilation
  - Difficult Laryngoscopy
  - Difficult supraglottic airway place device
  - Difficult cricothyrotomy
- Basic preparation for difficult airway management
- Strategy for intubation of a difficult airway
- Anticipated vs Unanticipated Cricothyrotomy

Scenarios

Scenario 1
- Difficult Intubation but easy to ventilate

Scenario 2
- Cannot intubate, cannot ventilate
- Cricothyrotomy simulation

Significance

- Simulation is an effective training modality for clinical decision making and skill maintenance
- Frequent difficult airway training and simulation provides valuable experience for infrequent clinical challenges

Recommendations

- Annual education, training, and simulation for difficult airway management and decision making
- Annual skill training with difficult airway techniques and equipment
- Evaluation of simulation, training, and educational effectiveness

Conclusion

Implementation of a bi-annual difficult airway training program:

1. Brings awareness
2. Improves practice of existing skills
3. Enhances professional competencies among the anesthesia providers
4. Ultimately, improves patient outcomes

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