AHA Team Training

Stronger Together: A Simulation-Based Approach to TeamSTEPPS for Medical Trainees

March 12, 2025

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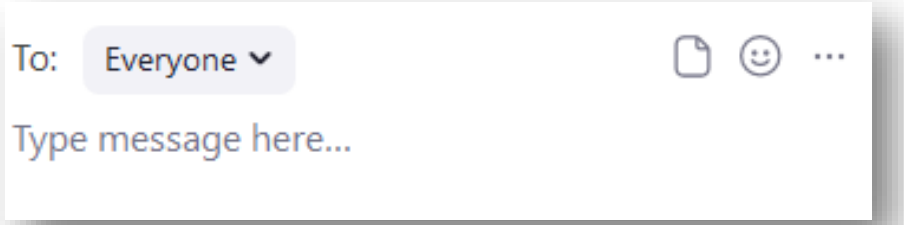

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Upcoming Team Training Events

In-person Master Training Courses – Registration Open!

- April 7-8 | New Hyde Park, NY | Northwell
- April 24-25 | Los Angeles, CA | UCLA
- May 6-7 | Chicago, IL | AHA Team Training
- May 19-20 | New Orleans, LA | Tulane

Virtual Master Training Course – Registration Open!

- September 25 – November 13 | University of Washington

Webinars

- April 9 – Problems, Possibilities, and People: Using Human-Centered Design to Create and Scale Change for Teams

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Custom TeamSTEPPS Advisory Services at Your Organization

TeamSTEPPS Master Training Course

Using a train-the-trainer model, **we give you the foundational tools** and concepts, and train your staff through this **two-day training** program. You will gain a team of Master Trainers ready to teach others in your organization.

Comprehensive TeamSTEPPS Programs

We help you along the way. After delivery of the two-day Master Training course, we continue to work with your team for **3-6 months**, building the internal capacity to hardwire TeamSTEPPS throughout your organization.

Learn More »

> Our relationship with the TeamSTEPPS faculty and the on-site trainings were both phenomenal. **They did a great job of meeting us where we were** and customized a program that really helped us gain clarity about the problem we're trying to solve.
>
> – **Melissa Riffe-Guyer**
> Executive Director,
> Culture Cone Health

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Today's Presenters: The Team from UT Southwestern

Jeanne Carey
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Simulation Education Manager

Aditee Ambardekar
MD, MSEd
Professor and Residency Program Director
Distinguished Teaching Professor
Department of Anesthesiology and Pain Management

Krystle K. Campbell
DHA, MS, CHSE, FACHDM
Assistant Vice President of Education, Academic Affairs; Director of Operations, Simulation Center; Assistant Professor, Department of Emergency Medicine, UT Southwestern

John D. Beaver
MPA, MEd, CCRP
Assistant Director of Operations

Daniel J. Scott, MD
Frank H. Kidd, Jr. MD Distinguished Professorship in Surgery
Assistant Dean, Simulation & Student Integration, Graduate Medical Education
Director, UT Southwestern Simulation Center

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Poll Question #1

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Which best describes your role in healthcare?

- Physician
- Nurse
- Educator
- Administrator
- Other

Poll Question #2

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How familiar are you with TeamSTEPPS?

- Very familiar – I've taught or implemented it.
- Somewhat familiar – I've attended training.
- I've heard of it, but I don't know much about it.
- Not familiar at all.

Objectives

After participating in this webinar, learners will be able to:

Describe how a simulation-based curriculum can strengthen teamwork, communication, and professionalism among new medical trainees.

Identify key patient safety, leadership, and communication skills that align with ACGME core competencies and milestones.

Apply TeamSTEPPS tools to help interns navigate real-world clinical scenarios with greater confidence and collaboration.

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Poll Question #3

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Does your institution currently offer TeamSTEPPS training?

- ✅ Yes, as a required training for all staff.
- ✅ Yes, but only for specific teams or departments.
- 🔄 No, but we are considering implementing it.
- ❌ No, and we have no plans to implement it.

Poll Question #4

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If your institution offers TeamSTEPPS training, how is it delivered?

- In-person workshops
- Online or self-paced learning
- Simulation-based training
- A combination of methods
- We do not currently offer TeamSTEPPS training

Creating a Simulation-Based, Core Curriculum for GME Learners

ACGME

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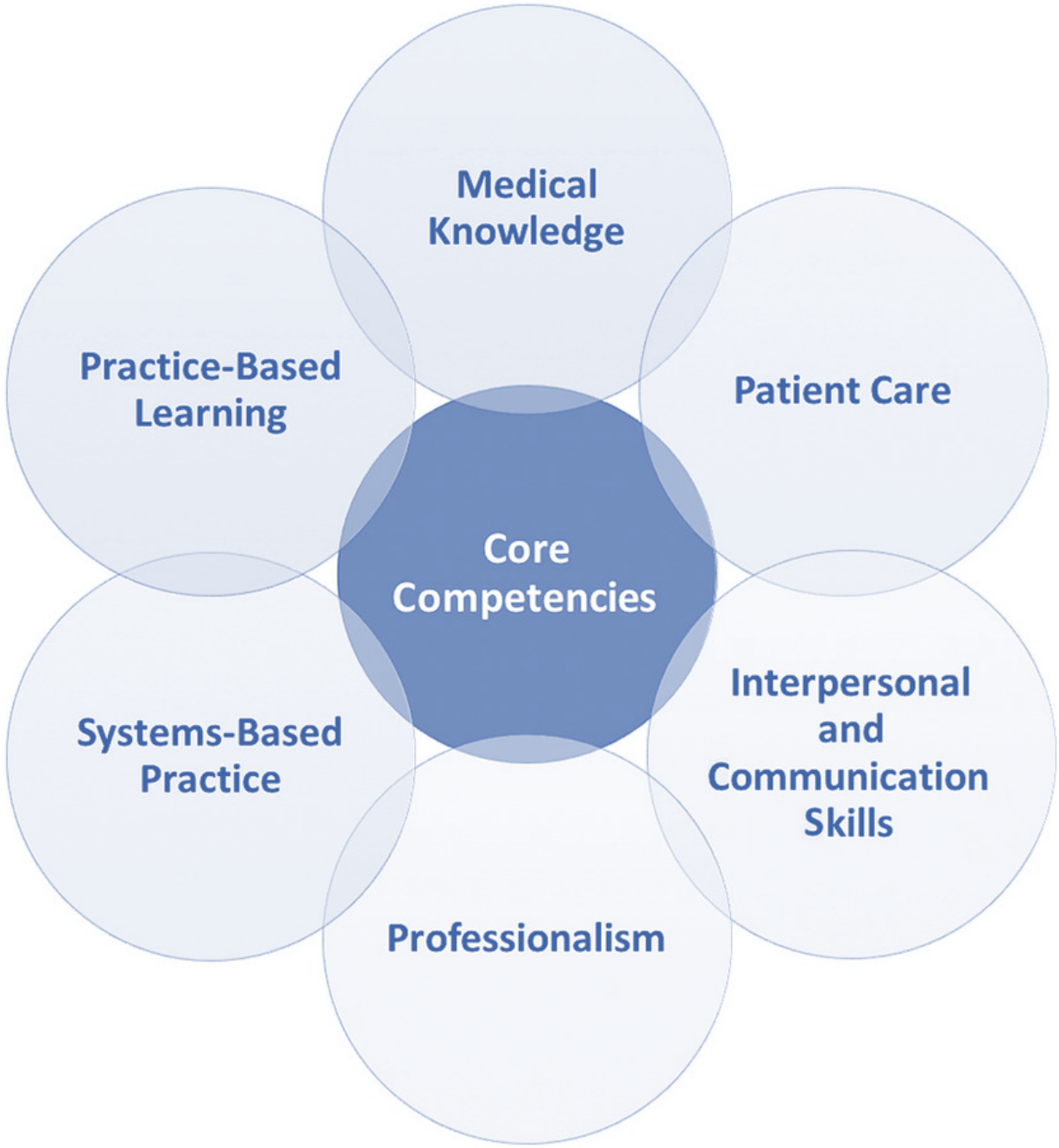

Poll Question #5

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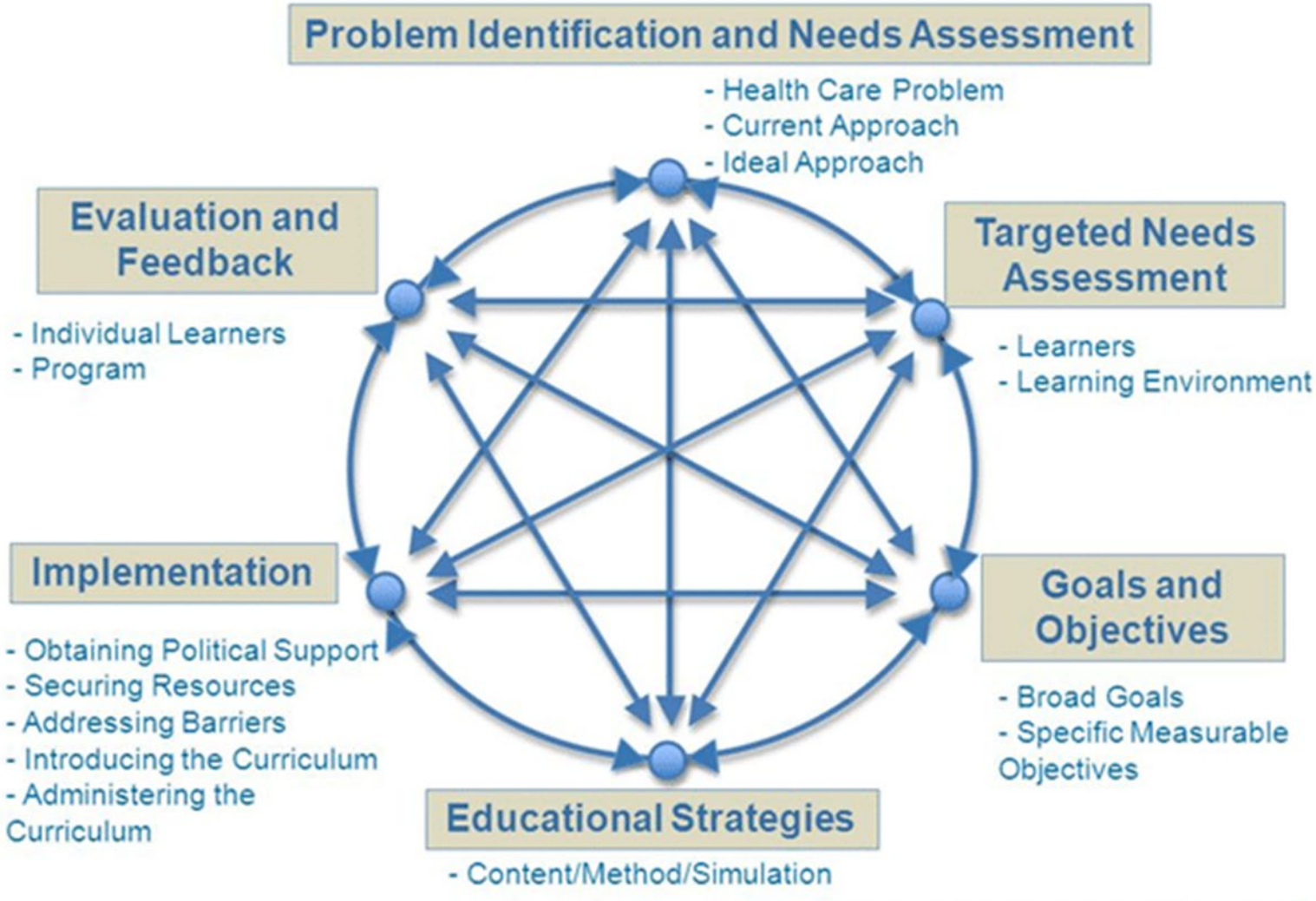
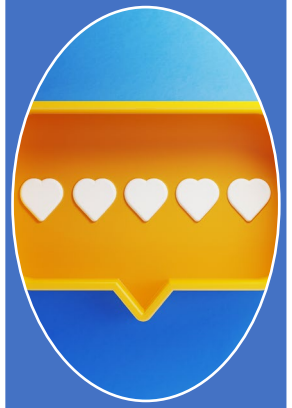
Does your institution integrate TeamSTEPPS principles into residency or fellowship training?

- ✅ Yes, fully embedded in training.
- ⚖️ Partially—used in some programs.
- 🔄 No, but we are interested in doing so.
- ❌ No, and we have no plans to.

Kern's 6-Step Method for Curriculum Development



TeamSTEPPS Project Development Using Kern's 6-Step Framework

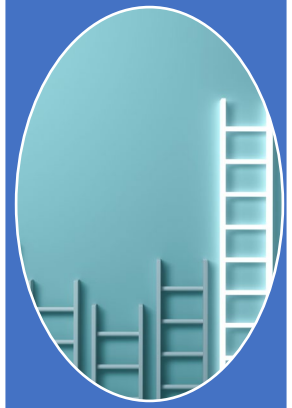


Problem Identification

- Highlighted gaps in team communication and lack of curricula for harmonized ACGME milestones.
- Identified teamwork breakdowns as a key contributor to patient harm.

Needs Assessment

- Conducted document analysis of ACGME program requirements.
- Completed a scoping literature review of simulation in GME.
- Engaged stakeholders through a Delphi process to prioritize competencies.



Goals and Objectives

- Improve communication and teamwork using TeamSTEPPS.
- Align curriculum with harmonized milestones for interpersonal skills.

Educational Strategies

- Designed a core simulation-based curriculum.
- Integrated foundational knowledge modules and simulation sessions.

Implementation

- Delivered TeamSTEPPS training with tailored scenarios.
- Hosted faculty development sessions for trainers.

Evaluation and Feedback

- Assessed knowledge and skills pre- and post-simulation.
- Used TPOT for team performance analysis and captured feedback via surveys.

Iterative Process

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Problem Identification

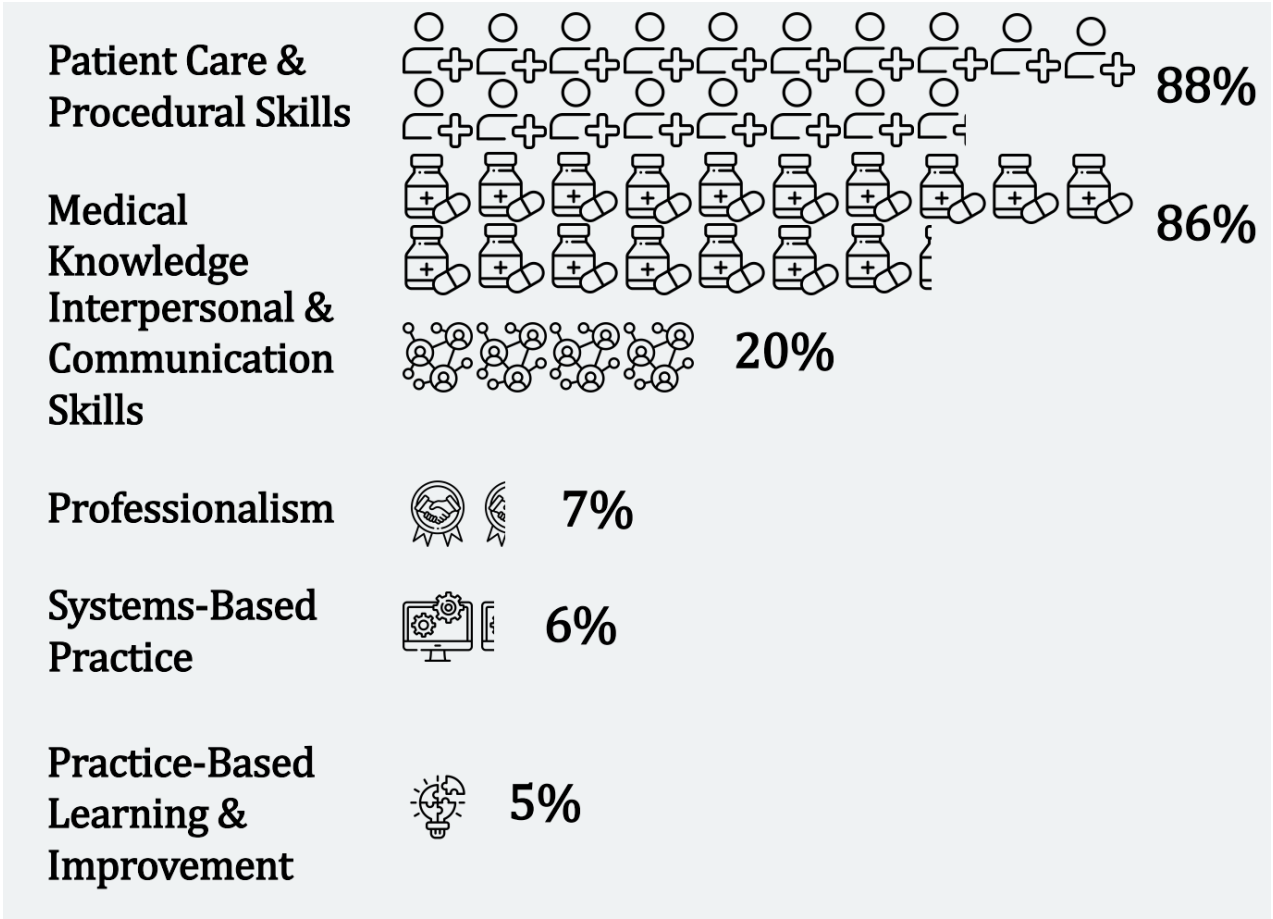
Academic:

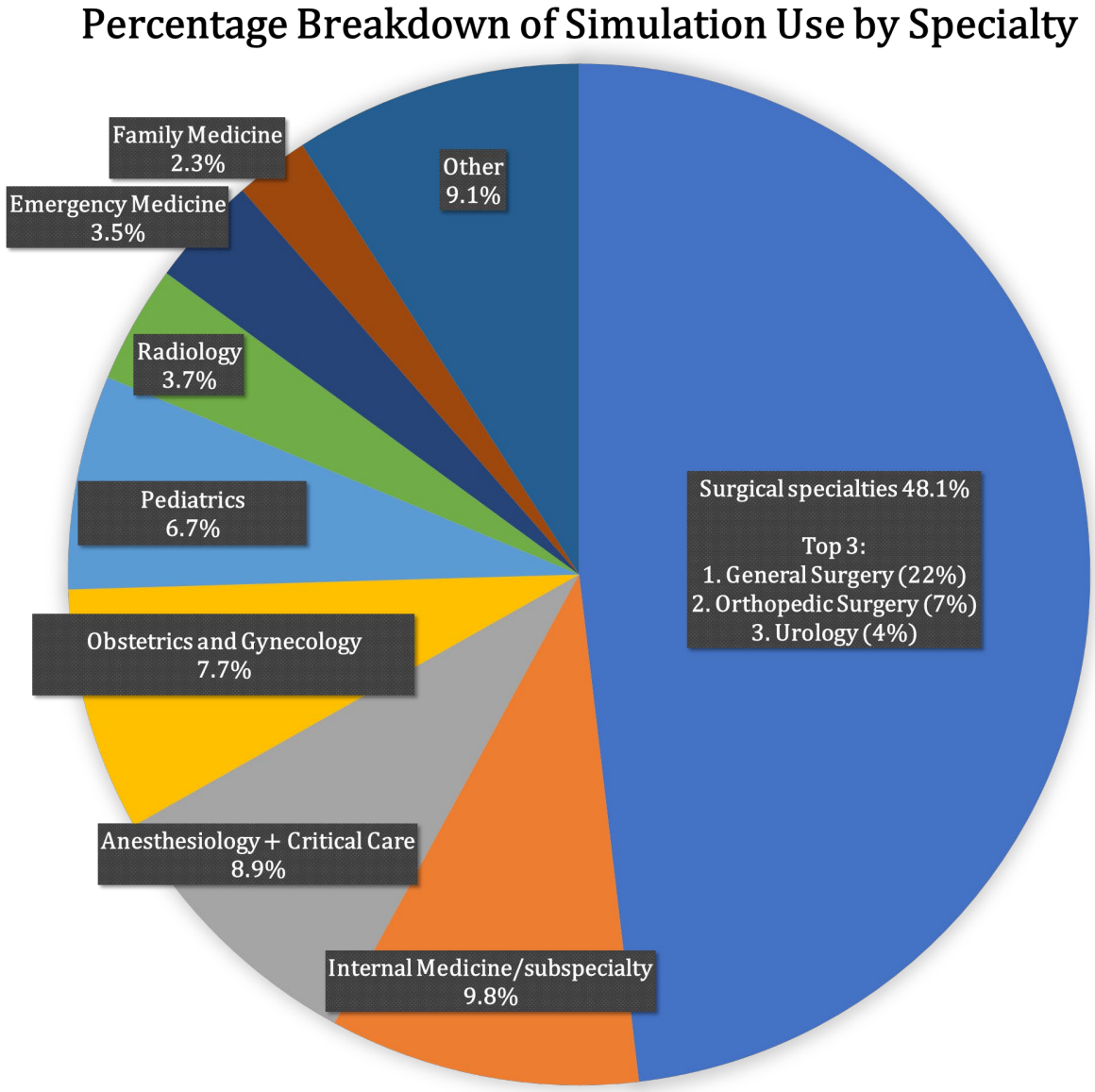
- **Background** - Interdisciplinary work group created to ensure consistency across GME disciplines resulted in Harmonized Milestones (Milestones 2.0) where 4 Core Competencies were harmonized across all specialties, but without curricular content to address these milestones.
- **Gap** – need for standardized resident training and validated assessment plans to ensure the harmonized milestones are addressed by residency programs

Clinical:

- **Background** - teamwork breakdowns are leading cause of patient harm in the U.S.
- **Gap** - need for improved teamwork skills among practicing physicians

Needs Assessment – Scoping Literature Review





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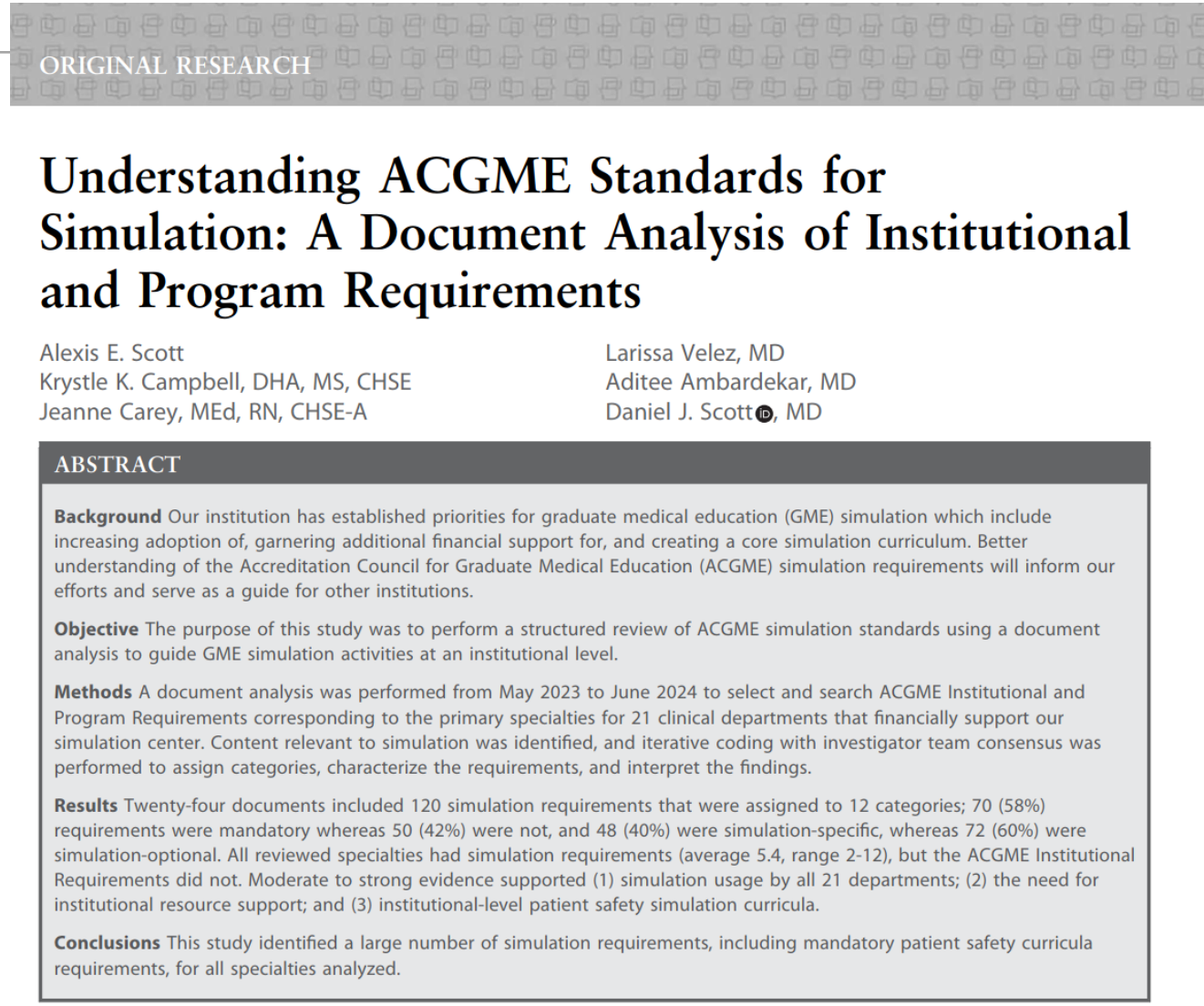
Needs Assessment

Methodology: Document analysis of 24 ACGME-accredited specialties' current Program Requirements

Results:

- 24 documents included 120 simulation requirements, assigned to 12 categories
- 70 (58%) of requirements were mandatory whereas 50 (42%) were not
- 48 (40%) were simulation-specific whereas 72 (60%) were simulation-optional
- All reviewed specialties had simulation requirements (average 5.4, range 2-12)
- Institutional Requirements interestingly contained no such simulation requirements.



ORIGINAL RESEARCH

Understanding ACGME Standards for Simulation: A Document Analysis of Institutional and Program Requirements

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ABSTRACT

Background Our institution has established priorities for graduate medical education (GME) simulation which include increasing adoption of, garnering additional financial support for, and creating a core simulation curriculum. Better understanding of the Accreditation Council for Graduate Medical Education (ACGME) simulation requirements will inform our efforts and serve as a guide for other institutions.

Objective The purpose of this study was to perform a structured review of ACGME simulation standards using a document analysis to guide GME simulation activities at an institutional level.

Methods A document analysis was performed from May 2023 to June 2024 to select and search ACGME Institutional and Program Requirements corresponding to the primary specialties for 21 clinical departments that financially support our simulation center. Content relevant to simulation was identified, and iterative coding with investigator team consensus was performed to assign categories, characterize the requirements, and interpret the findings.

Results Twenty-four documents included 120 simulation requirements that were assigned to 12 categories; 70 (58%) requirements were mandatory whereas 50 (42%) were not, and 48 (40%) were simulation-specific, whereas 72 (60%) were simulation-optional. All reviewed specialties had simulation requirements (average 5.4, range 2-12), but the ACGME Institutional Requirements did not. Moderate to strong evidence supported (1) simulation usage by all 21 departments; (2) the need for institutional resource support; and (3) institutional-level patient safety simulation curricula.

Conclusions This study identified a large number of simulation requirements, including mandatory patient safety curricula requirements, for all specialties analyzed.

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Needs Assessment with Stakeholder Engagement

Stage 1:Engaged Key Stakeholders

- program directors
- coordinators
- current residents
- graduated residents
- Coordinators
- education experts
- patient safety experts

Stage 2: Three Surveys

- Survey 1 (S1)
  - Identified critical competencies
  - Gathered insights on educational offerings and challenges
- Survey 2 (S2)
  - Explored integration of simulation-based methods
- Survey 3 (S3)
  - Achieved consensus on competency importance
  - Highlighted challenges and barriers

Stage 3 Data Analysis

- Descriptive and inferential statistics using SPSS
- Thematic analysis by independent coder

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- Descriptive and inferential statistics using SPSS - Thematic analysis by independent coders

Needs Assessment

Stakeholder Engagement and Consensus-Building

Results:

- ***Survey 1*** (n=48) identified competencies/knowledge for GME learners to include **communication, evidence-based medicine, population health and DEI, Quality Improvement and Patient Safety**
- ***Survey 2*** (n=87) demonstrated that **simulation-based learning is widespread** amongst GME programs, **barriers exist** common to all departments, and **communication, DEI, and professionalism** are critical competencies to address
- ***Survey 3*** (n=?) achieved **consensus on communication** as a necessary competency, highlighted **challenges in leadership/teamwork and crisis management assessments**, and **confirmed barriers** to simulation to include time constraints and lack of administrative support

Goals & Objectives

After participating in the TeamSTEPPS activity, learners will be able to:

1. Explain the TeamSTEPPS framework, including the 4 constructs of Team Communication, Team Leadership, Mutual Support, and Situation Awareness.

2. Identify some of the TeamSTEPPS tools and the situations in which they are useful, i.e. SBAR, CUS, Closed-Loop Communication, Call-Out, Check-Back, Huddle, Authority Dampening

3. Recognize areas for improvement in their own teamwork & team communication skills.

Educational Strategies

Train-the-Trainer Sessions for Departmental Facilitators

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Goal: Ensure Standardized Training

- Hosted ~1 month prior to sessions with incoming residents
- Content covered simulation prebriefing, facilitation, and debriefing
- Facilitators helped review and develop scenarios relevant to learners, but ensured learning objectives remained consistent across all scenarios
- New facilitators were paired with a co-facilitators experienced in simulation

Simulation Scenario (example)

Standard case

- Relevent to wide-array of specialties
- Appropriate medical knowledge/decision-making level for incoming residents
- Able to progress

Location modified (PACU vs inpatient vs outpatient)

Allowed focus to remain on Teamwork/Communication

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Case Scenario Template

Case Scenario title	Activity Director	Department	Course
TeamSTEPPS		Anesthesiology	

CASE OVERVIEW

TARGET AUDIENCE: PGY 1

SUMMARY OF THE SCENARIO (*Setting, Background, Progression, Criteria for Resolution*)**:**
Jack Dawson is a 38 year old male who is now recovering in the PACU s/p elective laparoscopic cholecystectomy. The CRNA calls for you to check on the patient as they are going to take a break. The patient is awake and complains of feeling cold and tingling sensations on his head.

Intial assessment: Patient just started complaining of sharp abdominal pain and difficulty breathing; BP 113/72, HR 77, RR 16, SPo2 98%, temp 37.4

CRNA info: Patient underwent general anesthesia for elective laparoscopic cholecystectomy. Propofol, rocuronium, and cefazolin were administered. The surgery took 40 minutes. The patient developed a few episodes of hypotension, which were corrected with bolus fluids and phenylephrine. Reversal was done with Sugammadex. Otherwise, the anesthesia event was uneventful. He is given tylenol and ibuprofen for pain.

Patient info:

- PMH significant for obesity, symptomatic cholelithiasis
- No past surgeries
- No known allergies
- Family history significant for obesity, hypercholesterolemia, and T2DM for his mother and grandmother
- Patient starts to complain of sharp abdominal pain and has difficulty breathing

LEARNING OBJECTIVES
Fulfill Team STEPPS objectives with concentration on communication skills within team members, with other providers/consultants, and with other care givers during patient hand off.

Prebrief / DEBRIEFING FORMAT AND TOPICS:

Prebrief will be done in classroom with room orientation provided at each room. Debrief will be done bedside to allow recording and save room transition time.

EXPECTED ACTIONS / THERAPUTIC INTERVENTIONS:

Differential diagnosis and Therapeutic intervention are NOT the focus of this course. Main focus here will be communication skills.

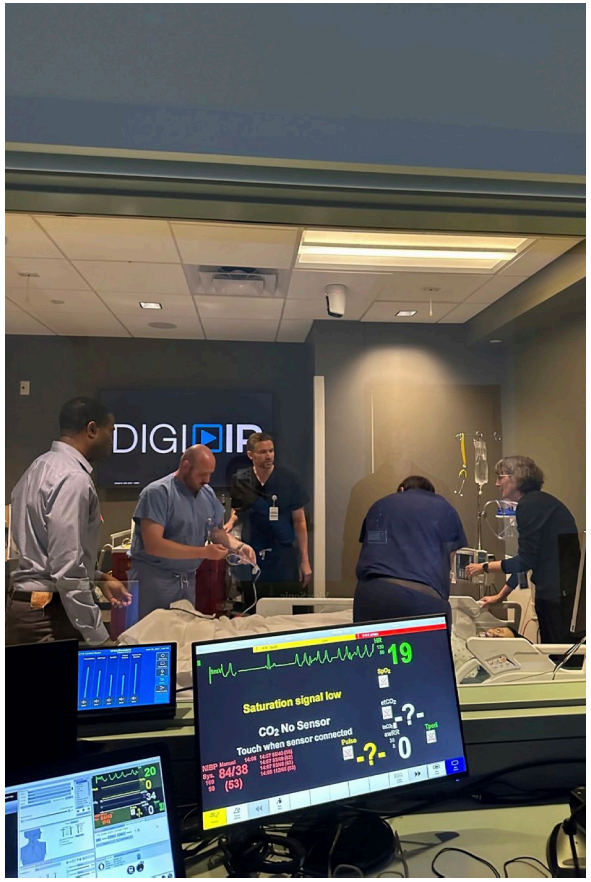
Expected calls to upper level/attending/pharmacy – all communication for these rolls done via overheard from control room.

Implementation

Prebrief

Simulation

Debrief



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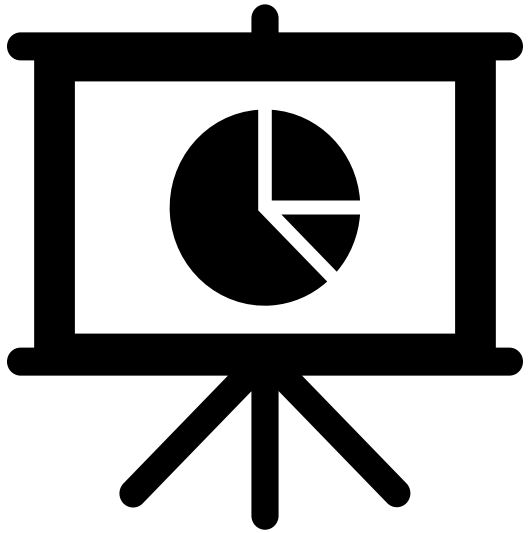
Pilot Results



Outcomes

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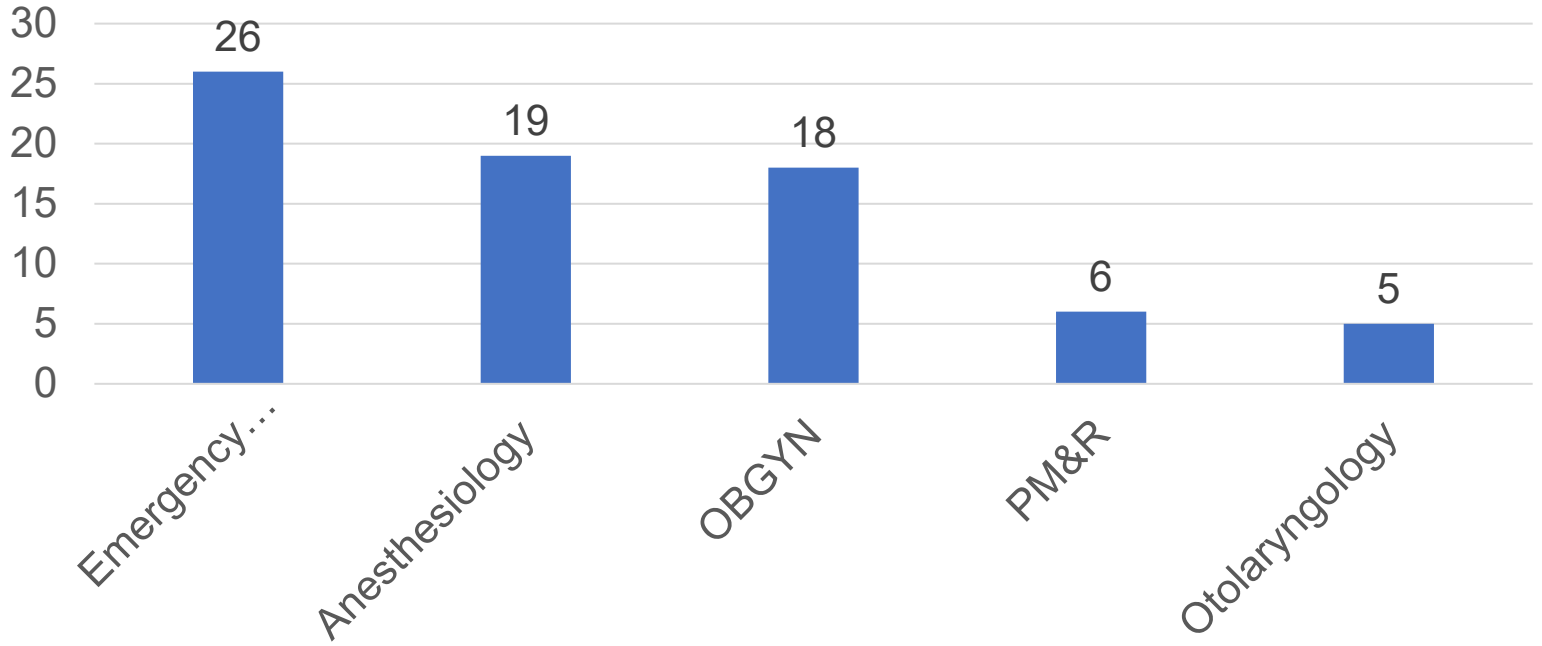
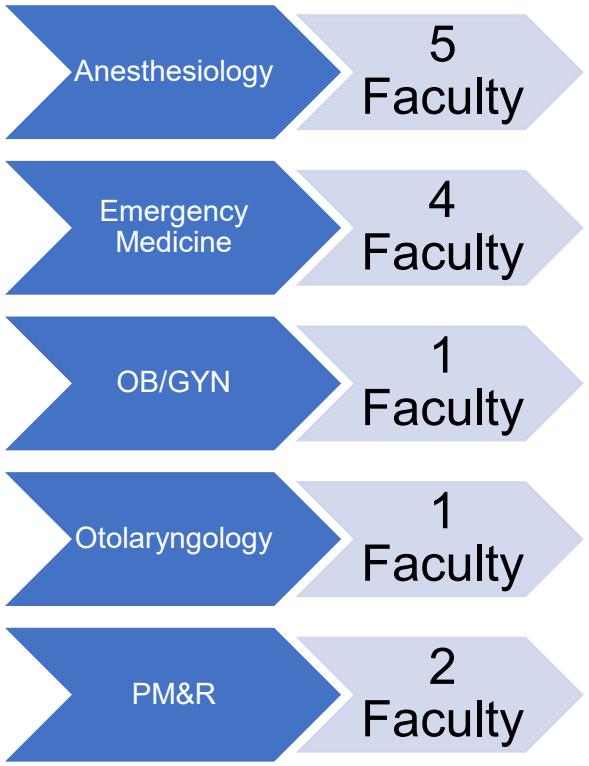
Assessment Plan

Assessment of Learning		Assessment of Program
Gain in knowledge • Pre-simulation v post-simulation knowledge check via validated TeamSTEPPs tool	Gain in Performance (teamwork and communication skills) • Formative evaluation via debriefing guide • Video review of teamwork using validated TeamSTEPPS Team Performance Observation Tool (TPOT) - Sim 1 v Sim 2	• Number of learners • Number of faculty • Feasibility • Post Activity Survey

PILOT: LEARNERS AND FACILITATORS



TeamSTEPPS Training: Learner Encounters by Department (N=74)



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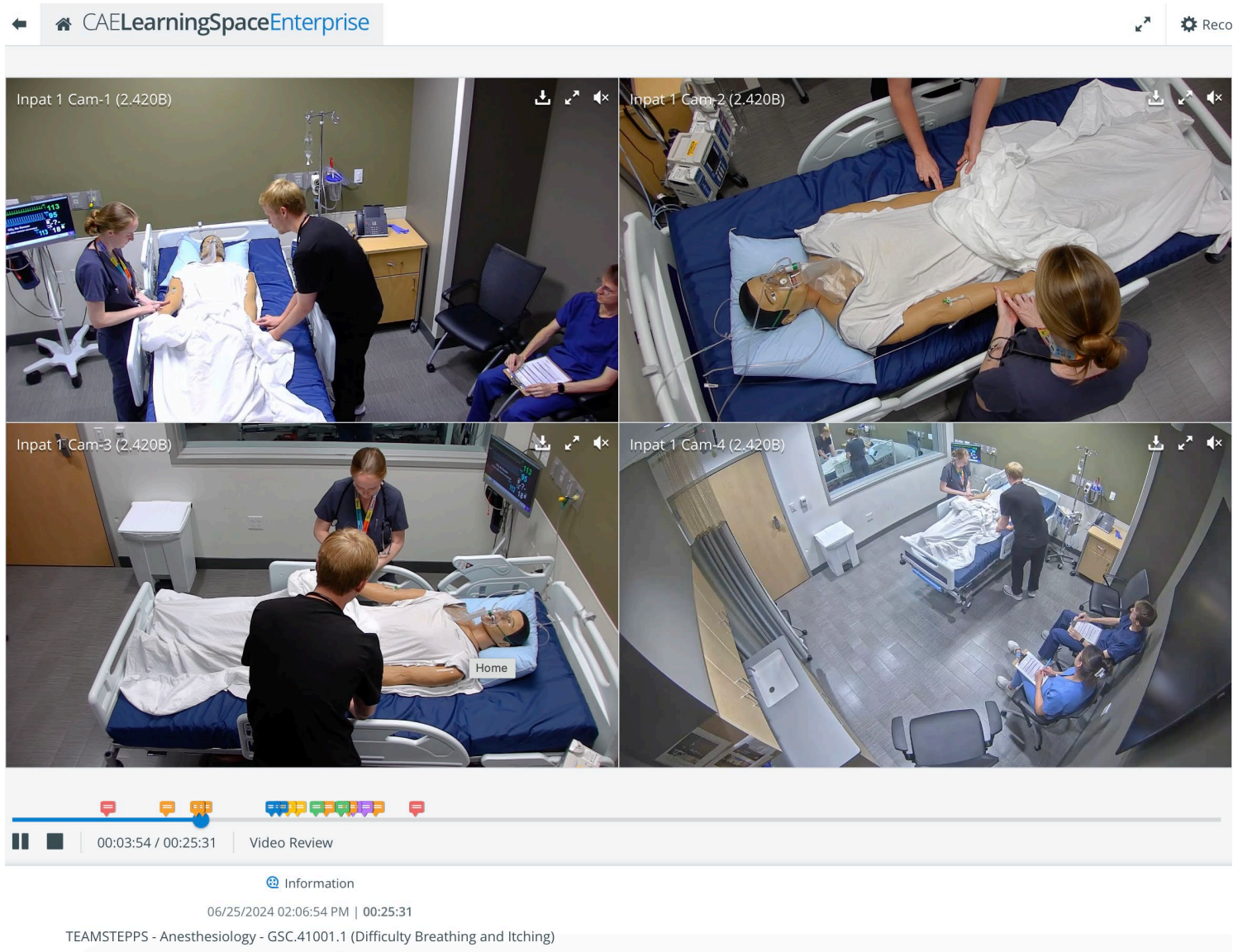
Evaluation and Feedback

Pre- & Post- Knowledge Check

OVERALL SCORES BY DEPARTMENT	Pre-Sim Quiz	Post-Sim Quiz
Anesthesiology	55.24%	70.00%
Emergency Medicine	52.17%	68.75%
Obstetrics & Gynecology	58.57%	72.86%
Physical Medicine & Rehabilitation	50.00%	80.00%

Evaluation and Feedback

Video Review: Team Performance Using T-POTS



TeamSTEPPS 3.0

TeamSTEPPS Team Performance Observation Tool

Date: _____
Unit/Department: _____
Team: _____
Shift: _____

Rating Scale *Please comment if 1 or 2.*

1 = Very Poor
2 = Poor
3 = Acceptable
4 = Good
5 = Excellent

1. Team Structure	**Rating**
a. Assembles a team	
b. Assigns or identifies team members' roles and responsibilities	
c. Holds team members accountable	
d. Includes patients and families as part of the team	
Comments: **Overall Rating – Team Structure**	
2. Communication	**Rating**
a. Provides brief, clear, specific, and timely information to team members	
b. Seeks information from all available sources	
c. Uses check-backs to verify information that is communicated	
d. Uses SBAR, call-outs, and handoff techniques to communicate effectively with team members	
Comments: **Overall Rating – Communication**	
3. Leadership	**Rating**
a. Identifies team goals and vision	
b. Uses resources efficiently to maximize team performance	
c. Balances workload within the team	
d. Delegates tasks or assignments, as appropriate	
e. Conducts briefs, huddles, and debriefs	
f. Models teamwork behaviors	
Comments: **Overall Rating – Leadership**	
4. Situation Monitoring	**Rating**
a. Monitors the status of the patient	
b. Monitors fellow team members to ensure safety and prevent errors	
c. Monitors the environment for safety and availability of resources (e.g., equipment)	
d. Monitors progress toward the goal and identifies changes that could alter the plan of care	
e. Fosters communication to ensure that team members have a shared mental model	
Comments: **Overall Rating – Situation Monitoring**	
5. Mutual Support	**Rating**
a. Provides task-related support and assistance	
b. Provides timely and constructive feedback to team members	
c. Effectively advocates for patient safety using the Assertive Statement, Two-Challenge Rule, or CUS	
d. Uses the Two-Challenge Rule or DESC Script to resolve conflict	
Comments: **Overall Rating – Mutual Support**	
TEAM PERFORMANCE RATING	

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Teamwork Construct	Teamwork Measure (TPOTS)	Sim 1			Sim 2			
		Mean	N	Std. Deviation	Mean	N	Std. Deviation	Significance (p<.05)
Team Structure	TS: Assembles team	1.6964	14	0.57327	2.5577	13	0.69338	0.002
	TS: Assigns or identifies team members' roles and responsibilities	1.48809524	14	0.55648579	2	13	0.57735027	0.027
	TS: Holds team members accountable	1.375	14	0.65596	1.9423	13	0.76481	0.049
Communication	CM: Provides brief, clear, specific, and timely information to team members	2.143	14	0.7703	2.808	13	0.522	0.015
	CM: Seeks information from all available sources	1.93452381	14	0.71325857	2.76923077	13	0.72501105	0.006
	CM: Uses SBAR, call-outs, and handoff techniques to communicate effectively with team members	1.9107	14	0.89661	2.5962	13	0.59107	0.028
Leadership	LS: Identifies team goals and vision	1.68452381	14	0.62717874	2.21153846	13	0.67581859	0.046
	LS: Uses resources efficiently to maximize team performance	1.875	14	0.80114	2.5577	13	0.56045	0.017
	LS: Delegates tasks or assignments, as appropriate	1.9047619	14	0.73296694	2.71153846	13	0.43115825	0.002
	LS: Models teamwork behaviors	1.72619048	14	0.84632727	2.5	13	0.5	0.008
Situation Monitoring	SM: Monitors the environment for safety and availability of resources (e.g., equipment)	1.5357	14	0.69238	2.2115	13	0.49839	0.008
	SM: Fosters communication to ensure that team members have a shared mental model	2.43452381	14	0.62204736	2.90384615	13	0.37553381	0.027
Mutual Support	MS: Provides task-related support and assistance	1.8036	14	0.83308	2.5192	13	0.48371	0.012
	MS: Provides timely and constructive feedback to team members	1.2143	14	0.57893	1.6731	13	0.42555	0.028
	MS: Effectively advocates for patient safety using the Assertive Statement, Two-Challenge Rule,or CUS	1.4821	14	0.72367	2.4615	13	0.80264	0.003

Evaluation and Feedback

Post-Sim Survey Results: Impact on Trainees ~ Qualitative Themes

- **Improved Team Dynamics:** trainees were able to apply TeamSTEPPS principles, resulting in more effective teamwork and communication.
- **Confidence Boost:** Trainees reported increased confidence in handling complex patient care situations as a team.
- **Establishing Psychological Safety:** Trainees voiced their appreciation for UTSW's investment and recognized the value of this course, as the opportunity to debrief and hear the faculty's perspective was highly valuable.
- **Key themes:** safe space to openly discuss feelings; trainees felt empowered to share when they needed assistance and reassured them to not be embarrassed to speak up.

Key Take-Aways and Next Steps

Take-Away #1

TeamSTEPPS intervention significantly improved participants' knowledge & skill in teamwork and communication.

Take-Away #2

The pilot proved the intervention was logistically feasible and well-received by learners and faculty alike, across the 5 participating departments.

Next Steps

All incoming medical residents, across the 21 clinical departments, will participate in the TeamSTEPPS intervention this June.

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Poll Question #6

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After today's webinar, how likely are you to advocate for TeamSTEPPS implementation in your institution?

- Very likely
- Somewhat likely
- Not sure
- Unlikely

Final Reminders

- **Evaluation**
  - Please complete the evaluation form that appears on your screen once the webinar ends
- **Continuing Education**
  - Create a Duke OneLink account if you have not done so
    - Instructions can be downloaded from the Files pod or your registration confirmation email
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