AUPN 2025

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Using Simulation to Evaluate Competencies Beyond Medical Knowledge

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Disclosures:

- Nuri Jacoby has received funding through the AUPN Faculty Innovation in Education award and the AAN Education Research Grant. He has received compensation serving as an expert witness and on an advisory board for Amgen.
- Arielle Kurzweil, David Lerner, and Jeremy Moeller report no conflicts.

Agenda for today's session

1. Introduction
2. Framework and activity to design an OSCE to build non-MK skills
3. Report back ideas for OSCEs
4. Simulation demo

How do you learn best?

a) By reading material
b) By sitting in a didactic
c) By observing others
d) By doing
e) A combination of the above

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Simulation = active learning!

What is an OSCE?

- Objective structured clinical examination
- Type of assessment to evaluate a learner's clinical skills or competencies in a standardized and objective manner
- Learners interact with standardized patients (SPs) or simulators (manikins, machines)
- Assessments are typically made using checklists or rating scales

Zabar S, Kachur EK, Kalet A, Hanley K. Objective Structured Clinical Examinations. 2013.

OSCEs utilizing SPs

Benefits of simulation

- Safe environment to practice skills
- Uniform experience for learners
- Interactions with “patients” are readily reliable and available
- Helps build a culture of safety

Issenberg SB, Scalese RJ. Simulation in Health Care Education. Perspect Biol Med. 2007;51:31–46.

Barriers to simulation

- Access
- $$$
- Time / effort
- Knowledge
- Realistic?

Zayyan M. OSCE: The Assessment of Choice. Oman Medical Journal, 2011; 26(4): 219-222.

Is simulation effective?

- Shorten door-to-needle time for ischemic stroke (Bohmann et al, Eur J Neurology 2022)
- Promote adherence to status epilepticus algorithms (Sutter et al, Neurology 2019)
- Improve success rate for LPs (Barsuk et al, Neurology 2012)
- Improve trainees' comfort with EEG interpretation (Fahy et al, Neurocrit Care 2020)
- Teach multidisciplinary collaboration (Bentley et al, MedEdPORTAL 2021)
- Identify and address struggling colleagues (Stainman et al, Neurology 2020)
- Practice communication skills in challenging scenarios like brain death (Morris et al, MedEdPORTAL 2020)

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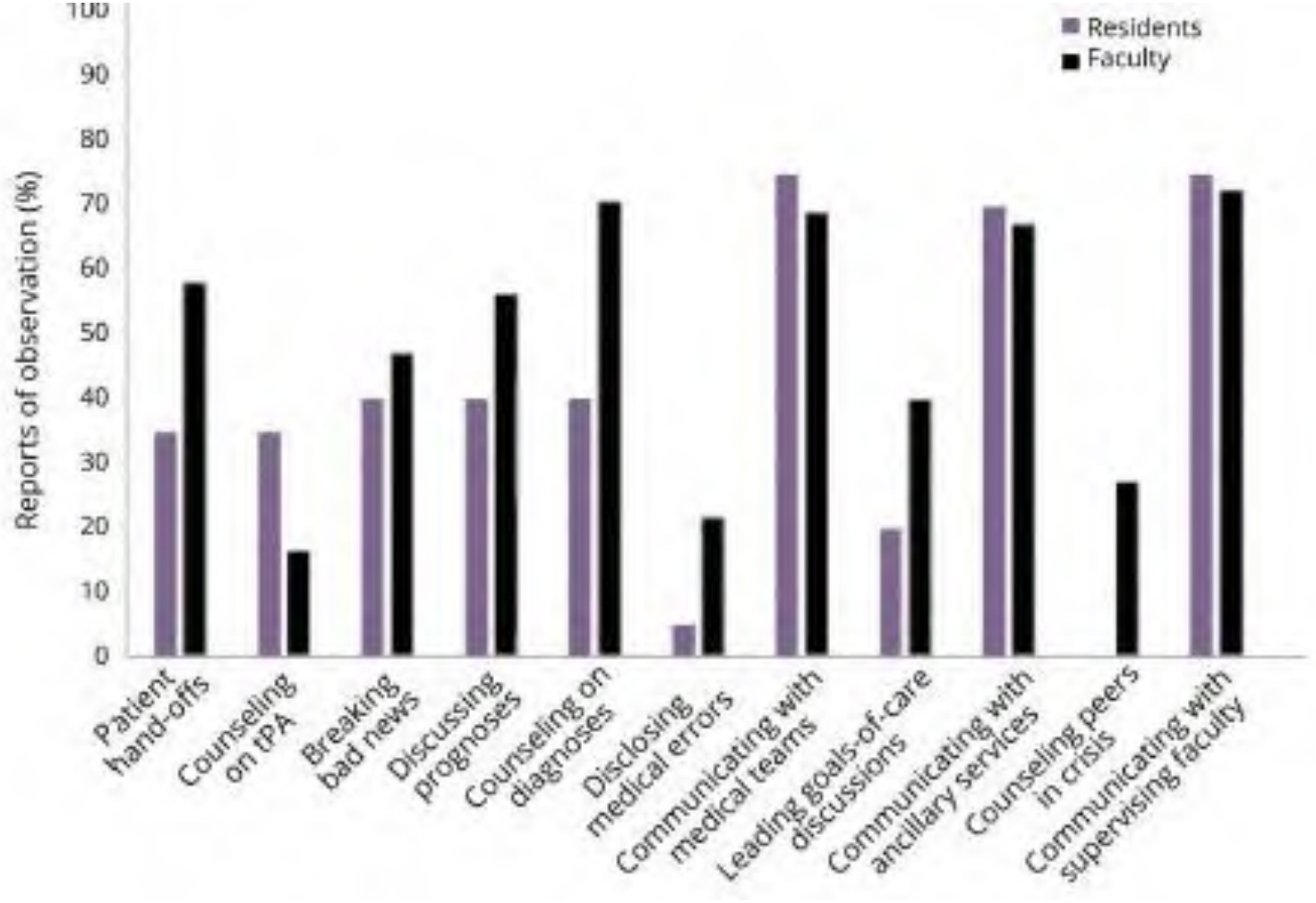
ACGME core competencies

1. Medical knowledge
2. Patient care
3. Practice-based learning and improvement
4. Systems-based practice
5. **Interpersonal and communication skills**
6. **Professionalism**

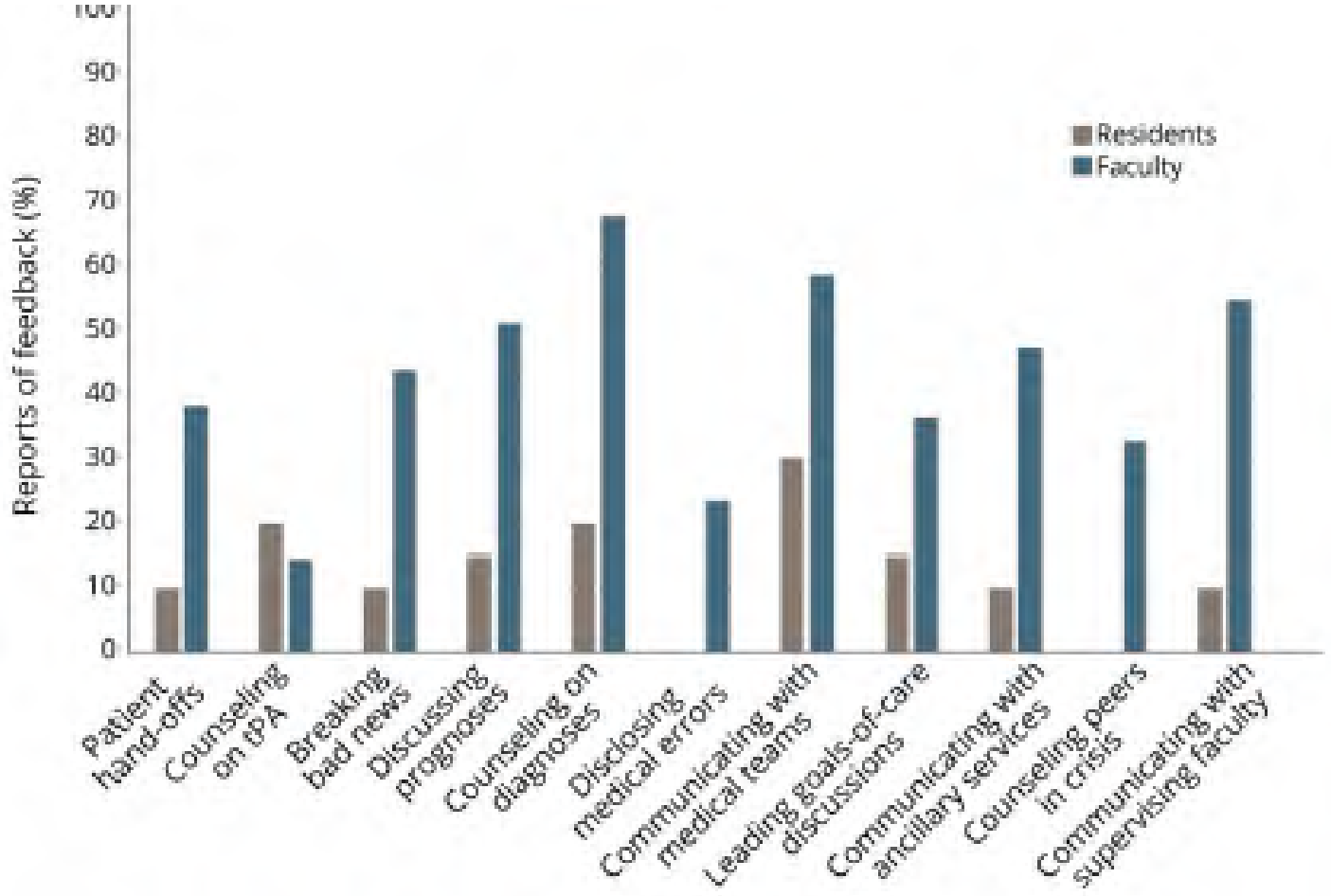
ACGME Milestones Guidebook

Report of observation



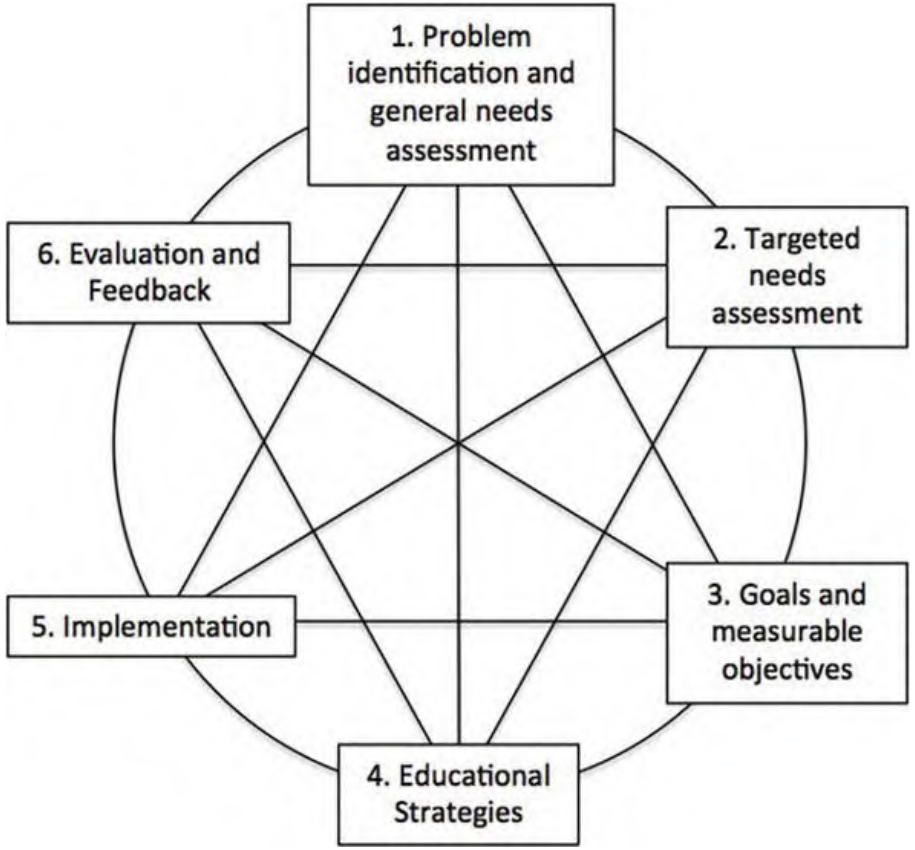
Kurzweil et al. Education Research: Teaching and assessing communication and professionalism in neurology residency with simulation. Neurology, 2020.

Report of feedback



Kurzweil et al. Education Research: Teaching and assessing communication and professionalism in neurology residency with simulation. Neurology, 2020.

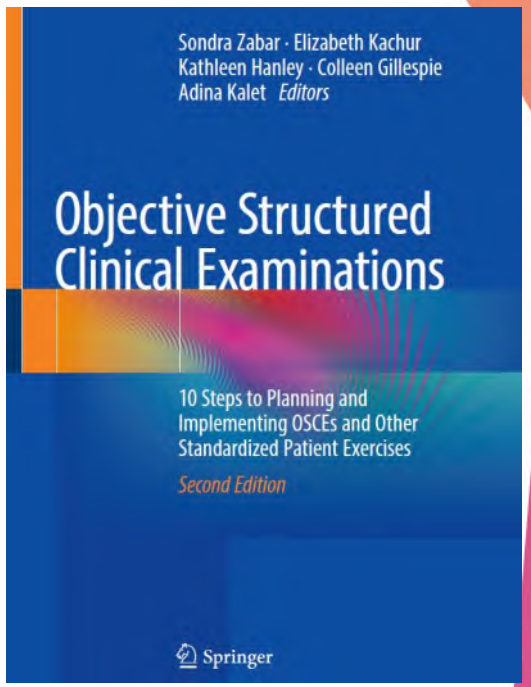
David Kern's 6-step approach



Thomas P, Kern D, Hughes M, Chen B. Curriculum Development for Medical Education: A Six-Step Approach.

Organizing OSCEs in 10 steps

1. Identify available resources
2. Agree on formats and timeline
3. Identify potential stations and establish a blueprint
4. Develop care scenarios and instructions
5. Create rating forms
6. Recruit and train SPs
7. Recruit and train evaluators
8. Implement the OSCE
9. Manage, analyze, and report data
10. Develop a case library and institutionalize OSCEs



Topic and Learner Group		
Gap/Need		
Goals & Objectives	Goal(s):	
	Objectives:	
Logistics	Location (sim center, AI): Schedule: Cost: Assessment of learners:	
Simulation Session	1. Pre-brief: How will you prepare learners for the simulation? 2. Simulation: What is an outline of the scenario? 3. Debriefing: What will be the main points to get across? Will it be individual vs group debrief or both?	
Tips for Debriefing Ask Tell Ask/ADAPT (Ask-Discuss-Ask-Plan Together)	Language for ADAPT	
Troubleshooting	Potential Barriers	Possible Solutions
Assessment & Evaluation	Learner and Instructor Satisfaction	
	Effectiveness of Intervention	

Thank you Drs. Galina Gheihman and Nicholas Morris

OSCE overview

OBJECTIVES

This station is designed to evaluate a resident's ability to:

1) Communicate effectively with an attending from another service
2) Communicate effectively with nursing staff
3) Maintain a professional demeanor when multi-tasking and under stress
4) Escalate to a higher supervision level (chief resident or attending)
5) Reach common ground with a more hostile member of the medical team

LOGISTICS

Personnel:

- **Standardized ER Attending**: Middle-aged male in **long white coat** with scrubs or street clothes
- **Faculty assessor also acting as nurse on the phone**

Station Materials:

- Resident instructions
- Standardized ER attending instructions
- SP evaluation forms/SP checklist

Room Arrangement:

- Desk space in ER attending with Computer for attending and Phone
- **Inner corridor Phone** for senior resident to use to call into room

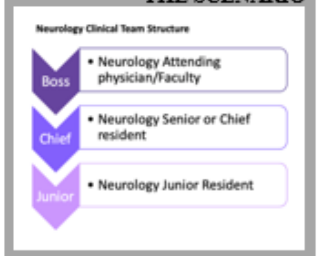
LEARNER INSTRUCTIONS

REASON FOR ENCOUNTER	**Case Setting**: You are the on-call Neurology junior. You have had a very busy call day and you have admitted a number of patients already. You also have pending consults to see. You have seen a consult in the ER. Ms. Smith is a 49-year-old woman with history of hypertension, borderline diabetes, tobacco abuse, depression/anxiety, multiple mental health visits, and ER visits with somatic symptoms. She presents with left hemibody numbness and burning without weakness that began 2 days ago. **On examination:** **General:** Obese, BP 140/90, pulse 90, complains of mild resolving headache **MS:** patient is anxious **Motor:** normal bulk, tone, give-way weakness on left **Sensory:** vague decreased sensation with tingling left face, arm, and leg without objective findings **Reflexes:** normal and symmetric **Gait:** exaggerated unsteadiness **Data:** NCHCT: negative CBC, chem panel, coags normal
YOUR ROLE	You are the Neurology Junior Resident and have spoken to your Chief Resident. Despite the patient's vascular risk factors, you both feel the current presentation is benign, and is a result of anxiety or migraine. You feel the patient can be discharged without additional testing and with neurology outpatient follow up.
YOUR TASKS	1) You need to discuss your recommendations with the ER Attending who is in the room you are about to enter. 2) If the phone rings, answer it as though answering a page.

Script

STANDARDIZED PROFESSIONAL I
ER ATTENDING

THE SCENARIO



You are a 45-year-old r
ER. You are providing
colleague of yours left,
notice, to take a new fa

You hate this time of y
residents and your per
and tendency for indec
admitted 10 patients t
services and your shift
have one more patient
as usual, the Neurology
meticulous".

The patient in question
no family accompanyin
examined her, **she was**
terrible was wrong w
regroup for discharge.
convinced she has not
significant vascular risk
pressure, pre-diabetes,
also have another caus
sided numbness, like n
to mind the fact that yo
misdiagnosed with anx
someone finally diagno
one should have to go t

In order to wrap this u
Neurology on call resid
weekend call day and h
admit a number of pati
The patient in question
resident has just spoke
know what the plan is

You are working on no
resident enters the roo

THE ENCOUNTER

BEGINNING:

Start with:
"I'm so glad we can finally talk. Ms. Smith really needs to be admitted."

The resident may tell you that the patient can be discharged with close outpatient follow up. **You are upset with this decision and feel the patient should be admitted for observation, work up, a MRI imaging.** To add to your irritation, your discussion with the resident is interrupted by a phone call from a floor nurse with questions about inpatients.

While the resident is on the phone with the nurse, you sit at your desk very near the resident waiting with your arms crossed. If the resident does not en the call quickly, you start drumming your fingers o the desk and making hand signals that you expect t resident to get off the call quickly and wrap up the patient disposition. You get up from the desk and move about the room to intimidate the resident further. If need be, you interrupt the call and tell th resident to call the floor staff back after you have finished in the ER.

With verbal statements and body language, you communicate the following at phases during the encounter:

Beginning:

1) Your annoyance with being in the ER and n on vacation:
   "I could be away enjoying a summer weekend rather than spending another weekend in this ER."
2) Your desire to get this wrapped up before your shift ends:
   "I've had a long day and this is my last patient to get squared away before I get of here."
3) Your irritation and impatience with the resident and the Neurology Service:
   "Your service is always slow about maki decisions!"

Middle:

4) Forceful recommendations that t admitted:
   "I really feel this patient shoul admitted for further observati evaluation."
5) **"Aren't you worried about this vascular risk factors?"**
6) **"Are you saying that you think is JUST anxious? Have you con**
7) Your anger about your own siste "misdiagnosis":
   "My sister's first symptom of m sclerosis was numbness, and s ignored for more than a year. I others to go through what she
8) Your irritation with the floor nur
   "Why does the floor nurse's n precedence over our discussio this ER patient?"

End:

9) Express your feeling that the res speak to his/her Chief and/or At **suggest you speak to your Chie Attending again to discuss the** If not (if it's contentious) say, **"G Attending's name, so I can do i**
10) Express your satisfaction if the r agrees to call a superior and com common ground with you.
11) Press the resident to give the pa **follow up with an actual appoi Neurology within a week.**
12) If the resident handled the encou them to get back to you about th
13) If the resident commits to makin plans and verifying with the Atte Chief Resident on service, and ge you as quickly as possible, that is acceptable to you.

(see next page)

STANDARDIZED PROFESSIONAL INSTRUCTIONS – FLOOR NURSE

THE SCENARIO

You are a nurse on 16East at Bellevue and you need some issues dealt with promptly by the on-call resident. A junior resident is on and the day has been very busy and stressful. You have paged the resident twice already and the first page was not answered.

YOUR ROLE

You are calling about Mr. Williams who is a stable epilepsy patient with a tendency to act out. You asked for a quetiapine order early in the morning because the patient was accelerating and the overnight call resident forgot to place the order. You are afraid you may need to call security to deal with Mr. Williams.

1) Get an order for quetiapine for Mr. Williams:
   "Can you give me a verbal order for quetiapine for Mr. Williams now."
2) Get an order for IM administration of a sedative (Haldol or Zyprexa) for Mr. Williams as well:
   What if Mr. Williams refuses PO and accelerates!? Can I have an IM order just in case?"
3) You also need clarification on other orders. Try to fluster the resident with your list of demands. Ask for enough that the resident will feel compelled to call you back rather than take care of all the issues at once:
   "There is a non-formulary blood pressure medication order on patient Perez."

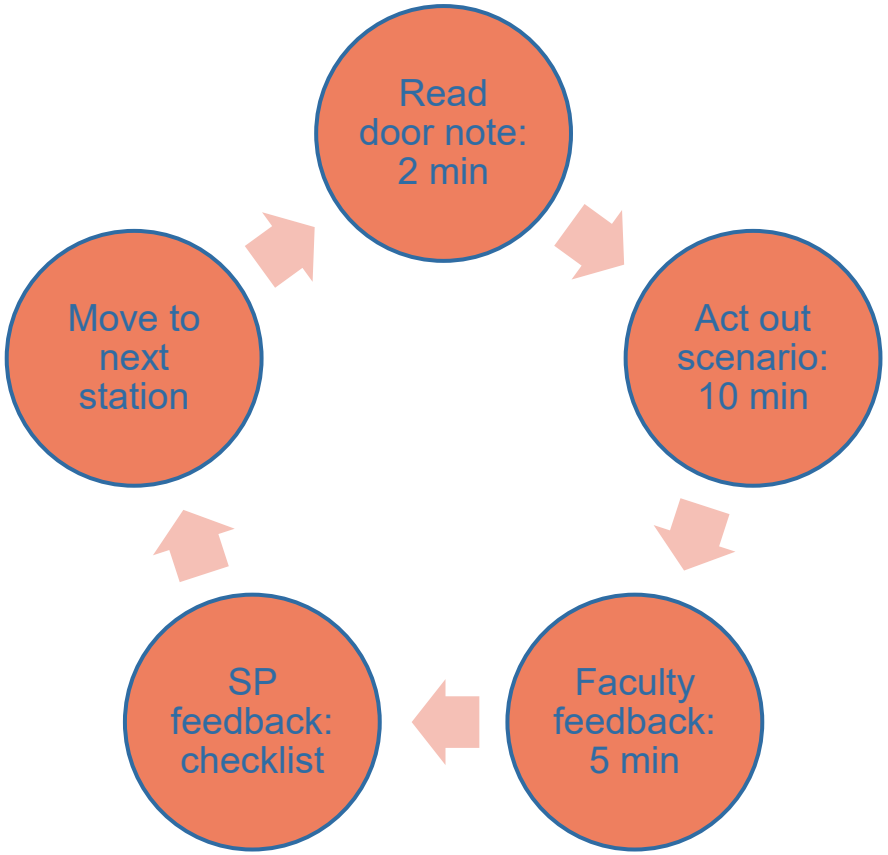
   "The new seizure patient Jones did not get her meds in the ER – should you give the am meds now?"

   "Can patient Alexander get the usual pain medication he takes at home and a bowel regimen for his constipation?"
4) Get a commitment from the resident for a call back or face-to-face encounter and a commitment about when that might happen.

S

1. **Elicited your story using appropriate questions**
   - ○ Not Done: Impeded story by asking leading/closed qu
   - ○ Partly Done: Used some open ended questions and in
   - ○ Well Done: Facilitated the telling of your story by askin
2. **Managed the narrative flow of your story**
   - ○ Not Done: Not able to elicit narrative because questio
   - ○ Partly Done: Elicited main elements of narrative, but ill
   - ○ Well Done: Elicited full narrative by asking questions th
3. **Clarified information by repeating to make sure he/she**
   - ○ Not Done: Did not clarify (did not repeat info provided)
   - ○ Partly Done: Repeated information but infrequently or
   - ○ Well Done: Repeated information and directly invited y
4. **Allowed you to talk without interrupting**
   - ○ Not Done: Interrupted
   - ○ Partly Done: Did not interrupt directly but cut respons
   - ○ Well Done: Did not interrupt and allowed time to expre
5. **Communicated concern or intention to help**
   - ○ Not Done: Did not communicate intention to help/conc
   - ○ Partly Done: Words OR actions conveyed intention to
   - ○ Well Done: Actions AND words conveyed intention to
6. **Non-Verbal Behavior enriched communication (e.g. eye**
   - ○ Not Done: Non-verbal behavior was negative or interfe
   - ○ Partly Done: Non-verbal behavior neither interfered wi
   - ○ Well Done: Non-verbal behavior facilitated effective co
7. **Acknowledged emotions/feelings appropriately**
   - ○ Not Done: Did not acknowledge emotions/feelings
   - ○ Partly Done: Attempted to acknowledge emotions/feeli
   - ○ Well Done: Acknowledged and responded to your emo
8. **Was accepting/non-judgmental**
   - ○ Not Done: Made judgmental comments or facial expre
   - ○ Partly Done: Did not express judgment but did not den
   - ○ Well Done: Made comments and expressions that den
9. **Used words you understood and/or explained jargon**
   - ○ Not Done: Jargon made it difficult to understand
   - ○ Partly Done: Used jargon occassionally but did not sig
   - ○ Well Done: Provided no opportunity for misunderstand
10. **Asked questions to see what you understood**
    - ○ Not Done: Did not check to see what you understood
    - ○ Partly Done: Checked what you understood in a curso
    - ○ Well Done: Checked your understanding through spec
12. **Collaborated with you to identify and decide on possible next steps/plan**
    - ○ Not Done: Did not give you opportunity to weigh in on next steps (told you what would happen next) OR didn't discuss next steps at all
    - ○ Partly Done: Told you next steps and asked if you agree, but no sense of collaboration
    - ○ Well Done: Elicited your views on next steps, shared her/his ideas, and mutually developed plan of action
13. **Introduced self**
    - ○ Not Done: Did not introduce self
    - ○ Partly Done: Introduced self partly (name but not role/status)
    - ○ Well Done: Introduced self fully (name and role/status)
14. **Acknowledged his/her own role in this patient's care (e.g., need to address ER attending's clinical concerns)**
    - ○ Not Done: Engaged in evasive discussion to avoid having to discuss the patient.
    - ○ Partly Done: Acknowledged ER attending's issues BUT expressed annoyance and reluctance to address ER attending's concerns.
    - ○ Well Done: Acknowledged role in patient's care AND offered solutions to clinical concerns
15. **Displays respect for you as member of team**
    - ○ Not Done: Made inflammatory or insulting comments AND raised his/her voice
    - ○ Partly Done: Was neutral
    - ○ Well Done: Remained calm, connected and respectful toward you
16. **Acknowledged your role as an ER Attending responsible for this patient**
    - ○ Not Done: Did not acknowledge at all
    - ○ Partly Done: Expressed understanding that your role is to ensure patient leaves ER and goes to appropriate service but actions do not reflect
    - ○ Well Done: Takes action to be responsive to your role/responsibilities (e.g., incorporates your role into decision-making)
17. **Communicated intention to facilitate best outcome for all parties (i.e. what works for the ER, ER attending, and resources at Bellevue)**
    - ○ Not Done: Did not communicate these intentions
    - ○ Partly Done: Words conveyed these intentions but body language did not
    - ○ Well Done: Words, actions, and body language conveyed these intentions
18. **Escalated the ER patient disposition to chief resident or Neurology Attending**
    - ○ Not Done: Did not even consider escalating to chief or Attending
    - ○ Partly Done: Decided to escalate to chief or Attending but did not convey intention to getback to the ER Attending ASAP
    - ○ Well Done: Decided to escalate to chief or Attending and conveyed intention to get back to the ER ATtending ASAP
19. **Overall, would you recommend this health provider to a family member or friend? *If chose NOT RECOMMEND or RECOMMEND WITH RESERVATIONS (especially if the individual performed reasonably well on checklist items) please make sure to explain why.***
    - ○ Not Recommend
    - ○ Recommend with Reservations
    - ○ Recommend
    - ○ Highly Recommend
20. **Overall, how would you rate this health provider's professionalism?**
    - ○ Not At All Professional - Displays many of the following: disrespect, lack of compassion, lack of accountability, lack of sensitivity/responsiveness to my needs/situation
    - ○ Somewhat Professional - Displays any of the following: disrespect, lack of compassion, lack of accountability, lack of sensitivity/responsiveness to my needs/situation
    - ○ Mostly Professional - Provider displays most of the following: respect, compassion, accountability, sensitivity/responsiveness to my needs/situation
    - ○ Completely Professional: Provider displays ALL of the above (respect, compassion, accountability, sensitivity/responsiveness to my needs/situation)

Implementing simulations



- x 4 stations
- SP checklist for each learner
- Faculty feedback for each learner
- Group debrief x 15 min
- Learner feedback via survey

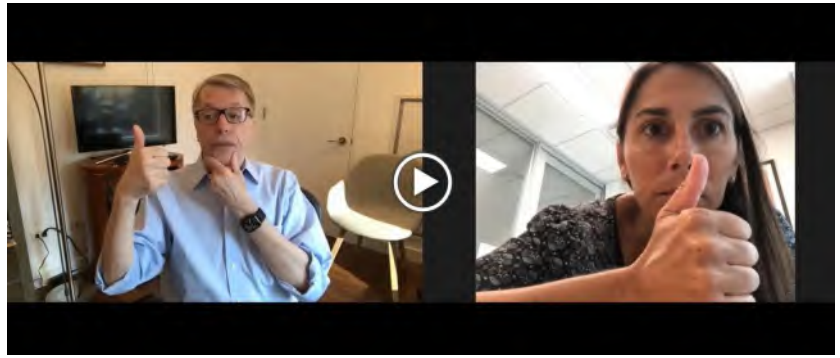
- Variations:
  - Group debrief only
  - Individual debrief only

How to overcome barriers?

- Access
- $$$
- Time / effort
- Knowledge

How to overcome barriers?

- Access
  - Remote simulation
  - Classroom style simulation
  - Low fidelity simulation
  - AI



How to overcome barriers?

- $$$
  - Remote simulation
  - Classroom style simulation
  - Low fidelity simulation
  - Use medical students/residents/faculty as SPs
  - Education grants

American Academy of Neurology™

Education Research Grant

American Board of Psychiatry and Neurology, Inc.
A Member Board of the American Board of Medical Specialties (ABMS)

Guidelines for Applicants for the ABPN Faculty Innovation in Education Award and the ABPN Dorthea Juul, PhD, Education Research Award

How to overcome barriers?

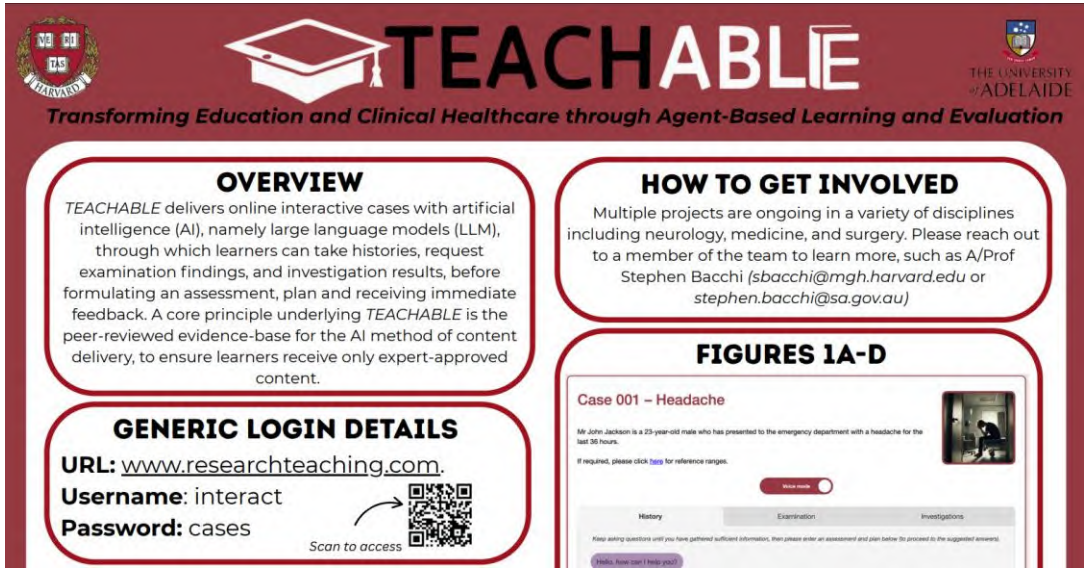
- Time/effort
  - Group OSCEs (GOSCEs)
  - Group debrief vs individual debrief only
  - Minimize time residents need to be present

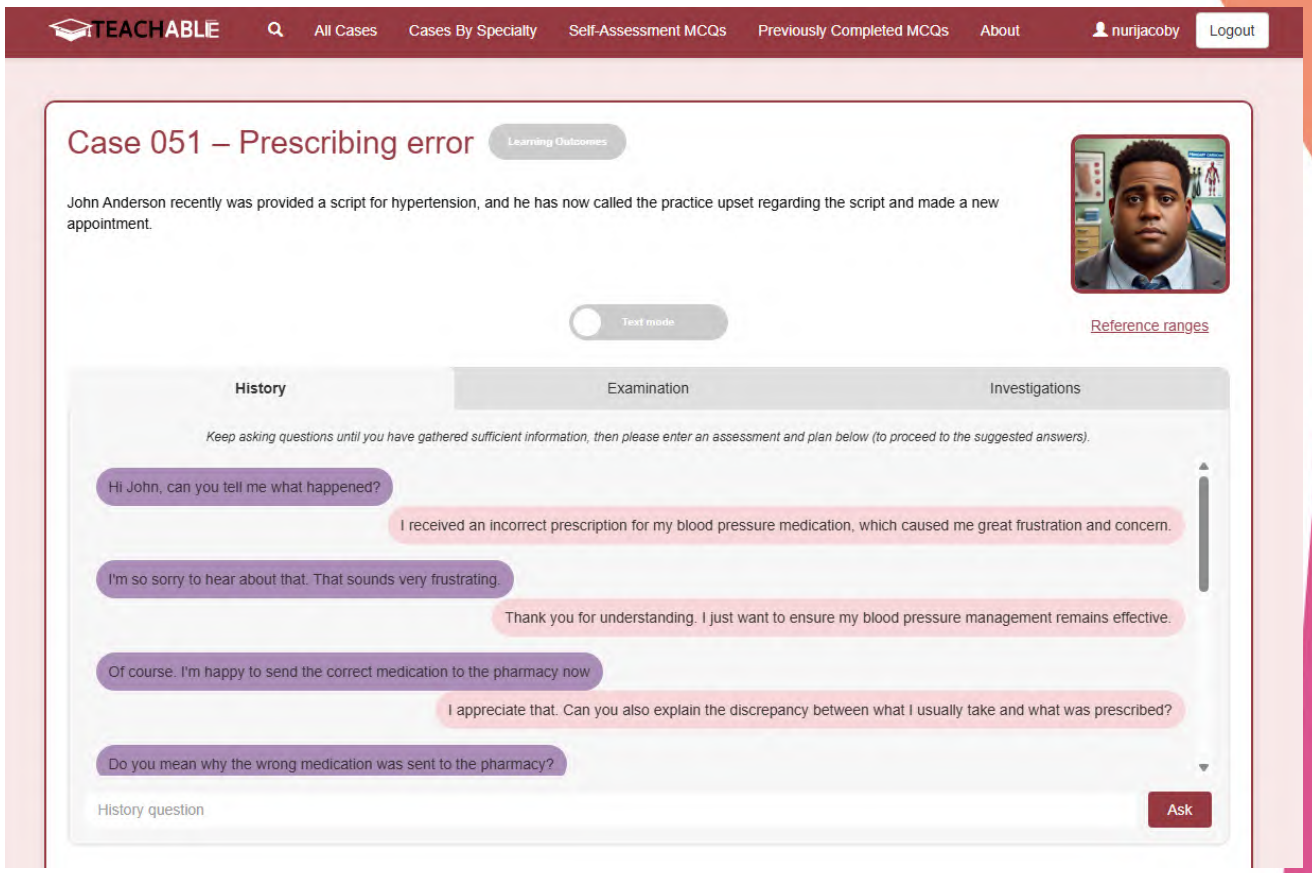
How to overcome barriers?

- Knowledge
  - Collaborate!!
    - Colleagues at same institution in other departments
    - Colleagues in neurology across the country
    - **CRESCENT: C**onsortium for **R**esearch and **E**ducation in **S**imulation promoting **E**xcellence in **N**eurology **T**raining
      - **Mission:** To create a collaborative network of neurology educators who utilize, research, and develop expertise in simulation
      - **Vision:** To improve the care of patients with neurological disorders through simulation science
      - Monthly virtual meetings, 3rd Friday, 1-2pm EST
      - nicholas.morris@som.umaryland.edu

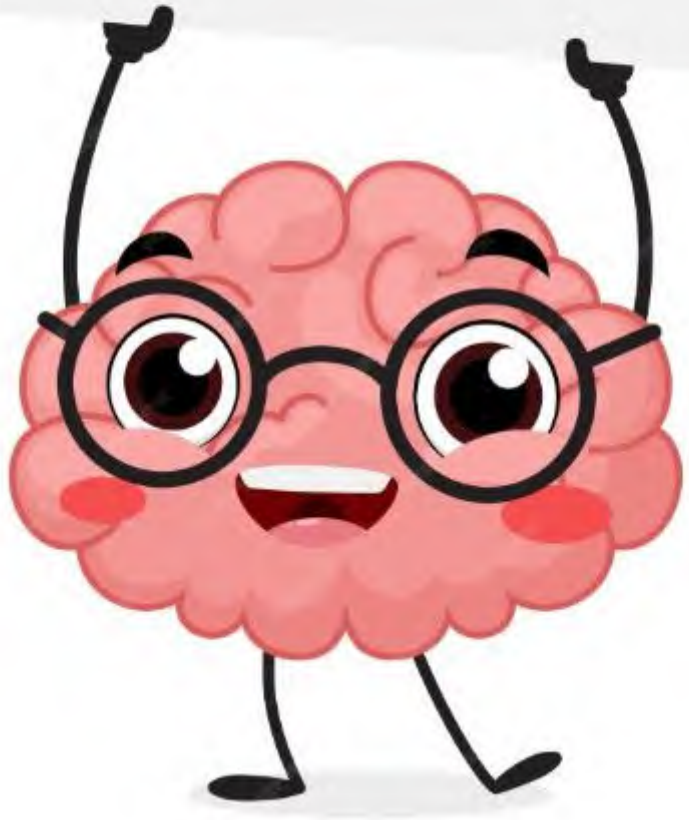
Using AI for simulation

Large language models can play role of patient that is text based or audio and evaluate and give feedback on communication skills using rubrics.





Thank you!



Topic and Learner Group		
Gap/Need		
Goals & Objectives	Goal(s):	
	Objectives:	
Logistics	Location (sim center, AI): Schedule: Cost: Assessment of learners:	
Simulation Session	1. Pre-brief: How will you prepare learners for the simulation? 2. Simulation: What is an outline of the scenario? 3. Debriefing: What will be the main points to get across? Will it be individual vs group debrief or both?	
Tips for Debriefing Ask Tell Ask/ADAPT (Ask-Discuss-Ask-Plan Together)	Language for ADAPT	
Troubleshooting	Potential Barriers	Possible Solutions
Assessment & Evaluation	Learner and Instructor Satisfaction	
	Effectiveness of Intervention	

Now it's your turn!

Topic and Learner Group		
Gap/Need		
Goals & Objectives	Goal(s):	
	Objectives:	
Logistics	Location (sim center, AI): Schedule: Cost: Assessment of learners:	
Simulation Session	1. Pre-brief: How will you prepare learners for the simulation? 2. Simulation: What is an outline of the scenario? 3. Debriefing: What will be the main points to get across? Will it be individual vs group debrief or both?	
Tips for Debriefing Ask Tell Ask/ADAPT (Ask-Discuss-Ask-Plan Together)	Language for ADAPT	
Troubleshooting	Potential Barriers	Possible Solutions
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	Effectiveness of Intervention	

Time to report back!

Topic and Learner Group	Topic- professionalism and communication. Learner- residents
Gap/Need	Gap: lack of standardized approach to teaching ACGME competencies of professionalism and communication
Goals & Objectives	Goal(s): Provide residents an opportunity for interactive skill building in communicating effectively
	Objectives: 1. Communicate effectively with another service and staff 2. Maintain a professional demeanor when multi-tasking and in a stressful, busy situation 3. Know when to escalate to higher level of supervision when needed (chief, attending) 4. Reach common ground when there are differences in opinion
Logistics	Location (sim center, AI): simulation center or classroom Schedule: 10 minute encounter + 5 minutes individual feedback + 15 minute group debrief Cost: cost of sim center + SPs Assessment of learners: SP checklist, faculty observer feedback
Simulation Session	1. Pre-brief: How will you prepare learners for the simulation? Didactic on professional behavior, heads up on consent for being videotaped 2. Simulation: What is an outline of the scenario? Learner reads door instructions, interacts with the SP for 10 minutes though is interrupted by "nurse" a few minutes in via phone/in person, then 5 min faculty feedback 3. Debriefing: What will be the main points to get across? Will it be individual vs group debrief or both? - Always introduce yourself politely and be prepared before entering an encounter with your colleague - If things start negatively: stop, step back, take a deep breath, and try to diffuse the situation - Use "Ask-Tell-Ask" strategies to assess where those involved in the encounter are at - Do your best to empathize with your colleagues, in addition to the patient - Always try to find a common ground
Tips for Debriefing Ask Tell Ask/ADAPT (Ask-Discuss-Ask-Plan Together)	Ask: How did the simulation go? What do you feel went well? Discuss: Yes, I saw that you escalated to a supervisor. Ask: What was challenging that you feel like you could have improved? Discuss: I noticed you did not ask the ED attending why he was worried. Plan Together: How can you improve in future challenging communications?
Troubleshooting	Potential Barriers - SPs being absent - Cost of hiring trained SPs - Residents showing up late - Time for residents and faculty Possible Solutions - Train backup SPs - Using medical students or residents as SPs - Allow for flexibility in schedule - Group debriefing, group OSCEs
Assessment & Evaluation	Learner and Instructor Satisfaction – survey of learners
	Effectiveness of Intervention – satisfaction survey of faculty, staff, other colleagues

Simulation Demo

Scan below for the demo case and checklist!

AUPN 2025
2nd Annual Meeting • Baltimore, MD • Saturday, September 13th