A Series on Teaching

Bringing Back Bedside Teaching:
Best Practices Across the Clinical Spectrum

Monday, February 10, 2025, 5:00 - 6:00PM

Are rounds still relevant?

Patient Care
Communication
Assessment
Education

Hulland. Journal of Hospital Medicine. 2017.

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Effective clinical teaching depends on a supportive learning climate

Get to know the team
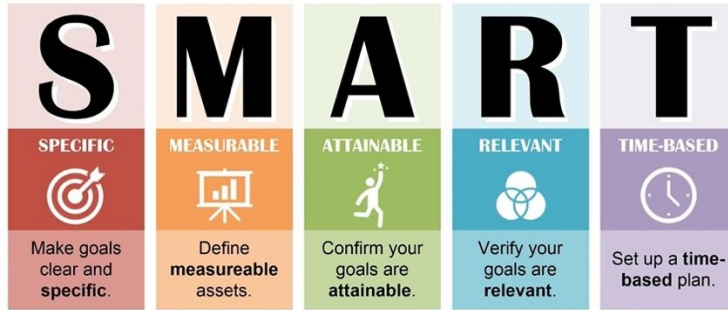
Share a growth mindset

Balance autonomy and supervision

Model admitting limitations

Reilly. Lancet. 2007.

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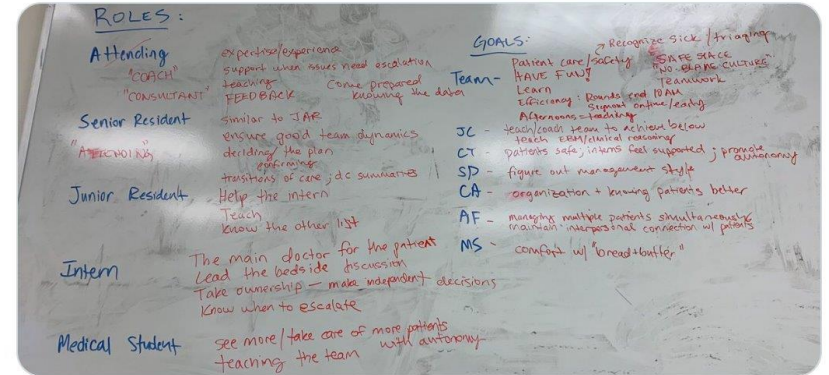**1** **Teach to the learner's agenda**

Establish learning goals

Provide accountability

Justin Choi @JustinJWChoi · Jun 26, 2019

Here's what my residents, interns, students decided for goals/expectations of each person and the team for the next 2 weeks. "Agree with the above." #meded

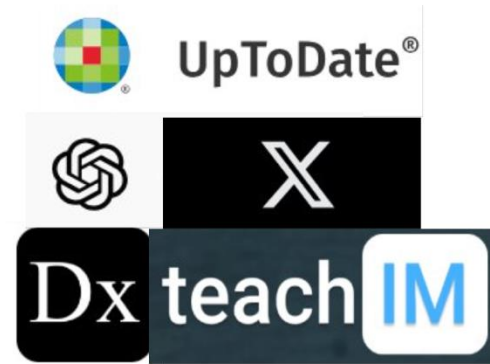**2** **Prepare for targeted teaching**

Set aside time to prepare teaching points

Pick a few high yield resources

Avoid over teaching

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3 **Orchestrate bedside encounters**

Set the agenda for the encounter

Assign roles involving the entire team

Give feedback and praise what went well

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4 **Clinical coaches facilitate peer teaching**

Define Roles
PGY1 = primary provider
PGY2/3 = team leader
Attending = coach

Use Questions
Reflect Q's back to
the team prior to
giving your input

Harness Expertise
Highlight learners'
unique interests and
use real time
researchers

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Summary

- Establish a positive learning climate to facilitate effective clinical teaching
- Teach to the learner's agenda, avoiding over-teaching and prompting peer-teaching
- Orchestrate bedside encounters to engage everyone and optimize efficiency

QUESTIONS?

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I have no relevant financial or nonfinancial relationships with any of the topics, medications or interventions discussed in this presentation.

Goal and Objective

To increase the number of clinicians including bedside teaching in their outpatient practice by sharing and applying an evidence-based approach with practical tips applicable for teacher-learner-patient triads of all levels.

Bedside Teaching in the Outpatient Environment

- High value
    - For learners, patients and for clinical educators

- Many challenges
    - Not enough time
    - Fear of an awkward moment
    - What are the actual teaching points - unclear goals
    - Giving feedback in front of a patient

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Bedside Teaching in the Outpatient Environment

Bedside teaching includes opportunities to teach and assess within multiple key learning domains:

1. Clinical knowledge and skills (many skills!)
2. Professionalism and empathy
3. Communication (with staff and with patients)
4. Role modeling, clinical reasoning, decision-making, time management

Burgess, A., van Diggele, C., Roberts, C. *et al.* Key tips for teaching in the clinical setting. *BMC Med Educ* **20** (Suppl 2), 463 (2020). https://doi.org/10.1186/s12909-020-02283-2

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We just need a plan!

Bedside Teaching in the Outpatient Environment

Recommendations:

- Have a **<u>very</u>** specific learning objective

- Discuss roles and expectations deliberately and collaboratively

- Tailor to the scenario – make it organic

- Feedback and debrief later (usually)

> 💡 *"Do you have any specific goals related to clinical skills that you're working on right now that I might be able to help you with during our time working together?*

Bedside Teaching in the Outpatient Environment Recommendations:

Deciding whether to do bedside teaching by:

- Direct observation (they drive the encounter)

- Role modeling with periodic engagement (you drive and they have a specific limited role)

- "Divide and conquer" (they evaluate the patient independently and present in front of the patient when you return)

Factors to consider: the learner, the patient, session flow/time constraints

Tung, Judy. Work conversation about bedside teaching via email. 4 Feb 2025.

Bedside Teaching in the Outpatient Environment

Have a <u>very</u> specific learning objective
Discuss roles and expectations deliberately and collaboratively

Domains to assess include:

- Communication skills
  - One section of the interview to expand on after you hear the presentation
  - Reviewing the rationale for one element of the plan with the patient
- One specific part of the physical examination
- Presenting findings in front of the patient
- Bonus points: a motivational interviewing moment

"Let's go back in together and…"
- *"…I can hear how you wrap up with her about bone density screening."*
- *"…I can hear how you bring the conversation back around to alcohol use."*

"I hope it's all right if I give you some feedback afterwards."

Rotthoff T. Practical tips to improve bedside teaching using learning theories and clinical reasoning [version 2; peer review: 2 approved]. MedEdPublish 2024, 13:215 (https://doi.org/10.12688/mep.19826.2)
Gawande, Atul, author. Being Mortal : Medicine and What Matters in the End. New York :Metropolitan Books, Henry Holt and Company, 2014.

Bedside Teaching in the Outpatient Environment
Have a <u>very</u> specific learning objective
Discuss roles and expectations deliberately and collaboratively

"I agree with Mr. L starting to check his blood pressure at home. Do you feel comfortable going over the appropriate technique with him? Or would you want to go over that first together?

"I'll go first just in case you haven't done this in a while, but let's both percuss Ms. B's right upper quadrant. Do you want to explain to her what we're doing while we are examining her or would you rather that I do that?"

Key ideas: assess experience, consider emotional element of learning, provide opportunities to fill in gaps, name and anticipate stresses; brief the patient as well

- *Make a back-up plan: "I will sit back and let you lead the counseling but if you need me to jump in please let me know."*
- *Confirm buy-in: "Does this sound like a plan or do you want to change the way we do this?"*

Rotthoff T. Practical tips to improve bedside teaching using learning theories and clinical reasoning [version 2; peer review: 2 approved]. MedEdPublish 2024, 13:215 (https://doi.org/10.12688/mep.19826.2)

Bedside Teaching in the Outpatient Environment
Tailor to the scenario – make it organic

- **Choosing "the right" patient can increase comfort levels**
  - A patient with a known physical examination abnormality
  - Someone who has done well with motivational interviewing before or who has conveyed positive feelings toward previous interactions with learners
  - *Learner-centered: match one of their specific learning goals (or a "need"); set your learner up for success with patient-specific information*

- **Don't forget to brief the patient**
  - Secure buy-in from patient while linking it to clinical relevance: *"Is it all right if both Rebecca and I examine your ankles to check the circulation in your arteries?"*
  - *"Thank you for starting off your visit today by working with Benjamin. Is it all right if he gives me a summary of what you and he have discussed so far? And at the end if there's anything you'd like to add or edit, please do."*
  - Plan ahead so it is easier for you and the learner to avoid jargon

Bedside Teaching in the Outpatient Environment
Feedback and debrief later

During the encounter:

- **Avoid saying "no" during the patient encounter**
  - Save constructive feedback for later
  - *"Another way to examine that area would be to (demonstrate); that way works best for me."*

- **Fight the urge to jump in (with exceptions)**
  - Efficiency less important than fostering the learner's autonomy and confidence
  - Trust that a different style can still be effective
  - Thank the patient directly for facilitating the educational moment

Bedside Teaching in the Outpatient Environment
Feedback and debrief later

After the encounter:

- *"First of all, having a skill assessed in front of a patient can be extra challenging, so kudos to you for being willing to do this together today."*

- *"How do you think that went?"*

- *"I thought it was successful when you…"*

- *"How did it feel when she answered your question that way?"*

- *"Is there anything that you would do differently next time?"*

- *"What if next time you met a patient with a similar issue but with…"*

- Be specific with any constructive feedback, linking to specific elements of the conversation or the patient positioning or hand positioning during the physical exam

Questions?

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Bedside Teaching: Procedural Skills

Julia Sobol, MD MPH

Fellowship Director, Anesthesiology Critical Care Medicine

Director of Clinical Education, Dept. of Anesthesiology

Outline

What makes procedural skills unique

Ideal instructor characteristics

Optimizing the teaching environment

How to teach procedural skills

Educational modalities

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Why Are Procedural Skills Unique?

Teaching procedural skills

Practical and realistic environment

Unpredictable

Patient care *vs* patient safety

Lack of learner privacy

Urgency/emergency

Limited discussions

Patient comfort

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Viola and Young, *Int Anesthesiol Clin* 2016.

Ideal Instructor Characteristics

Ideal instructor characteristics/traits

Focus groups with pulmonary critical care fellows and faculty at 4 different sites

Successful procedural teachers have these intrinsic qualities:

- Ability to remain calm and patient
- Trusting and yield control
- Instill confidence in learners
- Procedurally competent
- Adaptable
- Effective communicator

Kelm et al, *Chest* 2020.

Ideal instructor behaviors

Pre-brief

Give clear, specific feedback

Allow autonomy

Encourage or reassure

Debrief after the procedure

Least effective behaviors:

- Jump in and take over procedure

- Yell or criticize

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Kelm et al, *Chest* 2020.

# Ideal procedural instruction

Anesthesiology trainees' perceptions of best approaches to teaching epidurals

Qualitative study found that residents valued:

- Staged approach to learning

- Troubleshoot independently

- Graded independence

- Focused feedback

- Calm instructor

Challenges: awake, non-sedated patients, limited time to teach, and creating psychological safety

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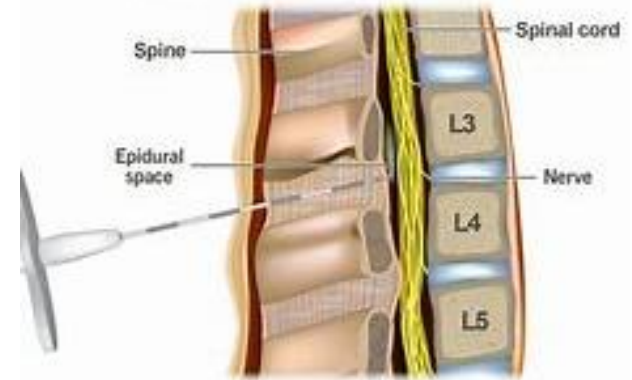
Effective surgical educators

Surveys and focus groups with surgical faculty and trainees

Framework of competencies

- Medical knowledge/patient care:
    - Knowledgeable, explains reasoning
- Diagnose learner:
    - Communicates expectations, deconstructs complex concepts
- Foster psychological safety:
    - Facilitates dialogue, approachable, reflects
- Communicates thought processes
- Learner-centered:
    - Involves learner in clinical reasoning, gives constructive feedback, fosters learner autonomy by allowing struggle before intervening

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Sharma et al, J Surg Educ 2024.

Optimizing the Teaching Environment

Teaching environment

Instructor should monitor and control the learning environment

- Create a calm space
- Manage other tasks
- Control the environment in the room

Expectations about time constraints and institutional policy/norms

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Kelm et al, *Chest* 2020.

How to Teach Procedural Skills

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Teaching procedural skills

Pre-brief before procedure

- Assess prior learning
- Review steps of procedure
- Pre-learning
- Common understanding of expectations

During procedure: specific, just-in-time feedback

After procedure: debrief, reflect, plan for next encounter

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Kelm et al, *Chest* 2020.

Briefing, Intraoperative Teaching, Debriefing (BID) Model

Model for surgical teaching in the OR

- Fits easily into surgeon's existing routine
- Adapted from One-Minute Preceptor to fit constraints of surgical practice

BID model

- Briefing: interaction at scrub sink, assess learner needs, establish learning objectives
- Intraoperative teaching: focus teaching on 1-2 learning objectives
- Debriefing: reflect, teach general rules, reinforce what was done right, correct mistakes

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Roberts et al, *J Am Coll Surg* 2009.

Educational Modalities

Activated demonstration

Useful for a skill/procedure unfamiliar to learner

Novice learner has specific assignment while observing

- "Watch what I do with my right hand during the laryngoscopy"

Afterwards, learner is "activated" by describing what was observed

Brief discussion about rationale for actions

Set agenda for future learning opportunities

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Chinai et al, *West J Emerg Med* 2018.

Videos

Study of computer-enhanced visual learning before trainee CSE placement

- Online tools: low cost, ease of access, self-directed learning

Randomized anesthesiology residents on first OB rotation to CEVL module or no access

- Control group: standard available resources of handbooks, textbooks, journal articles

Blinded raters assessed residents performing their first CSE

- Procedural checklist

- Procedural time

CEVL group had significantly shorter mean procedure time *vs* control group and had higher scores on overall performance checklist

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Nixon et al, *Anesth Analg* 2019.

Simulation: overview

Simulation-based education has large role in teaching procedural skills to novices

- Repetitive/deliberate practice without risk
- Competency-based curricula
- More ethical
- Requires commitment of resources, time, technical support, and supplies

Studies have shown effectiveness of simulation in testing settings, but future research should focus on:

- How to optimize this tool
- Whether knowledge transfers to clinical performance
- If it improves patient outcomes

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Simulation: CVCs

Prospective RCT in 188 PGY1s and PGY2s

Control group: no simulation or formal didactics

Intervention group: competency-based simulation training on CVC insertion 2 weeks before ED/ICU rotations

- Required to achieve successful completion of:
    - Use of ultrasound
    - Needle cannulation on task trainer
    - CVC insertion on model with no errors

Blinded independent raters observed residents placing 495 CVCs on the wards using a 50-point procedural checklist

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Evans et al, *Acad Med* 2010.

Simulation: CVCs, cont'd

Outcomes:

- Number of attempts

- Success rate

- Complications

- Technical errors

Simulation training was independently and significantly associated with first-pass success and successful CVC insertion on the wards

No difference between groups in errors or complications but rates low

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Evans et al, *Acad Med* 2010.

Simulation: laparoscopic surgery

RCT of novice surgical residents to:

- Training on VR simulators

- Surgery on live pigs

- Traditional pre-procedural learning (lecture, textbook, videos)

No significant difference in performance of VR and live surgery simulation-based training groups

Both significantly better than traditional training methods

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Bian et al, *Ann Med Surg (Lond)* 2023.

Simulation: high- vs low-fidelity

Randomized medical students in advanced life support course to different simulators

- High-fidelity group
- Low-fidelity group

Assessed with a simulation

High-fidelity training may not improve knowledge and practical skills compared to low-fidelity training

Participants in high-fidelity training overrated their abilities and performance despite similar or worse outcomes

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Massoth et al, *BMC Med Educ* 2019.

Simulation-based mastery learning

Literature review of simulation-based mastery learning

- Baseline assessment → learning objectives → engage in educational activity → accomplishment of a minimum passing standard → advance to next unit
- Once competencies mastered, then student can safely care for patients

Improved performance and success rates

Decreased procedural time

Decreased complications

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Griswold-Theodorson et al, *Acad Med* 2015.

Summary

Summary

Bedside procedural teaching is unique

Instructors should:

- Communicate effectively
- Allow autonomy
- Give constructive feedback

Pre-brief, teach, debrief

Consider educational modalities and tools

- Simulation and competency-based training might lead to improved patient care

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References

Bian et al, "Laparoscopic training on virtual-reality simulators or live pigs," *Ann Med Surg (Lond)* 2023; 85(7): 3491-6.

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Questions?

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