AT THE FOREFRONT
UChicago Medicine

# Teaching With Limited Time & The One Minute Preceptor

Kate Thompson, FAME for Radiology

October 2019

# FAME for Radiology Faculty Series

| Month | Topic | Speakers |
|---|---|---|
| August | Feedback | Nikki Orlov |
| October | One-Minute Preceptor/ Teaching with Limited Time | Kate Thompson |
| January | Lecture Skills | Jason Poston |
| March | Goals & Objectives | Dan Golden |
| May | Mentoring | Shannon Martin |

# Overview

- What makes a good teacher of radiology?
- Strategies for teaching with limited time
- The One Minute Preceptor

# Objectives

- Identify situations in your current practice that are opportunities for teaching with limited time
- Define the steps of the "one minute preceptor“
- Practice using the "one minute preceptor" and skills for teaching with limited time

# What makes a good teacher?

- Think of a really great teacher in radiology
- Think of 3 qualities that make them a great teacher

# Qualities of Great Teachers

Knowledgeable

# Qualities of Great Teachers

Challenged the learner
Interactive
Competent- made the difficult look easy
Enthusiastic
Energetic
Sense of humor
Recognized the learner's potential
Role model "loved learning"
Not condescending
Motivates
Patient
Gave positive feedback
Spent time with learners
High standards, integrity
Recognized different learner types and styles
Creative
Concise

## Characteristics

**When asked what they found to be effective characteristics of clinical teachers, students answered that their preceptor:**

- was clear of what she expected of me
- was keen to teach me new things
- was confident that I could carry out the tasks she assigned me
- was interested in talking about his teaching
- allowed me to be an active participant in planning and carrying out patient care and made sure I felt ready to take on new tasks
- asked me for feedback about how they were doing as teachers
- paid attention to my learning style
- was open to questions.

# Barriers to teaching in radiology?

- Different levels of learners together
- Skill level of learners (very advanced v. very basic)
- Patient care needs
- TIME!

# Teaching with Limited Time

- Identify teachable moments
- Asking good questions
- One Minute Preceptor

# Identifying Teachable Moments

- A *teachable moment* is an unplanned opportunity for teaching that must be sensed and seized by the teacher.
- Examples?

# Teachable Moments

- When a learner asks a question
- When a learner demonstrates knowledge
- When a learner makes a provocative statement
- When a learner expresses misinformation or lack of information
- When a learner expresses a need for change

# Asking Good Questions

- Teaching often defined as the activity of telling students something or giving them info
- Adult learning: asking good questions most effective
- Questioning allows preceptor to:
  - Determine learning needs
  - Stimulate/engage thinking
  - Transfer responsibility for learning to the learner

# Tips for Effective Questions

- Whenever possible, ask rather than tell
- Ask one question at a time, keep concise
- Adjust difficulty to learner ability, work towards higher level thinking
- Ask questions about process as well as outcome
- Model the kinds of questions you want students to ask
- Avoid “guess what I’m thinking”

## Low-level Questions

Ask for recall of facts, concepts, principles, or definitions.

For example:
"What is the recommended timetable for polio immunization?"

While this type of question can be useful to help you assess a student's understanding of basic facts, health professions education often focuses too much on lower-level cognitive performance.

## High-level Questions

Ask students to analyze, synthesize or evaluate information and to form judgments.

For example:

"What would you recommend with regard to screening mammography for this 45-year-old patient?"

Such questions enable the preceptor to see how learners use their knowledge to make decisions.

## Open-ended Questions (divergent)

- Allow a range of possible answers, invite reflection and speculation, and stimulate problem solving.
- Require higher-level cognitive performance and elicit longer answers.
- Expose student's thinking processes and level of expertise.
- Allow students to display what they know and don't know.
- Should be used as often as possible, and in a sequence that helps students build their understanding.

**Open questions can be used to prompt students to:**

- **Diagnose:** "What is your interpretation of the data?"
- **Decide:** "What interventions do you suggest?"
- **Hypothesize:** "What would you do if this patient were 20 and not 40 years old?"
- **Challenge:** "What leads you to that conclusion?"
- **Summarize:** "What are the important issues that emerged today?"

# Questions to Avoid

**Leading questions:**

- “You understand why this CXR can’t be consistent with pneumonia, don’t you?”

**Assertions that masquerade as questions:**

- “That blood is obviously in the subdural space rather than epidural space, wouldn’t you agree?”

**Questions that humiliate or put students on the spot:**

- “Haven’t most students mastered the description of breast calcifications by end of the second breast imaging rotation?”

# One- Minute Preceptor

- Well-known teaching strategy
- Microskills-based
- Addresses some common barriers to effective teaching
- Most data
- First published by Neher, 1992
  - "A Five-Step Microskills Model of Teaching"

# EVIDENCE FOR THE ONE-MINUTE PRECEPTOR (OMP)

# Evidence: Learners

- Residents taught OMP have better student ratings (Furney 2001)
  - Improved including student in decision making
  - Improved feedback
- Students perceive OMP better for teaching than traditional (Teherani 2007)
- Shifts teaching points from general comments to disease- specific teaching (Irby 2004)

# Evidence: Teachers

- Preceptor feedback behavior improved (Irby 2004)
- Increased teacher comfort assessing resident abilities (Salerno 2002)
- Easily taught in 1-3 hours to all teachers and use continues up to 4 years (Neher 1992)

# One minute preceptor: steps

- **1. Get a commitment.**
  What do you think is going on?
- **2. Probe for supporting evidence.**
  Why do you think this?
- **3. Teach a general rule.**
- **4. Reinforce what was right.**
  Tell them what they did right & the effect it had.
- **5. Correct mistakes.**
  Tell them what they did not do right & how to improve for next time.

# #1 Get a commitment

- Gives learner responsibility & ownership
  - Forces them to be more than a reporter
- Encourages information processing
- Allows assessment of synthetic skills of learner
  - Demonstrates knowledge, ability to process info
  - May show reluctance to expose weakness
  - May show dependency on others

# #1 Get a Commitment

- Pitfalls
  - Interrupting
  - Collecting basic data
- Do: Allow learner to formulate the problem
- Don't: Ask for more data or provide an answer
- Example: "What do you think is going on?"
  "What would you like to do next?"

# Example Preceptor questions

- “What other diagnoses would you consider in this setting?”
- “What do you think is the most likely diagnosis?
- “How do you think we should treat this patient?”
- “Do you think this patient needs to be hospitalized?”
- Examples for the radiology setting?...

# #2 Probe for supporting evidence

- Explores learner's clinical reasoning
- Demonstrates clearly thought process and clinical reasoning
- Allows for thinking out loud
- Allows for teacher assessment of synthesis skills in the learner

# #2 Probe for Supporting Evidence

- Pitfalls:
  - Grilling or pimping
  - May pass judgment- resist the urge to negate the original diagnosis
  - Asking closed patient fact questions – “was there blood in the stool?”
- Do: Diagnose learner’s understanding of the case, gaps/misconceptions, poor reasoning or attitudes
- Don’t: ask for textbook knowledge
- Example: “What led you to that conclusion?” “What else might be happening here?”

# Probe for Supporting Evidence- Example Questions

- “What factors in the history and physical support your diagnosis?”
- “Looking at your three diagnoses, which explains all of the findings?”
- “What facts do not support your diagnosis?”
- “What other lab tests would be helpful supporting this diagnosis?”

# #3 Teach a general rule

- Fill gaps in knowledge and emphasize most important learning points
- Targeted to learner's level of understanding
- Can be systems, processes, patient care considerations
- Consider showing or giving a resource

# #3 Teach General Rules

- Pitfall --- avoid giving a “mini-lecture”
- Do: help the learner to go from specific points in case to general knowledge
- Don’t: try to teach too much!
- Example: “Let’s review the three hallmark signs of this diagnosis”

# #4 Reinforce what was done Right

- Sounds like feedback to me!
- Be explicit
- Be specific
- Link the behavior to an impact
- Pitfall:
  - General praise – “That was a good presentation”

# #4 Reinforce What Was Done Right

“Your diagnosis of stress fracture was well supported by your history and physical. You clearly understand the risks with your questions of increased activity.”

# #5 Correct Mistakes

- Teachable moment!
- Be specific
- Mistakes not corrected may happen again
- Give alternatives
- Careful about who is also in the preceptor room
- Pitfall:
  - General comments
  - Avoidance

# #5 Correct Mistakes

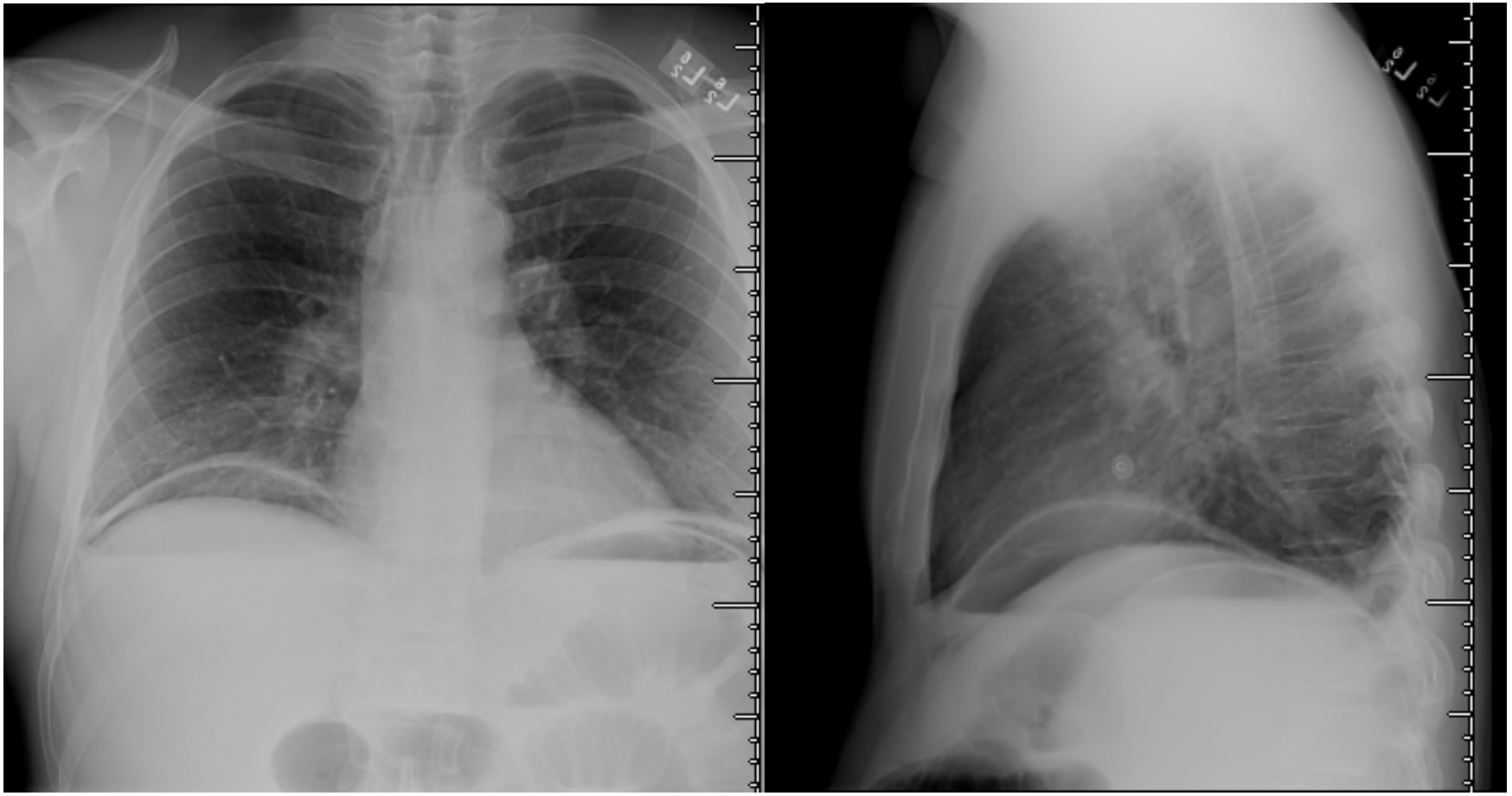
“In your differential you had the most common causes of abdominal pain in children. I encourage you to always think about at least one surgical or critical diagnosis to be certain you don’t overlook it.”

# One minute preceptor: steps

- **1. Get a commitment.**
  What do you think is going on?
- **2. Probe for supporting evidence.**
  Why do you think this?
- **3. Teach a general rule.**
- **4. Reinforce what was right.**
  Tell them what they did right & the effect it had.
- **5. Correct mistakes.**
  Tell them what they did not do right & how to improve for next time.

# Practice Case in Radiology

- 35 yo male with abdominal pain



# One Minute Preceptor

**Strengths**

- Quick, focused
- Good for case-based teaching
- Elicits clinical reasoning
- Fosters ownership of learning
- Built in feedback

**Limitations**

- Rigid structure
- More limited for very weak or very strong learners
- Not designed for delivering a lot of content at once

# Summary

- Precepting is a critical part of physician education
- Teaching with Limited Time is an intentional skill that has to be learned, practiced, and reflected on
- One Minute Preceptor is a well known, accepted, and proven method to work
- Consider how you might use this in your practice with different learners

# References


- Irby DM, Wilkerson L. Teaching when time is limited. BMJ. 2008;336(7640):384–7.
- Neher JO, Gordon KC, Meyer B, Stevens N. A five-step “microskills” model of clinical teaching. J Am Board Fam Pract. 1992;5(4):419–424.
- Furney SL, Orsini AN, Orsetti KE, Stern DT, Gruppen LD, Irby DM. Teaching the one-minute preceptor: a randomized controlled trial. J Gen Intern Med. 2001;16(9):620–624.
- Eckstrom E, Homer L, Bowen JL. Measuring outcomes of a one-minute preceptor faculty development workshop. J Gen Intern Med. 2006;21(5):410–414.
- Irby DM, Aagaard E, Teherani A. Teaching points identified by preceptors observing one-minute preceptor and traditional preceptor encounters. Acad Med. 2004;79(1):50–55.
- Salerno SM, O'Malley PG, Pangaro LN, Wheeler GA, Moores LK, Jackson JL. Faculty development seminars based on the one-minute preceptor improve feedback in the ambulatory setting. J Gen Intern Med. 2002;17(10):779–787.
- Gallagher P, Tweed M, Hanna S, Winter H, Hoare K. Developing the one-minute preceptor. Clin Teach. 2012;9(6):358–362.
- Teherani A, O'Sullivan P, Aagaard EM, Morrison EH, Irby DM. Student perceptions of the one minute preceptor and traditional preceptor models. Med Teach. 2007;29(4):323–327.