



EM CASES SUMMARY

Episode 98 – Teaching on Shift

With Dr. Amal Mattu & Dr. Rick Pencienner

Prepared by Dr. Alexander Hart & Shaun Mehta July 2017

Meeting the learner

There are a few key steps that our experts recommend prior to seeing patients on shift: *orienting* the learner, setting *expectations*, *diagnosing* the learner and *priming* the learner.

Orientating the learner: Learn about your learner.

Ask your learner some background questions like what program they are from, their level of training and experience, previous clinical experiences and their special interests. What do they hope to learn from you? What areas of medicine do they find difficult or confusing? What skills do they want to practice? Explain their role in the department, patient flow, and what work needs to be done.

Setting expectations: A mutual relationship.

Discuss the learner's responsibility during the shift and encourage them to ask questions. Tell your learners that *you will act like a coach* helping them to fine tune their skills. Lay out your expectations for case presentations, encouraging them to commit to a plan, clear charting and that you will be providing feedback during

and at the end of the shift. Let them know that you assess them by direct observation by listening in to their interactions with patients and staff.

Diagnosing the learner: Understand and tailor their experience.

One of the most common pitfalls is to teach based on a poor understanding of the learner and their needs. Teaching at a level of understanding greater or less than that of the learner is unproductive, frustrating, or both.

Once you get a sense of your learner, you can better teach at a level appropriate for them. There are 4 types of learners:

- Unconsciously incompetent
- Consciously incompetent
- Consciously competent
- Unconsciously competent (ie. staff/attending)

Priming the learner: Prepare them for success.

Encourage your learner to review the chart before going into a patient's room. Ask them to generate a differential diagnosis for the triage complaint. Consider starting inexperienced students with more straightforward cases.

Case presentation teaching strategies

The most important concept in being an effective teacher during case presentations is to *listen more, and talk less*.

Our role as teachers in the ED is to facilitate learning. Listening to our learners will prompt what we teach. We should approach teaching opportunities more like coaches and less like lecturers.

Some tips for achieving this:

- Give the learner your **full attention** – avoid multi-tasking during case presentations
- **Minimize interruptions** - don't interrupt or correct too early; the ideal presentation is one that is not interrupted too often – interruptions may confuse the learner and are often seen as criticisms of their presentation
- Inform the student of **expected length** for presentations up-front
- Allow the learner to **arrive at the diagnosis themselves**
- Encourage the learner to **present in a way that “makes their case”** - it is important for students to learn to present in a manner that “makes the case” for their diagnosis rather than in the same order in which they collected the data
- Taking away the chart from the learner while they present in order to force them to tell a story rather than read through a case

Focus on one teaching point for each patient.
 One of the biggest pitfalls in clinical teaching is to try to teach too much.

The One Minute Preceptor model

The *one minute preceptor model* allows for time-efficient teaching with well-studied impacts on learning.

Modified One-Minute Preceptor Model			
Skill	Learner Activity	Preceptor Action	Rationale
Get Commitment	Make decision and take intellectual responsibility for it	Observation	Promotes higher order thinking
Probe for Understanding	Links decision to underlying data	Assess learner's use of data	Promotes independent reasoning
Teach General Rules	Identifies what can be learned from encounter	Key features, pearls, pitfalls targeted to level or training	Instruction becomes more memorable
Provide Consolidative Feedback	Self-appraisal of success	Be specific with comments	Re-enforcement consolidates new skills
Provide Constructive Feedback	Self-appraisal of misunderstandings or errors	Discuss ASAP how to avoid errors in future	Unattended mistakes recur

Adapted from Aagard, Teherani, Irby; Academic Medicine 2004

Getting all that in in 1 minute can be challenging. The key however should always be to reinforce the first skill – get a commitment! Get them to commit themselves to an opinion about the diagnosis or about investigation or management. If you are unable to get a commitment on what the most likely diagnosis is, get the learner to commit to what needs to be ruled out and rank by deadliness:

- What will kill the patient in the next few minutes
- What will kill the patient in the next few hours
- What will kill the patient in the next few days

Questioning Techniques

The most important thing to remember when questioning learners is 'wait time': Wait 3-7 seconds for the learner to answer.

The average amount of time faculty allow a student to answer a question is about 1 second. Increasing wait times for answers will significantly increase the number of student responses. *Divergent* as opposed to *convergent* questioning is more effective in facilitating active learning. Examples include: What do you think is going on with this patient? What else could be going on? How did you reach that conclusion? What's the evidence for that conclusion? What else could it be? What do you think we should do next? How would you explain that to the patient?

The manner in which we ask questions of our learners can have a significant impact on how much information they are able to retain from a given encounter.

PEARLS	PITFALLS
Ask open ended questions - Why/How vs What	Interrupting learners
Ask "What if questions - Helps make routine patient encounters more interesting	Asking questions that require memory rather than critical thinking to answer
	Asking leading questions
	Asking "Guess what I am thinking questions
	Adopting a punitive approach to incorrect answers

Dr. Mattu's "What if" teaching tip

If the patients aren't interesting, make them interesting artificially by asking "What if.....?" For example, if the learner presents an otherwise healthy patient with a simple cellulitis ask the learner "what if this patient with cellulitis was an IV drug user, was febrile and appeared septic?" and "what if this the patient was on their third round of antibiotics with no improvement?"

Active Observation

It is often difficult to interact with or assess a learner beyond the case presentation. Observing full H & Ps, monitoring bedside manner and supervising procedures can be time consuming. *Sampling observation* is a strategy that is time efficient and can give you a broader scope of a learner's skills. Try:

- Listening to a history through the curtain
- Watching certain parts of a procedure
- Prompting the learner to elicit a specific sign on physical exam
- Asking the learner to deliver instructions to the patient

Whiteboard teaching, sniper rounds or post-it pearls

Engaging your learners with teaching modalities beyond the face-to-face verbal interaction is thought by opinion leaders to have a positive impact on their ability to retain information. Although the following pyramid is not supported by evidence, it is a good reminder that the more engaged one is in learning, the more likely they are to remember.



Call them whiteboard teaching, sniper rounds or post-it pearls, getting your learner to write down one key learning point per patient is a sure-fire way to maintain their engagement, promote on-shift teaching amongst your colleagues and ensure you never take a shift off when it comes to education. Your learner may also benefit from asking them to write down the 3 most important pearls they learned at the end of the shift.

Teaching on shift procedures

When it comes to teaching procedures, we have moved beyond the see one, do one, teach one framework.

Teaching procedures is a 3 step process:

1. **Conceptualization** – why do the procedure, risks/benefits etc
2. **Visualization** – observe the teacher do it, watch a video, visualize in your mind before doing it
3. **Verbalization** – verbalize what you are doing as you do it and have the learner verbalize what they are doing as they do it

Break down the procedure in to small digestible steps. It is important to correct mistakes as they are made rather than waiting until the end of the procedure both for increasing the impact of learning from that mistake and for patient safety. It is better to stop the error before it is imprinted into the motor memory.

Giving feedback when teaching on shift

Giving honest and helpful feedback can be challenging, however, of all the techniques a teacher can use, feedback has the greatest effect on learning. Studies show that medical teachers over-estimate the amount of feedback given while learners feel that they don't get enough feedback. Feedback should be giving often throughout the shift, not only at the end of the shift. The timing of the feedback is important: Time feedback as close to a performance as possible so that you and your learner can still remember the details of what happened. Give feedback that is *actionable*.

Our experts have a few pointers to help you give the learner effective end of shift feedback.

- **Define it** – feedback is information that highlights the difference between the actual and intended results.
- **Frame it** – have a common understanding that this information is given to improve future performance and enhance success.
- **Label it** – announce to your learner that you are giving them feedback.
- **Take it** – allow some time for your learner to give you feedback about your teaching.

When you are setting expectations at the beginning of the shift, let your learner know that you will tell them what they did well and a few things they should work on. This strategy will allow the learner to effectively retain what they received feedback on as well as better handle any negative connotations of constructive suggestions.

Criteria for effective feedback

OBJECTIVITY

CONSISTENCY

TIMELINESS

RELEVANCE

CLARITY

If in doubt, use the following template for your next feedback session focusing on behaviours and areas that the learner can control and modify rather than personality traits.

- Listen to self-evaluation first (use this self-evaluation to customize your feedback)
- Discuss and validate what was done right and they should continue doing
- Discuss what needs starting, stopping or improving
- Decide what to do next time – a 'recognizable action'
- Provide clear instructions and support for improvement – teach 'pearls' and 'general rules'
- Ask the learner to summarize the feedback and plan

Avoid the “Sacket Sandwich”

The classic teaching for giving feedback has been to sandwich constructive criticism between points of praise. This strategy is problematic because learners expect it and tend to lose the value of any 'negative' feedback.

The Wrap Up

At the end of the shift wrap up the teaching by:

- Asking the learner to tell you the three most valuable pearls or pitfalls that they learned on the shift
- Encouraging the learner to follow up on cases
- Suggesting resources for them to learn more about topics they identified as needing improvement during the shift

Qualities of a great teacher

The best teachers often have indefinable qualities that make them great.

The most important quality of a great teacher is enthusiasm.

<i>PEARLS</i>	<i>PITFALLS</i>
Respects and listens to the learner	Lack of interest in the learner
Passionate, enthusiastic	Excludes learner from cases
Gets to know the learner	Assumes competence level
Knowledgeable but humble	Refuses to say "I don't know"
Balances autonomy and support	Inappropriate learner autonomy
Gives and takes feedback	Lack of feedback
Tailors experience	Teaching at an inappropriate level
Patient, tolerant of error	Criticism without facilitation
Keeps a teaching file	Fails to point out clinical pearls

Pearls and pitfalls of teaching (adapted from ED-STAT)

EM Cases Quote of the Month

“In the hurly-burly of to-day, when the competition is so keen...it is well for young people to remember that no bubble is so iridescent or floats longer than that blown by the successful teacher.”

-Sir William Osler

References:

1. Irby DM, Bown JL. Time-efficient strategies for learning and performance. *The Clinical Teacher*. 2004;1(1):23-28
2. Kurth RJ, Irigoyen M, Schmidt HJ: A model to structure student learning in ambulatory care settings. *Academic Medicine*. 1997;72:601-606.
3. Norcini J: The power of feedback. *Medical Education*. 2010;44:16-17.
4. Aagard E, Teherani A, Irby DM: Effectiveness of the One-Minute Preceptor Model for Diagnosing the Patient and the Learner: Proof of Concept. *Academic Medicine* 2004;79(1):42-49.
5. Reilly BM. Inconvenient truths about effective clinical teaching. *Lancet*. 2007;370(9588):705-11.