Point of Care Teaching

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“I hear, I forget.  
I see, I remember.  
I do, I understand”

Confucius
Objectives

• Learners will:
  - Appreciate the literature on the relevance of experiential learning
  - Illustrate the advantages and barriers to bedside teaching
  - Identify strategies to implement effective point of care teaching
  - Apply tools/strategies to a clinical scenario
Experiential Learning

There should be “no teaching without the patient for a text, and the best teaching is often that taught by the patient himself”

William Osler
Experiential Learning: A Parent/Patient’s Perspective

- Latta et al (2008), Pediatric ICU:
  - Patients/parents favor bedside teaching
  - Report better understanding of the plan of care after participating in bedside teaching
  - Feel like an important member of the team

- Muething et al (2007), General Inpatient Pediatrics:
  - 85% of families request involvement in rounds when given the option
Experiential Learning: A Learner’s Perspective

• Studies by Williams et al (2008) demonstrate:
  – 90% of Internal Medicine learners believe that bedside teaching is effective for learning:
    ▪ Communication including role modeling
    ▪ History-taking
    ▪ Physical exam skills
    ▪ Professionalism
  – Between 41% and 65% state that they do not receive sufficient bedside teaching
The Disconnect:
The Attending/Teacher’s Role

• Despite evidence demonstrating the benefits of bedside teaching, Crumlish et al (2009) report:
  – Internal medicine hospitalists only spend 17% of their teaching time at the bedside
  – Physical exam teaching only occurs in 38% of those teaching sessions
  – Only 50% of the physicians were confident in their abilities to teach the physical exam
Permission to Teach video

Permission to Teach
The Disconnect: The Attending/Teacher’s Role

• In 2001, the Institute of Medicine’s report: *Crossing the Quality Chasm: A New Health system for the 21st Century* emphasized:
  - the need to ensure the involvement of patients in their own health care decisions
  - to better inform patients of treatment options
  - and improve patients and families access to information
The Disconnect:
The Attending/Teacher’s Role

• In 2003, the AAP incorporated these ideals into its Policy Statement on Family Centered Care recommending
  – conducting attending physician rounds in the patients’ room with the family present as the standard practice
The Disconnect: The Attending/Teacher’s Role

• Despite these statements, more recent literature reviews by Williams et al (2008) continue to reveal that
  - the portion of clinical educational time devoted to bedside teaching ranges from 8-19%
So Why the Disconnect?

In your experience as both a teacher and a learner, what are the benefits of as well as barriers to bedside teaching?

Please take 5 minutes in groups of 3 to create a list.
Time

• Inpatient Rounds
  – Adolescent: multidisciplinary family centered rounds only took 2.7 minutes longer per patient overall-findings not statistically or clinically significant (Rosen 2009)

• Outpatient Clinic Room presentations
  – Internal Medicine: Significantly less time compared to conference room presentations (Anderson 2002)
  – Pediatrics: No difference compared to conference room presentation (Baker 2006)
So how do we make it effective time while at the same time giving teachers the confidence to teach at the bedside?
The Microburst Teaching Model

A teaching strategy which consists of:

- Combining various teaching styles with different, and sometimes, disparate learning style
- Using different teaching methods and teaching styles which are interchanged and presented in brief “bursts” of time
The name “microburst” derives from the meteorological event: “an intense, short-lived, localized event occurring during a rain storm.”
The Microburst Model

Learning Style Preference & Adaptability

Different Teaching Styles

One minute preceptor

Varying Teaching Methods

Interactive demonstration

Adult Learning Theory

Adult Attention Span

Brief Didactic

Model

Microburst Teaching & Learning
Interactive Demonstration

• Examples:
  - Demonstrating how to perform a heart exam in a 2 year old
  - Teaching the differences between crackles and wheezing on exam
Modeling

- How to talk to parents about behavior issues in the child or sensitive issues
- How to encourage interaction with presenter by positioning

Note: Best if you tell the learner that you are going to model the task and will ask for comments afterwards.
Brief Didactic

• Examples:
  - Different types of controller medications for asthma
  - The indications and dosing of the flu shot
One-Minute Preceptor*

Refers to ability of teachers to quickly identify “teachable moments” and use skills to teach in these moments.

The “One Minute Preceptor” is used to:

• Deliver information needed by learner
• Encourage intake of and reflection on new information and experiences

Balancing Patient Care with Teaching

**Diagnose the Patient**
1. Listen carefully
2. Clarify information
3. Determine concerns

**Diagnose Learner**
1. Assess prior knowledge
2. Get commitment
3. Probe for evidence

**Target the Teaching**
1. Give feedback
2. Identify/correct mistakes
3. Teach general rule
4. Prioritize teaching
5. Role model skills
One Minute Preceptor Processes

1. Get a commitment
   WHAT?
One Minute Preceptor Processes

1. Get a commitment
   WHAT?

2. Probe for support evidence
   WHY?
One Minute Preceptor Processes

1. Get a commitment
   WHAT?

2. Probe for support evidence
   WHY?

3. Teach general rules
   WHEN THIS HAPPENS, DO THIS...
One Minute Preceptor Processes

1. Get a commitment
   WHAT?

2. Probe for support evidence
   WHY?

3. Teach general rules
   WHEN THIS HAPPENS, DO THIS...

4. Tell them what they did right
   WARM FUZZY
One Minute Preceptor Processes

1. Get a commitment
   WHAT?

2. Probe for support evidence
   WHY?

3. Teach general rules
   WHEN THIS HAPPENS, DO THIS...

4. Tell them what they did right
   WARM FUZZY

5. Correct mistakes
   WHOOPS!
Video Of One Minute Preceptor Processes

- [One Minute Preceptor Video](#)
One Minute Preceptor Process #1: Get a Commitment

- The learner should take a risk in articulating opinions
- Encourage the learner to state what he/she thinks is the most likely diagnosis or necessary management plan

- What do you think is going on? (Differential Diagnosis)
- What investigations should be ordered? (Diagnostic strategy)
- What is your first choice of medication? (Selection of therapy)
- What do you think is the most likely course? (Prognosis)
- What would you like to achieve in this patient encounter? (Management issue)
One Minute Preceptor Process #2: Probe for Supporting Evidence

• Before offering your opinion, ask the learner for supporting evidence

• Have them share the rationale for their “commitment”

➤ Why do you think this is the most likely diagnosis?

➤ What other diagnoses did you consider? Why do you think they are less likely?

➤ Why do you want to order those tests?

➤ Why is that medicine your first choice?
One Minute Preceptor Process #3: Teach a General Rule

- Teach general rules or concepts targeting them to the learner’s level of understanding.
- Give them rules that they can apply to other patients.

- When this happens, do this . .
- For example: If a patient has cellulitis, incision and drainage is not possible. You have to wait until the area is fluctuant to drain it.
One Minute Preceptor Process #4: Tell them What They Did Right

- Positive reinforcement
- Done immediately
- Be specific without using vague phrases

➢ “Obviously you considered the patient’s finances in your selection of a drug which will increase his compliance”

➢ “You did a great job of considering multiple diagnoses but at the same time pinpointing the most likely diagnosis”
One Minute Preceptor Process #5: Correct Mistakes

• Mistakes must be corrected for the sake of both the learner’s own effectiveness as well as the quality patient care
• Done as soon as possible after a mistake has been made
• Allow the learner the opportunity to self-analyze first
• Be specific

➤ “You may be right that the child’s fever is due to a URI, but you can’t be sure it is not an otitis media until you have examined his ears”
So how do you prioritize the teaching?
General Guidelines

- Concentrate on the overall goals of your educational program
- Focus on issues relevant to the patient
- Prioritize based on educational level/skill level of the learner
Role Playing Rules
“One-Minute Preceptor”

Have Fun!!
Show respect for different opinions/styles. There’s no right or wrong way. Focus on process not the content.
Participants can do the same role play more than one time, but try to switch roles of preceptor and learner.

Choose roles:
Preceptor - choose a vignette; acts out role play; give first self-evaluation (“how it went”); can’t stop process
Learner - let the preceptor know what level of learner you will play (ie: student/ resident); act out role play; gives second evaluation
Timer/ Observer - times role play (no longer than 2 minutes); comment on effectiveness of interaction & how the role play could have been done differently

• Role play for 2 minutes beginning with the “learner” reading one of the practice cases to the preceptor.
• The “preceptor” should then try to use the 5 microskills to assess, instruct, and provide feedback
• After role playing complete, each person should critique the role play starting with the preceptor
• Rotate roles and repeat the exercise two more times so everyone has the opportunity to play each role
Questions?
References


References


Teaching in the Ambulatory Care Setting

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Goals

- The challenges & advantages of teaching in the office
- Setting expectations for the learner
- Teaching to different levels of learner

Teaching Strategies
- One Minute Preceptor
- SNAPPS
What are the advantages & challenges to teaching in the ambulatory care setting?
Advantages
Advantages

- More like real world setting
- Different set of medical problems
- Learn how to care for patients in longitudinal setting
- Establish long term relationship with patients

- Learn how to be more efficient
  - Hx, PE, prioritizing problems
- More one on one interaction with resident & faculty
- More individual resident responsibility (and learning)
- Opportunity to analyze individual resident performance
Challenges of Teaching in the Ambulatory Care Setting
Challenges of Teaching in the Ambulatory Care Setting

- Limited time
- More psychosocial problems
- Multiple distractions
- System problems
- Inefficiencies of clinic setting
- Variable level in the abilities of the learner
- “Trust” resident’s history & physical

- Dual challenges of providing quality patient care and teaching
- Acute and long term care issues to address
- Increased uncertainty
- Teaching done on the ‘fly’ – no time to prepare
- May not be a priority of a resident
What kinds of expectations do you set for your residents when working in the clinic?
Setting Expectations

- Start time
- Rooming patients/ patient flow
- Expectations of presentations
- Documentation
What expectations do we have for all learners

- On time
- Professional behavior
- Willing to see late patients if time permits
- Willing to help out and see extra patients if time permits
- Accurate presentation
- Appropriately focused PE
- Think through case with proposed A&P prior to presenting case
- Know what you need help on
- Review old records as appropriate
- Keep flow sheets, problem & med lists up to date
- Accurate notes with A&P
- Follow up (of learning/SDL & of patients)
Do you have different expectations based on PGY level?

PGY-1 residents
PGY-2 residents
PGY-3 residents
Teaching to Different Levels

- Interns
  - Taking efficient history
  - Presentation style
  - Differential diagnosis
  - Prioritizing problem list
  - Learning preventive medicine and approach to common medical problems
Teaching to Different Levels

- PGY-2
  - In room efficiency
  - Committing to a diagnosis and treatment
  - Independent medical decision making
  - Learn the evidence behind the management decisions
Teaching to Different Levels

- PGY-3 and above
  - Efficient, focused presentations
  - Focus on patient problem, but keep differential diagnosis open
  - Billing and coding
  - Preparing for independent practice
Teaching Strategies
The Traditional Model

- A detailed factual presentation is given to preceptor
- Preceptor & resident make management decisions
- >75% of the teacher: learner interaction is spent on communication of factual information about the case
  - Clarifying history, physical, and test results
Two Better Models

- The One Minute Teacher
  a.k.a. the 5 “microskills” of teaching

- SNAPPSS
The One Minute Teacher

The One Minute Preceptor

The Five Microskills of Teaching

Two Volunteers Needed

Preceptor

Intern
Mr. Jones is a 72 year old man with hyperlipidemia, tobacco use, and longstanding, previously controlled hypertension who presents to the office with an elevated blood pressure. He is a former engineer who checks his blood pressure weekly, records it on an Excel spreadsheet, and noticed that the numbers have been much higher in the past few months.

Meds: Lisinopril, hydrochlorothiazide, simvastatin, & aspirin

On exam, BP 172/110  P 86  R 12  Fundascopic exam revealed slight AV nicking. Heart, lung and abdominal exams were normal
Teaching Style # 1
Teaching Style #1

Attending’s Response:

This patient obviously has renal artery stenosis. Start amlodipine 5 mg daily, get a serum creatinine and an MRA of the renal arteries.
Teaching Style # 2
Teaching Style #2

- **Attending**: Is he taking his medicine?
  - **Student**: Yes

- **Attending**: Any chest pain or shortness of breath
  - **Student**: No

- **Attending**: How is his EKG?
  - **Student**: LVH, but otherwise normal

- **Attending**: Start him on amlodipine and get an MRA
  - **Student**: OK
Teaching Style # 3
Teaching Style #3

**Attending**: What do you think is going on?

**Intern**: Well I’m concerned about something else going on beyond essential hypertension.

**Attending**: What led you to that conclusion?

**Intern**: His BP has been well controlled for years, and now it’s not.
Attending: What did you consider?

Intern: He could be noncompliant with taking his medications or possibly he is taking an NSAID or other drug that raises blood pressure. It’s possible that he might also have a secondary cause of hypertension such as renal artery stenosis.
Attending: Excellent. An older patient who has had well controlled hypertension for years that suddenly becomes uncontrolled raises the concern for secondary causes of HTN. In the older patient with multiple risk factors for atherosclerotic disease, we need to worry about renal artery stenosis. Both ultrasound and MRA are useful diagnostic tools. We can talk about the pros and cons of each and what we would do with the results if it’s positive.
Three styles of teaching

- The ‘lecture’
- Interactive ‘close ended’ questions
- Interactive ‘open ended’ questions
What we do as clinician-educators

Diagnose & Treat the Patient

Diagnose & Teach the Learner
Overview:
Five Microskills of Clinical Teaching

Case Presentation

1. Get a commitment
2. Probe for supporting evidence

(Diagnose the Patient)

3. Teach general rules
4. Reinforce what was right
5. Correct mistakes

Diagnose The learner
The One Minute Teacher

It de-emphasizes the transfer of knowledge, but emphasizes patient management and clinical reasoning skills.
Diagnose the Patient

- **Listen** – resist interruption with questions
- **Clarify** – many different teaching points will arise
- **Figure out what is going on**
Step 1: Ask for a commitment

- After the presentation, find out what the student or resident is thinking, (Do not offer answers)
  - “What do you think is going on”
  - “What do you want to do”
  - “How would you manage this”
  - “What would you do if there were no preceptors”

- Making them commit makes them responsible for the patient

- This is not the time to ask “Did you think of anything else” (because we are going to probe next)
Step 2: Probe for supporting evidence

- Ask the student or resident to explain their reasoning that established their commitment.
  - “What were the findings that brought you to this diagnosis”
  - “How did you get to that decision”
  - “Why did you choose that treatment”
  - “What is the evidence for...?”

- This is not “grilling” the learner – instead they need to be reassured that this is to get them to think out loud
Step 3: Teach General Rules

- Teach a rule that is applicable to other patients
  - “ACE inhibitors reduce morbidity and prolong life in patients with dilated cardiomyopathy”
- The goal is to avoid:
  - “Start the patient on lisinopril”
- Avoid “inappropriate lectures” that will slow down the process and be difficult for the student or resident to remember
Step 4: Reinforce what was right

- Be specific to what the student or resident did well
  - “You were right on target with the way you thought through that problem to come up with a diagnosis”
- General praise “Great job” is not as helpful as specific feedback.
- Students & residents want validation that they made appropriate clinical decisions
Step 5: Correct Errors

- Consider asking the student or resident what they could have done better or different

- Try to be positive in your feedback
  - “It’s great that you had a broad differential in your workup, but asthma is a much more common reason for shortness of breath in young adults than is Wegener’s granulomatosis”
The One Minute Preceptor has been well studied and has shown to:

- Broaden differential diagnosis
- Improve consideration of diagnostic tests and evaluations
- Improve resident presentation skills
- Preceptors are better able to see resident weaknesses and evaluate clinical competence
- Students and residents have found it an effective teaching method
Tips for Asking Questions

- Ask more basic questions first
- Use the pregnant pause
  - Sufficient wait time
- One question at a time
- Ask open-ended questions rather than focused questions
The One Minute Teacher

- Diagnose the patient
- Diagnose the learner
  - Ask for commitment
  - Probe for underlying reasoning
- Teach
  - General rules
  - Provide positive feedback
  - Correct errors
Another model for outpatient medicine presentations
The SNAPPS Model

- **Summarize** briefly the history and physical
- **Narrow** the differential to 2 or 3 relevant possibilities
- **Analyze** the differential
- **Probe** the preceptor by asking questions
- **Plan** the management
- **Select** a case-related issue for self-directed learning

It puts the learning objectives in the hands of the learner
The SNAPPS Model

- **Summarize**
  - Residents need to be *coached* in presentation style
    - Limit to relevant data
    - Use medical terminology
  - Presentation should be no longer than 3 minutes
  - Save time for discussion
The SNAPPS Model

- **Narrow the differential diagnosis**
  - For new problems consider 2 or 3 differential diagnosis
  - For follow up problems
    - Consider 2 or 3 reasons the disease may be uncontrolled
    - Consider 2 or 3 therapeutic interventions
  - The learner should provide this in presentation before asking the preceptor to help
  - Similar to getting Commitment in the OMP model
The SNAPPS Model

- **Analyze**
  - The learner initiates a discussion of the possibilities and tries to support their decisions with the relevant data.
  - Advanced learners will likely combine this step with the previous step.
  - This step may create discussion with the preceptor, but the preceptor should still try to avoid taking over the case.
The SNAPPS Model

- **Probe**
  - The learner probes the preceptor with questions – utilizing the preceptor as a knowledge resource
  - The learner should reveal areas of confusion or knowledge deficits by asking questions
The SNAPPS Model

- **Plan**
  - The learner initiates a discussion of the patient management
  - The learner should suggest a treatment or diagnostic plan
  - They may ask questions of the preceptor to help
The SNAPPS Model

- **Select**
  - The learner should select a reading topic based on the case that was presented
  - The preceptor can help direct the learning objectives
The SNAPPS Model

- **Summarize** briefly the history and physical
- **Narrow** the differential to 2 or 3 relevant possibilities
- **Analyze** the differential
- **Probe** the preceptor by asking questions
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SNAPPS Facilitates Expression of Clinical Reasoning

- Prospective study of 64 students using SNAPPS vs. usual presentations
- No change in length of presentations

Conclusions

- SNAPPS (as compared with usual & customary presentations) better at:
  - Facilitating expression of diagnostic reasoning (number of differential dx and analysis of differential)
  - Learner expression of uncertainties & obtaining clarification
  - Discussing patient management
  - Identifying case related topics for further study
The SNAPPS Model

- Also a learner centered model
- The learner needs to be prepped to understand the expectations of the model.
- The preceptor acts as a facilitator to assist the learner in clinical decision making
**One Minute Preceptor**

- Diagnose the patient
- Diagnose the learner
  - Ask for commitment
  - Probe for underlying reasoning
- Teach
  - General rules
  - Provide positive feedback
  - Correct errors

**SNAPPS**

- Summarize briefly the history and physical
- Narrow the differential to 2 or 3 relevant possibilities
- Analyze the differential
- Probe the preceptor by asking questions
- Plan the management
- Select a case-related issue for self-directed learning
Conclusions

- The One Minute Preceptor and SNAPPS both provide a more learner centered form of teaching in the outpatient setting and are superior to the usual and customary presentations.