Of EPIC Importance: Working with Students in the EMR

2013 CDIM NATIONAL MEETING
NEW ORLEANS, LA

Who are we?

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  - General Practice Clerkship Director, University of Queensland/Ochsner Clinical School, New Orleans LA

- Rob Harrold
  - Third year student, University of Queensland/Ochsner Clinical School, New Orleans LA

- William Carter, MD
  - Internal Medicine Clerkship Director, University of Queensland/Ochsner Clinical School, New Orleans LA

- Domnica Fotino, MD MPH
  - Assistant Professor Internal Medicine, Tulane University School of Medicine, New Orleans LA
Who are we?

- University of Queensland/Ochsner Clinical School
  - Ochsner Clinic Foundation is a major health system in SE Louisiana, with 7 hospitals (and growing) and a couple dozen outpatient clinics in New Orleans and Baton Rouge
  - Long a major teaching site for LSU and Tulane, Ochsner partnered with UQ to establish a medical school in 2008.
  - US college graduates spend 2 years in Australia, then 2 clinical years in New Orleans in the Ochsner system. Students enter US Residency Match program
  - EPIC gradually adopted through July 2012

Who are we?

- Tulane University School of Medicine
  - Founded in 1834, a major teaching medical center in New Orleans
  - 4 teaching hospitals: Tulane Medical Center, Tulane-Lakeside Hospital, LCMC (Louisiana Children's Medical Center, formerly Interim Louisiana State University Hospital) and Veterans Affairs
  - Several electronic medical records used: Meditech, VA, Cliq/EPIC
  - EPIC transitioned into use July, 2012
Objectives

After this workshop, attendees will

- Be able to discuss rationale for student documentation in EMR
- Discuss work-arounds and short cuts in the EMR for students
- List best practices for working with students in the EMR

Defining the Problem

- 2009 American Recovery and Reinvestment Act gives incentives to EMR adoption
- Teaching documentation skills has always been a part of IM clerkships.
  - EMR’s are being adopted at a fast pace
  - Education for students on EMR documentation skills lags behind.
- Administrators (in some clinical settings) read the Medicare rules and preclude or limit student documentation
- Different screen views for students than physicians limit ability of physicians to teach.
- Student documentation can slow teachers in clinic.
Regulations REQUIRE documentation

- LCME ED19:
  “The curriculum of a medical education program must include specific instruction in communication skills as they relate to physician responsibilities, including communication with patients and their families, colleagues, and other health professionals.”
- USMLE Step 2 CS tests note writing
- ACGME core competencies require first year residents to write clear and efficient notes about their patient encounters.
  - If students don’t write notes, they’ll be unprepared for internship

Education Best Practices Include Student EMR Use

- Students interview patients, document findings in EMR, and serve as patient advocates by communicating issues to team
  - Thus, students facilitate transfer of information in healthcare teams.
- Medical record review is an assessment tool to measure competency
- Students can be marginalized when EMR access restricted.
  - Limits student growth towards independence
Medicare

- Allows students to document the following for billing purposes:
  - Past Medical and Surgical History
  - Family History
  - Social History
  - Review of Systems
- Does NOT restrict students from writing “non-billable” notes.
- To avoid “Medicare fraud”, some systems prohibit student documentation.

ACE Guidelines

- Alliance for Clinical Education (UME collaborative between OBG/IM/FM/Surg/Peds/Psych) published these recommendations in 2012:
  1. Students must document in the patient’s chart and notes should be reviewed for content and format
  2. Students must have opportunity to practice order entry in EMR
  3. Students should be exposed to utilization of decision aids in EMR
  4. Medical schools must develop set of competencies related to EMR charting
Dean’s Expectations

- **2007 Survey of Medical School Deans**
  - 90% believed student notes belong in medical record
  - 42% had a policy
  - 93% felt that without student notes, education would be negatively affected
  - Limiting students’ notes negatively affect:
    - Feeling part of the team
    - Preparation for internship
    - Sense of involvement

Survey of Clerkship Directors

- Survey by ACE of all CD’s; 32% response rate precludes meaningful conclusions. However:
  - 90% allow student access to EMR
    - 32% “view only”; 41% view and write notes; 27% view, write notes and pend orders
  - 74% have templates; 26% do not allow student use
  - 57% of CD’s in this survey used student note to help document resident or attending note
    - Potential for insurance fraud if copying the wrong portion of the student note
  - 24% noted problems with individuals copying a provider’s note and claiming content as their own
Benefits of EHR:
- Increased legibility
- More complete (and remote) access to pt data
- Templates for standardization of care

Disadvantages of EHR:
- Copy and paste
- Stifle student thinking
- Spend time “watching preceptors type”
- More engaged with chart and computer than with patient

Note writing in EPIC

This presentation will be in the context of EPIC, but should be applicable to EMRs in general
Note writing in EPIC

- 2 ways to compose notes in EPIC
  - NoteWriter
  - New Note

NoteWriter

- Compose Subjective and Objective portion of the note through ‘click-to-add’ options
**Subjective:**

**Patient ID:**

**Chief Complaint:** Wheezing

**HP**

**Review of Systems**

**Objective:**

**Physical Exam**

**Assessment:**

1. Asthma attack
2. Asthma
3. Immunization due

**Plan:**

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**Wheezing**

- **Frequency:**
  - today
  - yesterday
  - in the past 7 days
  - 1 to 4 weeks ago
  - more than 1 month ago
  - more than 1 year ago
- **Severity:**
  - mild
  - moderate
  - severe
- **Associated symptoms:**
  - chest pain
  - hoarseness
  - rapid heart rate
  - shortness of breath
  - cough
  - palpitations
  - dizziness
  - headache
  - fatigue
- **Aggravated by:**
  - nothing
  - activity
  - allergens
  - smoke exposure
  - a stressful position
- **Foreign body:**
  - no
  - witnessed
  - suspected
- **Steroid use:**
  - no prior steroid use
  - intermittent steroid use
  - currently using steroids
- **Treatments tried:**
  - nothing
  - inhaled
  - one or more OTC medications
  - one or more prescription drugs
  - beta-agonist inhalers
  - humidity
  - oxygen
  - reintroduction
- **Improve or treatment:**
  - no relief
  - mild
  - moderate
  - significant
**Good**

- Standardized ‘SOAP’ format
- Self-populated text is editable
- Efficient
**Bad**

- ‘Click-to-add’ options can be a crutch to students and a road block to educational evaluation
- Students may develop a reliance on selectable options in order to compose a note
- The ‘Problem List’ is pre-generated for the student

**New Note**

- Patient documentation from scratch
Good

- Note synthesis without relying on a template
- Reinforces the medical student’s clinical thought process
- Allows faculty to effectively evaluate the medical student’s patient documentation
New Note

- **Bad**
  - Formatting is subject to individual style
  - Proper formatting can be inefficient
  - Workarounds (shortcuts) are easily accessible

Obstacles to medical student education in EPIC

- Workarounds
- Templates
  - Preset SOAP note with ‘fill in the blank’ and ‘click to add options’
  - Similar drawbacks to NoteWriter
SUBJECTIVE:

Chief Complaint/Reason for Admission:

ACTIVE PROBLEMS:
* No active hospital problems.

History of Present Illness:
Patient is a [female], presenting with [symptom(s)]. Onset of symptoms was [date and time]. Patient denies [symptom(s)]. Symptoms improve with [treatment(s)].

Pain Scale: [VAS 0-10] [24/10]

Last in a hospital admission

No known Allergies

Past Medical History:

Family History:

Review of Systems:

OBJECTIVE:

Eyes: [SRT 0.90606] [0.906096]
Respiratory: [SRT 0.906026] [0.906096]
Cardiovascular: [SRT 0.906015] [0.906015]
Gastrointestinal: [SRT 0.906015] [0.906015]
Musculoskeletal: [SRT 0.906025] [0.906025]
Psychiatric: [SRT 0.906025] [0.906025]
Endocrine: [SRT 0.906038]

Diagnostic Results:

ASSESSMENT/PLAN:

Active Problems:
* No active hospital problems.
SUBJECTIVE:

Chief Complaint/Reason for Admission:

Active Problems:
"No active hospital problems."

History of Present Illness:

Patient is a [Syed] female presents with "***. Onset of symptoms was [Dec; hip onset 60104] with [Dec; clinical condition 17: "unchanged"]: course since that time. Patient denies "***. Symptoms are aggravated by "***. Symptoms improve with "***.

Pain Scale: [PAIN 0-10 24/4009]

Not in a hospital admission

No Known Allergies

Past Medical History:

Diagnosis:
- Asthma, well controlled

Review of Systems:

Constitutional: acute for 10 days ago
- not acute for 10 days ago

ENT: [30430001]
- Thorax: [30430001]
- Cardiovascular: [30430001]
- Gastrointestinal: [30430001]
- Hematology/Lymphatic: [30430001]

Allergy/Immunology: [30430001]

Mucocutaneous: [30430001]

Neurologic: [30430001]

Behavioral: [30430001]

Other:

OBJECTIVE:

Vital Signs (Most Recent):

Temp: 36.7°C (98.2°F) (98/92/15 10:58)

Physical Exam:

[Exam 304179411]

Laboratory:

[Results 30416175:

SUBJECTIVE:

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[Results 30416175:

**
Obstacles to medical student education in EPIC

- Workarounds
- Macros
  - Commands that populate the note with patient information
  - Efficient way to provide pertinent information in a standardized format
<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage</th>
<th>Dispensal</th>
<th>Refill</th>
</tr>
</thead>
<tbody>
<tr>
<td>albuterol (PROVENTIL) 5 mg/mL nebulizer solution</td>
<td>Take 0.5 mL (2.5 mg total) by nebulization every 6 (six) hours as needed for Wheezing.</td>
<td>20 mL</td>
<td>12</td>
</tr>
<tr>
<td>albuterol (ACCUIN) 0.63 mg/mL Nebu.</td>
<td>Take 3 mL (0.63 mg total) by nebulization every 6 (six) hours as needed</td>
<td>30 mL</td>
<td>12</td>
</tr>
<tr>
<td>albuterol (PROAIR HFA) 90 mcg/actuation HFA</td>
<td>Inhale 2 puffs into the lungs every 4 (four) hours as needed</td>
<td>1 Inhaler</td>
<td>0</td>
</tr>
<tr>
<td>albuterol (PROAIR HFA) 90 mcg/actuation HFA</td>
<td>Inhale 2 puffs into the lungs every 4 (four) hours as needed</td>
<td>1 Inhaler</td>
<td>0</td>
</tr>
<tr>
<td>albuterol (PROVENTE) 90 mcg/actuation HFA</td>
<td>Inhale 2 puffs into the lungs every 4 (four) hours as needed</td>
<td>1 Inhaler</td>
<td>0</td>
</tr>
<tr>
<td>montelukast (SINGULAIR) 4 mg chewable tablet</td>
<td>Take 1 tablet (4 mg total) by mouth every evening</td>
<td>30 tablet</td>
<td>0</td>
</tr>
<tr>
<td>prednisone (CRAPRED) 15 mg/5 mL solution</td>
<td>Take 1 1/2 teaspoons daily for 5 days</td>
<td>50 mL</td>
<td>0</td>
</tr>
<tr>
<td>prednisone (CRAPRED) 15 mg/5 mL solution</td>
<td>Take 7.5 mL daily x 3 days</td>
<td>25 mL</td>
<td>0</td>
</tr>
<tr>
<td>DISCONT'D: albuterol (PROVENTIL) 5 mg/mL nebulizer solution</td>
<td>Take 0.6 mL (2.5 mg total) by nebulization every 6 (six) hours as needed for Wheezing</td>
<td>20 mL</td>
<td>12</td>
</tr>
<tr>
<td>DISCONT'D: budesonide (PULMICHORT) 0.25 mg/2 mL nebulizer solution</td>
<td>Take 2 mL (0.25 mg total) by nebulization once daily</td>
<td>60 mL</td>
<td>3</td>
</tr>
<tr>
<td>DISCONT'D: fluticasone (FLOVENT DISKUS) 100 mcg/actuation inhaler</td>
<td>Inhalate 1 puff (100 mcg total) into the lungs every 2 (two) times daily</td>
<td>1 Inhaler</td>
<td>6</td>
</tr>
<tr>
<td>albuterol (PROVENTIL HFA/VENTOLIN HFA) 90 mcg/actuation HFA</td>
<td>Inhale 2 puffs into the lungs every 4 (four) hours as needed</td>
<td>1 Inhaler</td>
<td>0</td>
</tr>
<tr>
<td>azithromycin 200 mg/5 mL (ZITHROMAX) 200 mg/5 mL suspension</td>
<td>Take 4 mL daily one and 2 mL daily 2-5, Disp. 15 mL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>budesonide (PULMICHORT) 0.25 mg/2 mL nebulizer solution</td>
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Obstacles to medical student education in EPIC

- **Note Bloat**
  - Has been defined as “information so overwhelming that those of us sharing in the care of the individual are having difficulty weeding out the specific information quickly.”

- **Dangerous scenarios**
  - Copy and paste
  - Using a resident’s EMR access to write notes and order
Obstacles to medical student education in EPIC

- Pitfalls
  - Reading and regurgitating physician/resident notes
    - Useful for reviewing medical history
    - Obstacle when used instead of direct patient evaluation

- Lack of feedback on note writing
  - Feedback is an important part of the learning process and encourages better patient documentation
Optimal approach to training students to work in EMRs

- What is the optimal approach?
  - Students are notorious for trying to get through online modules as fast as possible because they are seen as busy work
  - Dedicated course on the use of EMRs prior to 3rd year
  - Distinct learning objectives designed to educate medical students on how to operate efficiently in the EMR

- 4th year medical students
  - Hands-on teaching by proficient 4th year medical students in a computer lab setting
  - Instruction from a user that is familiar with the interface and issues that will be encountered
  - Stress importance of avoiding pitfalls, workarounds, and dangerous scenarios
  - Efficiently stress need-to-know information
Optimal approach to training students to work in EMRs

- Other options
  - Attending Physicians
    - Would not be as efficient due to variation in interface leading to significant time investment to learn then teach
  - EPIC trainers
    - Are extremely proficient in EPIC, but are not familiar with the problems that are unique to medical students

Optimal approach to training students to work in EMRs

- Epic survival guide
  - Booklet that provides concise instruction to incoming students about working in EPIC
  - Good to for visiting students that cannot attend teaching sessions for specific EMR
  - Online modules may still be useful within the context of a visiting student, or for current user supplementation
Questions?

Small Groups 1: Define Best Practices

- At your table, spend 10 minutes discussing your clerkship, hospital or school’s policies about student note-writing.
  - Blue Tables: Is the student progress note a permanent part of record? Should it be?
  - Yellow Tables: Should students be allowed to use notewriter (templates for notes)? Why or Why not?
  - Red Tables: How does your institution teach students to use the EMR? How should this be done?
- Spend 5 minutes deciding on two “best practices”
- Report Out
Small Groups 2: Getting Faculty to Read Student Notes!

- At your table, spent 10 minutes brainstorming methods to get faculty to review student notes and give feedback
  - Blue Tables: Inpatient notes
  - Yellow/Red Tables: Clinic notes
- Spent 5 minutes deciding on two “best practices”
- Report out

References: