The EHR as a teaching tool: tips for learner-centered EHR use

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October 21, 2016

Background

Our goal is to help faculty and residents engage with learners in the Electronic Health Record (to be learner-centered) while teaching and providing patient-centered care

- Discuss documentation/compliance issues with EHRs
- Review skills intended to facilitate patient-centered EHR use
- Introduce and explore the concept of learner-centered EHR use

Compliance

(Rules are different at different institutions)

Medicare guidelines

Students may document in the EHR

Preceptor/resident documentation

May use student's:

- Review of systems
- Past medical history
- Family history
- Social history

These may be performed without preceptor being present

May *not* use student's:

- History of present illness
- Physical examination
- Medical decision making

Preceptor must perform and document

Pitfalls

- Sharing log in
- 'Make me author' button
- Cut and paste

Compliance Summary

- Students can document in the EHR
  - Know your institution's rules
- Never share log-in
- Avoid: copy/paste, 'make me author'
- Preceptors/residents may use student's:
  - ROS, Past medical, family, social history
- Preceptors must perform and redocument
  - HPI, PE, MDM

Scribes

- Students as scribes??
  - physician utilizes the services of his or her staff to document work performed by that physician
  - scribe does not act independently, but simply documents the physician's activities during the visit
  - The physician who receives the payment for the services is expected to be the person delivering the services and creating the record, which is simply "scribed" by another person
- Scribe attestation
  - "The documentation recorded by the scribe, XXXX, accurately reflects the service I personally performed and the decisions made by me."
- “Make me author”

Documentation pitfalls

- Not letting students document
- Lack of feedback on notes
- Using templates

Feedback on notes

Note in EHR

- Route student the note with feedback

Word document

- Via email
  - No personal health information
- Print with written comments

Templates

- Don't promote critical thinking
- Do not allow student to tell 'the story'
- Take focus away from patient

- Where is the clinical reasoning?

Annals of Internal Medicine POSITION

Clinical Documentation in the 21st Century: Executive Summar Policy Position Paper From the American College of Physicians

Thomson Kuhn, MA; Peter Basch, MD; Michael Barr, MD, MBA; and Thomas Yackel, MD, MPH, MS, for the Medical Inf Committee of the American College of Physicians*

Clinical documentation was developed to track a patient's condition and communicate the author's actions and thoughts to other members of the care team. Over time, other stakeholders have placed additional requirements on the clinical documentation process for purposes other than direct care of the patient. More recently, new information technologies, such as electronic health record (EHR) systems, have led to further changes in the clinical documentation process. Although computers and EHRs can facilitate and even improve clinical documentation, their use can also add complexities; new challenges; and, in the eyes of some, an increase in inappropriate or even fraudulent documentation. At the same time, many physicians and other health care professionals have argued that the quality of the systems being used for clinical documentation is inadequate. The matics Committee of the American College of Phy dertaken this review of clinical documentation in a ify the broad range of complex and interr surrounding clinical documentation and to sugg ward such that care and clinical documentation in tury best serve the needs of patients and families.

Ann Intern Med. 2015;162:301-303. doi:10.7326/M14-2128
For author affiliations, see end of text.
This article was published online first at www.annals.org 2015.

In the past decade, medical records have become increasingly synonymous with electronic health re-

The primary goal of EHR-generated do should be concise, history-rich notes that r

Templates

ABDOMINAL PAIN

CHIEF COMPLAINT: @CHIEFCOMPLAINT@
This is a @AGE@ @SEX@ [***]
Historian: Patient
Time course: [Gradual]
Onset was [***] prior to arrival, Episodes [***]
Currently Symptomatic: [Worse]
Complicating Factors: Quality [Aching, Dull]
Severity: Maximum [Severe]; Current severity [Moderate].
Associated with: [No Flank pain, Groin pain, No Trauma, No Recent travel, No UTI]
[Abdominal distention, Vomiting, Diarrhea, Fever]
[Pregnancy risks: S/p hysterectomy, LMP, Prior ectopics, History of PID, IUD]
Exacerbated by: Movement
Relieved by: Nothing
@ALLERGY@
@PMH@
@SURGICALHX@
@SOC@

Templates

PHYSICAL EXAM:
@VS@
GENERAL: Patient is afebrile, Vital signs reviewed, Well appearing, Alert and lucid.
EYES: Normal inspection.
HEENT: normocephalic, atraumatic , normal ENT inspection.
CARD: regular rate and rhythm, heart sounds normal.
RESP: no respiratory distress, breath sounds normal.
ABD: soft, tender to palpation [***], BS [present], soft, no organomegaly or masses.
BACK: non-tender. No CVA tenderness.
MUSC: normal ROM, non-tender , no pedal edema.
SKIN: color normal, no rash, warm, dry.
NEURO: awake & alert, no motor/sensory deficit, gait stable.
PSYCH: mood/affect normal.

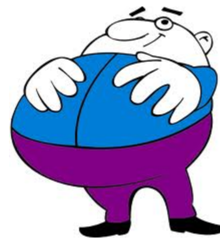
ASSESSMENT:
GI upset. No gross pain to suggest an acute abdomen, but will discuss signs and symptoms for return to an emergency department and consideration of further studies. Will consider studies as appropriate and discuss with the patient.
Will assist with oral or IV hydration as the patient tolerates. I feel a pulmonary or cardiac component is unlikely at this time base on the history and exam.

Best practices

- We suggest using templates **only** where developmentally appropriate
  - Not in 3rd year except for certain types of visits
    - Well child, physicals
  - More appropriate for Acting Interns
    - Still need to free text HPI, assessment
    - Need to teach proper use of templates

Note bloat

- Copying / pasting
  - Lack of clinical reasoning
  - Lack of engagement with information
  - Lack of thinking about problem



Patient-Centered EHR Use

EHR Use = Distracted doctoring

- Back to patient
- Poor eye contact
- Computer guided questioning
- Long silences
- Typing during sensitive discussion
- Miss non-verbal cues

Improving Patient-Centered Technology Use (iPaCT)

Lee WW, Alkureishi ML, Farnan J, Arora V
University of Chicago School of Medicine

Honor the ‘Golden Minute’

Use the ‘Triangle of Trust’

Maximize Patient Interaction

Acquaint yourself with chart

Nix screen

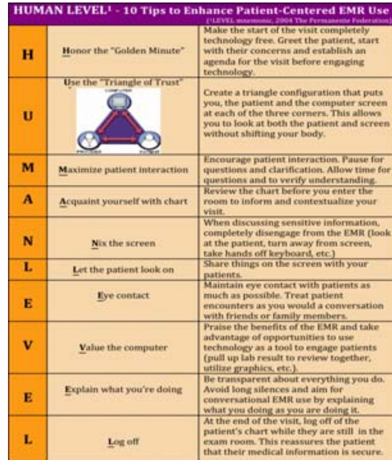
Let the patient look on

Eye contact

Value the Computer

Explain what you’re doing

Log off

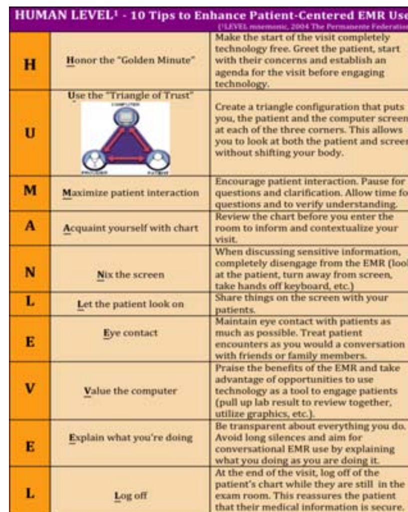


HUMAN LEVEL[1] - 10 Tips to Enhance Patient-Centered EMR Use
([1]LEVEL mnemonic, 2004 The Permanente Federation)

H	Honor the "Golden Minute"	Make the start of the visit completely technology free. Greet the patient, start with their concerns and establish an agenda for the visit before engaging technology.
U	Use the "Triangle of Trust"	Create a triangle configuration that puts you, the patient and the computer screen at each of the three corners. This allows you to look at both the patient and screen without shifting your body.
M	Maximize patient interaction	Encourage patient interaction. Pause for questions and clarification. Allow time for questions and to verify understanding.
A	Acquaint yourself with chart	Review the chart before you enter the room to inform and contextualize your visit.
N	Nix the screen	When discussing sensitive information, completely disengage from the EMR (look at the patient, turn away from screen, take hands off keyboard, etc.)
L	Let the patient look on	Share things on the screen with your patients.
E	Eye contact	Maintain eye contact with patients as much as possible. Treat patient encounters as you would a conversation with friends or family members.
V	Value the computer	Praise the benefits of the EMR and take advantage of opportunities to use technology as a tool to engage patients (pull up lab result to review together, utilize graphics, etc.).
E	Explain what you're doing	Be transparent about everything you do. Avoid long silences and aim for conversational EMR use by explaining what you doing as you are doing it.
L	Log off	At the end of the visit, log off of the patient's chart while they are still in the exam room. This reassures the patient that their medical information is secure.

Curriculum during late 2nd year

Knowledge and skills better after curriculum (self-report and OSCE)



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Back to baseline at end of 3rd year

Patient-centered EHR Use

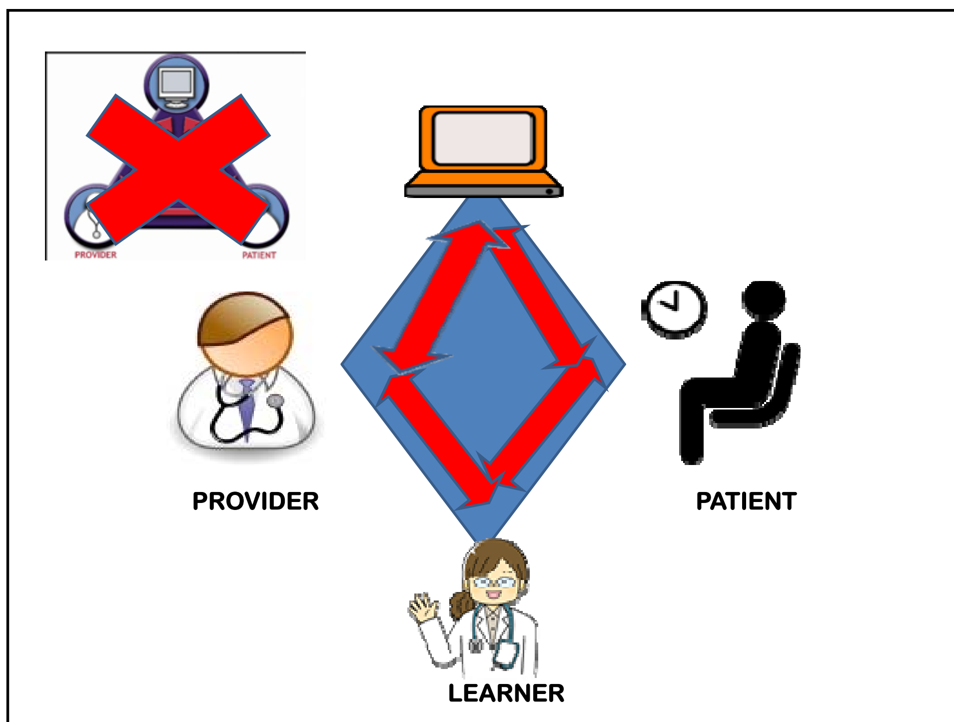
Learner-centered EHR Use

Learner-centered EHR Use

- Prepping for visit: Teach learners how to review chart

Learner-centered EHR Use

When you are in the room with a patient and a student, you need to be aware of everyone's position



Learner-centered EHR Use

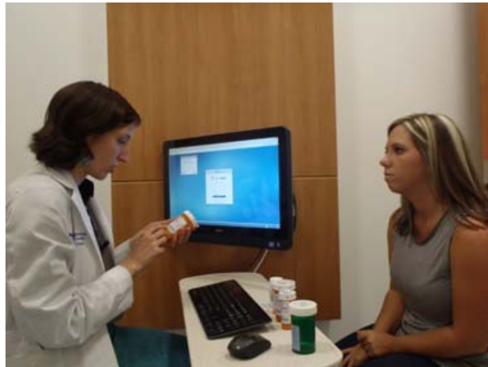
Can you find the patient?

Learner-centered EHR Use

- There are actual teaching and learning opportunities when one is using an EHR
  - When student is alone with the patient (after appropriate observation and feedback)
  - When student and preceptor are together with the patient
  - Holy Grail: direct observation while still being efficient

Student alone with the patient

Medication Reconciliation



Student alone with the patient

Student performs screenings

(Video)

Student alone with the patient

- After visit summary
  - Can teach student and patient together
  - Preceptor creates AVS, student reviews with patient
  - Student creates AVS and reviews with patient

- Pending orders
  - Practice writing prescriptions, ordering tests and making referrals

Student and preceptor with patient

Teach student and patient together

(Video)

Direct observation of clinical interactions…

…while remaining efficient

Observation #1

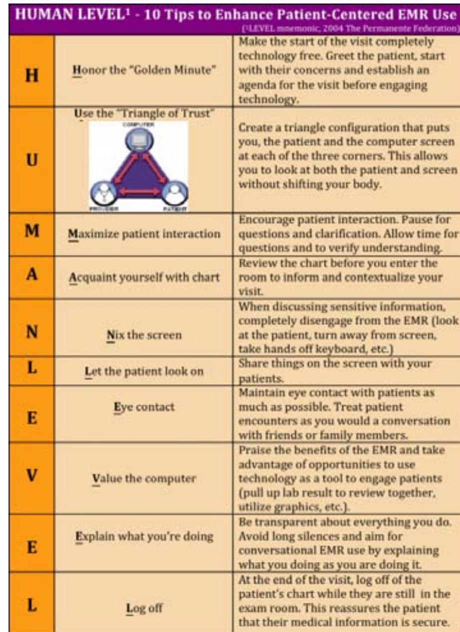
(Video)

Observation #2

(Video)

Observation #3

(Video)



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7 Tips to Enhance Learner-Centered EHR Use

Let students document in the EHR!

Educate learner & patient while using EHR

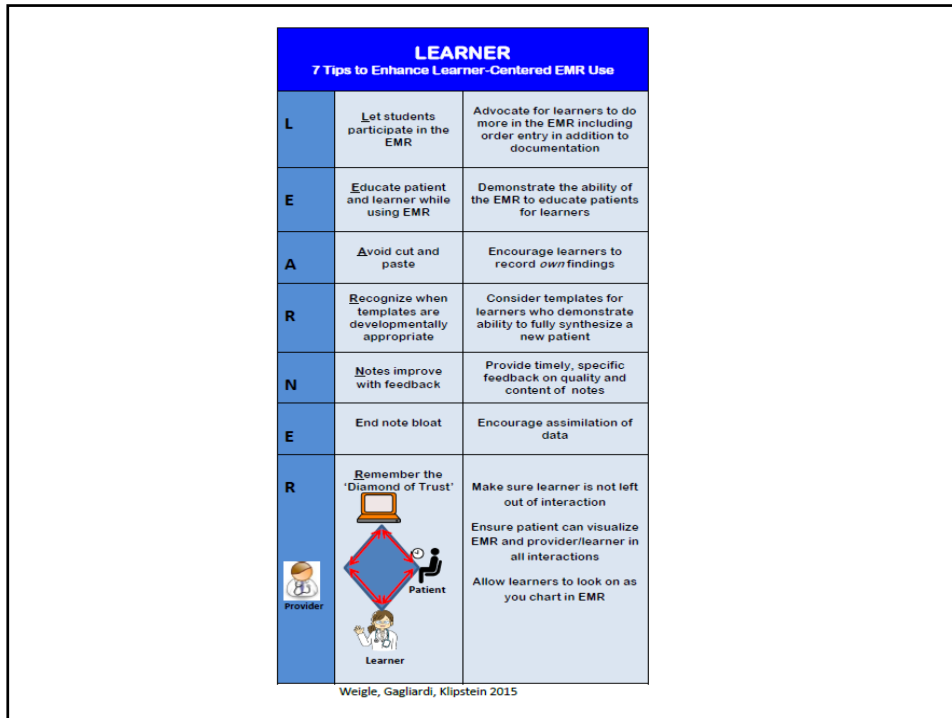
Avoid cut/paste

Recognize when templates are developmentally appropriate

Notes improve with feedback

End note bloat

Remember the 'diamond of trust'



LEARNER 7 Tips to Enhance Learner-Centered EMR Use		
L	Let students participate in the EMR	Advocate for learners to do more in the EMR including order entry in addition to documentation
E	Educate patient and learner while using EMR	Demonstrate the ability of the EMR to educate patients for learners
A	Avoid cut and paste	Encourage learners to record *own* findings
R	Recognize when templates are developmentally appropriate	Consider templates for learners who demonstrate ability to fully synthesize a new patient
N	Notes improve with feedback	Provide timely, specific feedback on quality and content of notes
E	End note bloat	Encourage assimilation of data
R Provider	Remember the 'Diamond of Trust' Patient Learner	Make sure learner is not left out of interaction Ensure patient can visualize EMR and provider/learner in all interactions Allow learners to look on as you chart in EMR

Weigle, Gagliardi, Klipstein 2015

Students adding value to practices

- Quality improvement projects
- Health maintenance dashboard
- Panel management
- Systems-based practice
  - Integrating cost into order entry

Future Directions

- **Clinical decision support systems**
  - Enhance fund of knowledge
  - Guide learning
  - ‘Point of care’ education
  - Teach best practices
- **Tracking learner exposures**
  - Diagnoses
  - Procedures

Your thoughts?
Feedback?

Scribes?
Templates?
Note bloat?

Do we observe students?

What do we expect day one of internship?

Who is advocating for learners in the EHR?

When and how do we teach all of this to students and residents and faculty?