

# Survey of experts on the use of the Electronic Medical Record with Graduate Medical learners

Thank you for your willingness to participate in this study by completing this survey.

This study consists of a Delphi survey and may take about 15-20 minutes to complete. At the end, you will be asked whether you are willing to participant in an optional phone call with a study team member to share your own "best practices" or successful strategies with teaching trainees in the setting of the electronic medical record.

All questions are optional, but we hope that you will complete as much of the survey as possible.

The focus of the study is teaching and learning of resident and fellows in the setting of the electronic medical record. While the interaction with the patient is vitally important, it is not the focus of this study.

Please indicate your gender:

- Male  
 Female  
 Prefer not to say

Please indicate your age:

- < 24  
 25-30  
 31-36  
 37-42  
 43-48  
 >49

Please indicate the number of years you have used EPIC:

- < 1 year  
 1-3 years  
 4-6 years  
 7-10 years  
 >10 years

Please indicate the number of years using any electronic medical record:

- < 1 year  
 1-5 years  
 6-10 years  
 >10 years

Please indicate the number of years of experience teaching graduate medical (GME) learners:

- < 1 year  
 1-3 years  
 4-6 years  
 7-10 years  
 >10 years

Atwater AR, Rudd M, Brown A, et al. Developing Teaching Strategies in the EHR Era: A Survey of GME Experts. *J Grad Med Educ.* 2016;8(4):581-586.

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**How important or unimportant is each of the following to the teaching and learning of residents & fellows in the setting of the EPIC EMR?**

	Very unimportant	Somewhat unimportant	Somewhat Important	Very Important
Understanding the functionality and limitations of clinical decision support tools and hyperlinks (such as medication interaction warnings, allergy warnings, medication coverage warnings, embedded links that help to direct plan of care)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to frame clinical questions when using clinical decision support tools and hyperlinks (such as medication interaction warnings, allergy warnings, medication coverage warnings, embedded links that help to direct plan of care)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using automated checklists to improve quality and safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the EMR to provide experiences for learners that are not otherwise possible (for example, virtual cases)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using order guidelines to improve quality and safety (such as for labs, meds, standard inpatient orders)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minimizing the repetition of data already documented elsewhere in the EMR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrating understanding of the legal and ethical implications of accessing and using information individually identified in the EMR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**How important or unimportant is each of the following to the teaching and learning of residents & fellows in the setting of the EPIC EMR?**

	Very unimportant	Somewhat unimportant	Somewhat Important	Very Important
Understanding the functionality and limitations of automated reports (for example, average time provider spent "in" each patient's chart, or % of time calls answered in 24 hours)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using automated reports with details about trainee portal and electronic message use to improve performance (for example, % of time patient messages responded to within 24 hours)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using automated reports to identify areas for practice improvement (for example, review psoriasis cases to confirm trainee asked about arthritis & develop quality improvement plan based on findings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using automated reports to create procedure logs for training documentation (extracted from procedure notes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using automated reports to track and document adequate trainee supervision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using automated reports to document maintenance of problem lists and medication reconciliation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging users to flag patient records for their "teaching / learning files"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**How important or unimportant is each of the following to the teaching and learning of residents & fellows in the setting of the EPIC EMR?**

	Very unimportant	Somewhat unimportant	Somewhat Important	Very Important
Balancing the review of electronic data with verbal history and examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balancing focus on electronic documentation with patient engagement during the patient encounter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creating electronic notes that focus on communicating clinical thought processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using EMR tools to facilitate health information exchange between medical institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using EMR tools to improve communication among clinicians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recognizing a patient's level of technologic literacy and using patient portals, e-mail, and video visits to enhance communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**How important or unimportant is each of the following to the teaching and learning of residents & fellows in the setting of the EPIC EMR?**

	Very unimportant	Somewhat unimportant	Somewhat Important	Very Important
Teaching and learning how to use the EMR through direct hands-on practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing adequate time for faculty to learn new technologies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improving the typing skills of users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development of faculty and trainee EMR templates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development of EMR shortcuts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eliminating the copy-and-paste function from trainee documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eliminating the template function from trainee documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the Reporter-Interpreter-Manager-Educator (RIME) scheme as a framework for systematically teaching and evaluating EMR-specific skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Email communication between faculty and trainees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**To what extent do you think that the following items would enhance teaching and learning of residents & fellows in the setting of the EPIC EMR?**

	Not at all	Very Little	Somewhat	Quite a bit	A great deal
Faculty teaching trainees while away from the EMR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreasing faculty patient volume in teaching clinics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Completion of faculty and trainee clinical documentation after or outside of clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preloading notes or begin documentation prior to clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using dictaphones for clinical documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rearranging the workroom to facilitate the teaching interaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Typing/documenting by trainee in the patient's room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation of the note in the EMR by the faculty member while the trainee is presenting the case	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction of note documentation time spent to improve teaching and learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**To what extent do you think that the following items would enhance teaching and learning of residents & fellows in the setting of the EPIC EMR?**

	Not at all	Very Little	Somewhat	Quite a bit	A great deal
Assigning roles of faculty and trainees regarding the clinical encounter and EMR workflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extender, nursing, and scribe assistance with completing the note in the EMR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to more trainees and /or mid-level providers to decompress time spent completing notes in the EMR, thus allowing for more teaching and learning time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Focusing on fundamental principles of teaching and learning rather than specific technologies in isolation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eye-to-eye contact and visual cues between the teacher and the learner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faculty refraining from review of data and development of plan in advance, prior to engaging with trainee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing the opportunity for trainees to demonstrate clinical reasoning in real time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging trainees to routinely check laboratory values, rather than relying on the knowledge that results will be available on demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing consistent and accurate handoffs because patient information is available in real time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**To what extent do you believe that each of the following is a concern in the teaching and learning of residents and fellows in the setting of the EMR?**

	Not at all	Very Little	Somewhat	Quite a bit	A great deal
The use of EMRs linked to a decreased enthusiasm for teaching, even for otherwise enthusiastic teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The trainee being denied the opportunity to demonstrate her/his understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The trainee being denied the opportunity to learn from an experienced attending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presentations on rounds becoming a pro forma educational exercise rather than an intellectual exchange	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the interest of time, attending staff rapidly going through the EMR, seeking out data to answer their own questions rather than engaging the trainee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**Additional Colleagues:**

Do you have any colleagues with expertise with graduate medical education in the setting of EPIC, who may have interest in this project and qualify for participation.

- No
- Yes

Contact #1

Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Institution: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contact #2

Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Institution: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contact #3

Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Institution: \_\_\_\_\_

Email Address: \_\_\_\_\_

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**Phone Follow-Up**

Would you be willing to participate in a follow-up phone call to help us elicit additional information?

- No  
 Yes

Please provide the phone number we can best reach you at for the follow-up phone call.

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## Comments

Please use the space below, if you have any comments that you would like to share with the study team, about this topic or the survey.

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