Electronic Health Record (EHR) Optimization in a Multispecialty Medical Services Organization

Case Study

Holly M. Deiter, FACMPE

August 20, 2016

This paper is being submitted in partial fulfillment of the requirements of Fellowship in the American College of Medical Practice Executives.
Electronic Health Record (EHR) Optimization in a Multispecialty Medical Services Organization

Statement of Problem:

Two years after the implementation of a robust electronic health record (EHR), providers were producing an office patient record through the EHR that reflected a poor summary of the patient visit. Information documented was found to be non-specific. Clinical summaries given to patients were contradicting and created miscommunications. Duplications within the patient history were prevalent. Medication history was not being reconciled to bring the medication list current. Data fields were not being utilized appropriately, which prevented documentation from populating appropriately in other document fields within the patient record.

Migrating from a paper chart to an electronic health record was a daunting task to providers and staff. Although appointment schedules were adjusted to allow for the anticipated greater length of time it would take to master the work flow changes from a paper chart to an electronic medical record, providers and staff struggled in this transition. Because the EHR implemented was one that offered multiple pathways to obtain personally desired documentation, it was apparent that the providers and staff continued to use first-learned strategies to get from the patient visit to the note completion. This less-than-optimal patient note became a repetitive normal that continued to compromise the patient record because of the lack of clear, concise and accurate documentation. The reluctance of the providers and staff to experiment and seek out more efficient documentation methods prevented any improvement to the patient note.

The Medical Service Organization consists of thirteen practices that include thirty providers and ninety-two staff members that utilize the EHR. Users have varying degrees of understanding of recommended best practice standards and familiarity with electronic documentation.
Outside consultants contracted through the EHR vendor were the trainers for the first week of an office go-live of the EHR. These consultants, although knowledgeable about the product, lacked familiarity with the existing work flows of the offices. This was a contributing factor in the varying, inefficient pathways of documentation learned by those users of the EHR. The consultants had varying backgrounds of understanding of provider specialties, which further contributed to a less-than-optimal educational, go-live of the EHR.

It was apparent that there needed to be a relatively fast paced initiative developed to bring all users to a level of best practice standards so that the EHR workflows were easily understood, office note documentation was clear to the patients and referring providers, patient records contained meaningful medical information, and the appropriate medication reconciliation process was being performed.

**Descriptions of Alternative Solutions:**

Five alternative plans were evaluated: 1) Retrain all users of the EHR in a hands-on training lab in a central location; 2) Develop a self-instruction PowerPoint of best practice standards review for each individual user to complete; 3) Offer both a hands-on lab and an on-line PowerPoint format for training and retraining. The user would choose which method would best fulfill his or her learning style; 4) Require both a hands-on training off-site and a PowerPoint module on-line training session on an ongoing basis; 5) Choose to not initiate any changes to optimize the understanding and use of the EHR.

The pros and cons of each option were assessed by a work group formed including representatives from the Information Services Department, the Medical Services Organization operations team, a
cross section of provider users of the EHR and a complement of office supervisors of the Medical Services Organization to review the suggested solutions.

**Retrain all users of the EHR in a hands-on training lab in a central location.** One possible solution evaluated was to retrain all users of the EHR in a hands-on training lab in a central location. Users could develop an increased comfort level in their understanding and use of the EHR through this hands-on training. Best practice standards would be reviewed and/or taught to users in a standardized format. The identification of best practice standards through this training would set expectations to be universally followed. An interactive, hands-on format would enhance the learning experience, giving individuals opportunities to ask questions and to receive personal instruction. This solution would increase expenses within the organization and could contribute to decreased revenue generation. Expenses would increase through mileage reimbursement of staff to attend the trainings and potential overtime wages. If patient hours were to be maintained in the offices, there may be increased utilization of a pool of per diem personnel to cover those employees that may be at the trainings, which would result in additional salary expenses. Trainers would need to dedicate a significant amount of time in their preparation for the training as well as the time it would take to train all users. The trainers may require additional work hours to accommodate the trainings, which would present an increase in overall salary expenses for their department. Logistics for off campus practices to attend could present patient hour coverage shortages, potentially decreasing revenue production. Providers would need to be willing to commit to time outside of patient hours so that patient hours were not decrease, thereby decreasing revenue. Some individuals may find this format a non-optimal learning environment.

**Develop a self-instruction PowerPoint of best practice standards.** The second solution evaluated was to develop a self-instruction PowerPoint of best practice standards review for each individual user to complete. Users may have a higher degree of comfort with this learning process
as it would be private and could be done at the convenience of the user. Expectations of EHR best practice standards would be in an interactive format that could be utilized at a later time as a reference. Staff trainings could be scheduled at the convenience of the practice to minimize disruption to patient hours and be completed potentially during practice down times, keeping expenses at a minimum. Additional expenses would be minimalized by keeping the training within the office with no need to cover travel time and mileage. Patient care hours may not need to be compromised, which would allow productivity revenue to remain constant. The demands on the trainers’ time would be reduced as there would not be multiple sessions to teach. The time needed would be in production of the learning session. With less demand on the trainer’s time an increase in salary expense would be minimal or non-existent. There would be no interactive format in real time to ask questions to enhance learning. A challenge with this solution may be that some individuals may find this format a non-optimal learning environment as they may need the real time interaction to reinforce their learning.

**Offer both a hands-on lab and an on-line PowerPoint format for training and retraining.**

Another solution considered was to offer both a hands-on lab and an on-line PowerPoint format for training and retraining. The user would choose which method would best fulfill his or her learning style. This would allow a learning format for those that prefer a hands-on, instructed environment and a format for those that prefer a self-instruction format. Practices would have a decreased cost in employee mileage expenses and hourly salary expense with no travel time if fewer users would prefer the hands-on format. There would be greater flexibility to spread out the trainings so decreased patient care hours would be minimal or not decreased at all if some staff preferred the hands-on lab and some staff preferred the PowerPoint training. This would lessen the chances of decreased patient hours, which would result in a decrease of office revenue generation. Trainers would have less demand on their time and expenses if not everyone chose the hands-on training
lab. Those choosing to be retrained through a self-instructing PowerPoint would not have the opportunity for the exchange of information through a question and answer session. This may place them at a disadvantage by not participating in the interactive conversation. Interactive conversation can promote understanding of what is being taught through discussion of related educational material. Practices could see an increase in costs associated with the training for those choosing to have the off-site, hands-on training. Travel time, mileage reimbursement, overtime and supplemental staffing through per diem personnel would increase costs to the practice as in the first solution evaluated. There may not be flexibility in spreading out the trainings - as not to affect patient care hours - if all or the majority of staff chooses to attend off site. This could potentially decrease revenue stream into the practice if the patient hours would decrease. Trainers may have a higher demand on their time and salary expenses if the majority of users choose the hands-on training.

**Require both a hands-on training off-site and a PowerPoint module on-line training session on an ongoing basis.** The fourth solution evaluated would require both a hands-on training off-site and a PowerPoint module on-line training session on an ongoing basis. This would allow a learning format for those that would benefit from a hands-on environment and a format for those that would benefit from a self-instructing environment. This model would afford perhaps a greater depth of review overall and increase a knowledge base retention percentage through repetitive learning by using the two formats. Staff members would be given the ability to ask questions and participate in discussion, which further enhances learning opportunities. Practices would see an increase in costs associated with this training model through travel time, mileage reimbursement and supplemental staffing through per diem personnel. Per diem staffing would be utilized to preserve patient access and maintain patient hours whenever possible but because of the limited pool of per diem staff there may be a decrease in revenue due to fewer patient hours. Trainers
would have a higher demand on their time and responsibilities in order to provide both venues for learning. The training department salary expenses, mileage reimbursement expenses and per diem staffing expenses would increase with both types of learning becoming mandatory.

Choose to not initiate any changes to optimize the understanding and use of the EHR. A possible solution to evaluate was to choose to not initiate any changes to optimize the understanding and use of the EHR. The group had difficulty in finding any valid benefit in continuing the current processes and protocols in place. Choosing to ignore the current state of the EHR record, which led to miscommunications between providers and between the provider and the patient, was felt to be irresponsible. Patients deserve to have an accurate and comprehensive medical health record.

Procedure Used to Select Solution:

A SWOT analysis was performed and analyzed by all members of the work group. Strengths, weaknesses, opportunities and threats in relation to the outlined options were identified. The group met monthly over the course of six months. The work group then recommended a plan based upon the analysis and consensus of the group.

Decision:

The work group determined that the option that required both a hands-on training off-site and an on-line PowerPoint module training session on an ongoing basis offered the most comprehensive approach to what will become a required ongoing format for the optimization of the EHR of best practice standards as new standards are refined and developed. The recognition of how diverse individuals are in their learning preferences led the group to this decision.
The group also recommended that each specialty meet with the trainers to look at note forms and make possible refinements to the note forms to offer a more comprehensive documentation option within each specialty. The note form templates were initially set up to benefit the primary care providers. It was found that the specialty provider’s needs for documentation were slightly different and the templates were presenting a demand on the specialty provider to do a significant amount of typing within the record, which was resulting in a less-than-acceptable professional format.

Although this decision would require increased financial resources, the group felt the financial investment in this process is necessary, as proper documentation provides a quality of care that patients deserve. Proper documentation also provides an increased benefit to the patients, providers and the organization from a risk management perspective.

**Implementation:**

The Information Systems Department EHR team would lead this optimization process with support from the organization’s administrative team. A series of collaborative meetings between these two teams were scheduled to develop the optimization action plan.

A central location was chosen for the hands-on training. The hands-on training will occur with each new hire and will be repeated at the new employee’s six month anniversary date. Existing staff will be offered the opportunity to attend this training if the supervisor they report to feels that it would be beneficial to the staff member.

Provider meetings will be held monthly for all provider users of the EHR. The meeting can be attended either on site at the Hospital or via a WebEx. The meeting’s agenda will include updates
and improvements made to the EHR as well as reviews and demonstrations of best practice standards for EHR documentation. A segment of time will be reserved for provider questions and to allow provider feedback in regard to proposed refinements and changes to the EHR. Reviews and demonstrations will be captured on a PowerPoint, which will be posted on the EHR shared team site to be utilized as a reference. Providers will be eligible for yearly financially incentives based upon goals relating to participation and training as outlined. The financial support for this would come from the money received through the successful attestation of CMS (Centers for Medicare and Medicaid Services) meaningful use programs.

An EHR user meeting will be held each Friday for providers’ staff. The meeting can be attended either on-site at the Hospital or via WebEx. The agenda will include reviews and demonstrations of best practice standards for EHR documentation. Also included will be a time for staff members to ask questions and to provide feedback to proposed refinements of EHR workflows. The best practice standards and content of the meeting will be posted on an EHR team site that everyone will be able to access.

An additional monthly meeting will be held with an appointed group of individuals, consisting of representatives from Information Systems, the Medical Services Organization operations team and office supervisor representatives. The purpose of these meetings will be to evaluate suggestions and requests made by the EHR user group relating to the EHR note forms and overall EHR system refinements. This group of individuals will make recommendations for any note form changes and process improvements based upon consensus, and report those recommendations to the Chief Information Medical Officer for final approval and development of an action plan to carry out the recommendations.
**Significance of Outcomes and Lessons Learned:**

Within a month of initiating these meetings, improvements were seen within the EHR documentation. Engagement in the refinement of the EHR was seen among providers and staff alike. The increase in knowledge users obtained of the EHR led individuals to feel more comfortable in engaging in discussions for enhancements to the program. As the comfort level increased, the engagement at the meetings became more valuable through in-depth discussions and recommendations for optimization. Specialty note forms were developed and refined, which has resulted in a more comprehensive and efficient format for documenting. Referring providers and patients are now receiving accurate, meaningful information. Documentation in a standardized format has led to a greater efficiency for providers in both completing the patient note and reviewing referring provider notes.

Although the decision process has resulted in distinct successes for many providers, participation of providers has not been 100 percent. The group did believe that the financial incentive was going to result in a higher participation rate of providers. However, that was not the case. There was only a 60% participation rate among providers. The group did not evaluate in detail what the motivators would be for the providers with this study. A work group will be developed to identify a strategy to obtain a 100 percent provider participation rate for continued optimization and compliance with best practice standards.

Participation of non-provider staff was met with an overwhelming success. Although all staff was invited to participate in the EHR staff sessions, participation by all was challenging due to scheduling complexities and the size of the group. Most participated through the WebEx option, which presented challenges. Not all individuals spoke clearly and as loudly as needed, which led to difficulty of others in hearing what was being said. The Web Ex license limited the number of
participants, which required several individuals to call in from one phone utilizing the speaker option on the phone. This prevented some individuals from being heard and some individuals from hearing. A decision was made to have only the office supervisors call in and then cascade the learning to the staff. A team list serve was developed that allowed individuals to ask questions and ask for clarifications.

**Recommendations for Other Managers:**

Overall the group felt this decision was successful. For those organizations experiencing a similar situation, some recommendations would be:

Include a wide complement of users in this review process. The different perspectives were instrumental to the success this solution brought. Each user group and specialty utilizes the EHR in a different context. The multi-discipline representatives in this review committee contributed to a well-rounded review and decision making process to obtain a comprehensive approach to EHR optimization.

Evaluate what motivates the providers to commit to a solution such as this. As described previously in regard to outcomes, understanding what motivates individuals would lead to greater success with provider participation.

It is evident that EHR optimization is something that must remain constant. There are multiple upgrades to the system per year and note form refinements are constantly evolving as are medical treatment options. Comprehensive communication formats and training opportunities were the keys to the optimization success seen. Dedication to optimization is imperative so that a patient’s
medical record information and care is accurately documented. Only then can a high quality of care be provided to the patients we serve.