

IMPLEMENTING AN ELECTRONIC MEDICAL RECORD: CREATING A REQUEST FOR
PROPOSAL

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Abstract

The quality of inter-professional team documentation, when documenting on paper, has consistently failed to meet the recommended standards because of illegible handwriting, which leads to wrong information recorded in patients' charts, and incomplete health histories. When developing a comprehensive electronic medical record system to serve an orthopedic office, this requires significant time, open and honest communication, dedication from each member of the team, and resources. In an orthopedic office setting, an inter-professional team was formed to develop and evaluate a request for proposal for an electronic health record system, compared to the current documentation process influences a decision for a new electronic documentation system within a three-month period. The literature review identified evidence that supported the use of a request for proposal (RFP) when fulfilling an informatics system/electronic medical record (IS/EMR). Research also supported the utilization of the inter-professional team to build an effective request for proposal. The model used in this project was the Schwirian informatics model. This model enables identification of significant informational needs that can foster gaps in knowledge for nursing practice. The request for proposal allowed the office to develop, and distribute the proposal to three informatics systems and compare these systems to select the most useful system for their practice. The orthopedic office was able to choose the right electronic medical record system. Developing the inter-professional team and completing the request for proposal made this project successful.

Keywords: Nursing informatics; request for proposal; Electronic medical records; information system technology; Schwirian informatics model.

Implementing an Electronic Medical Record: Creating a Request for Proposal

Medical professionals are recognizing that an electronic medical records process could help prevent human error related to documentation issues. Defining documentation issues includes handwritten notes that are illegible, leading to mistakes; the necessary documentation does not occur when the physician sees patients; the lack of documentation or providing of patient education; patient health histories are incomplete; allergy to drug interactions occur from unlisted allergies; and medication redundancies. With healthcare changing so rapidly, inter-professional team building has become increasingly crucial. All new health care delivery initiatives involve team-based care. For this project, the inter-professional team comprised using skills from each employee and focusing on individual strengths to reduce healthcare costs and improve patient outcomes through shared responsibility. To develop the request for proposal, the inter-professional team created and worked toward clear goals, practiced clear and open communication that included 100% engagement from all members, trust, and effective conflict management. Creating the request for proposal required full participation and collaboration from all inter-professional team members; the goal was to discover the best way to help improve patient outcomes. The inter-professional team from the participating orthopedic office will use the information gathered to determine which electronic medical records system will best fit the needs of patients. This project supports nursing practice because it increases patient safety and patient confidentiality while enhancing practitioner-patient communication.

Background

Study findings estimated that between 3% and 17% of inpatients experienced adverse events significant enough to prolong hospitalization, caused significant morbidity or led to death (Lesar, Briceland, & Stein, 2014). Data collected by Lesar, Briceland, and Stein (2014)

indicated, “errors in medication prescribing, 30% are related to decreased knowledge in drug therapy, and 29% were from a lack of patient information” (para. 26). Electronic medical records will help improve the quality of care by saving clinicians time accessing, retrieving and recording data, allowing clinicians to focus more on patient care (Lu, Xiao, Sears, & Jacko, 2015). An electronic medical record can also provide clinical decision support at the point-of-care, such as during electronic prescribing (Lu et al., 2015). Improving access to knowledge databases at the point-of-care may also improve translating knowledge into practice (Lu et al., 2015). Physicians who work in the emergency departments believe that mobile access to electronic medical records is necessary (Lu et al., 2015).

Data collected by Lu et al. (2015) showed “the benefits of handheld electronic medical record improved productivity and accessibility of information as well as great potential to improve patient safety and quality of care” (para. 15). A request for proposal is a necessary part of choosing an adequate information system. Kakimzhanov, Haung, Zhang, and Wang (2015) stated that a “request for proposal is needed, and will benefit the organization if completed with passion; one must be vested in the interest of not only the organization but also the change project” (para. 1). For the request for proposal to be useful one must support the project question, enabling one to stay on track when designing the request for proposal (Kakimzhanov et al., 2015).

The goal of this project was to help patients through inter-professional team collaboration by using an integrated electronic medical record to support improved patient outcomes. By developing a request for proposal as the primary focus of this project, the office can choose a system that includes e-Prescribing, patient portals, connected cost accounting, information verification, increased privacy and confidentiality with encryption and password; protecting the

security of patient information. By creating a request for proposal, the orthopedic office could determine the best practice for electronic medical record use. The information in the request for proposal is relevant information the orthopedic office must have in the electronic medical record. Currently, the orthopedic office charting transpires on paper, allowing mistakes in documentation from human error to occur. At the completion of this project, the office will have an information system chosen. The inter-professional team completed the request for proposal and selected three information systems companies. Two of the companies responded with the letter of intent on time, one did not even respond. The two companies that responded with a letter of intent, and sent the request for proposal back on time. Company 3 did not send the letter of intent, and mailed the request for proposal back. This disqualified them from having their data reviewed by the inter-professional team.

Literature Review

The literature review identified evidence supporting the use of a request for proposal when implementing an electronic medical record. Research that supports the utilization of request for proposal and patient safety of electronic medical record systems was the focus of the review. Several themes emerged from the extensive literature review related to safety and security of personal health records, why electronic health records are important, why the request for proposal was needed to make this change, documentation improvement, and understanding how patient outcomes are affected by the implementation of electronic medical record systems. Many of the study findings substantiated using paper charting often causes misdiagnoses, underdiagnoses, undiagnosed, and under- or untreated diseases. There were also significant untoward consequences of using paper charting, especially when coupled with poor handwriting.

Safety and Security of Personal Health Records

In recent years, the electronic medical record system emerged as a patient-centered model for health information exchange. Electronic medical records allow patients to create, manage, and control their personal medical records from a single location; making the storage, retrieval, and sharing of medical records more efficient and secure. With the electronic medical record, the owner decides how to encrypt the files and which set of users can access the data, by using a password-protected system (Yu & Hou, 2014). When implementing an electronic medical record system, a secure communication channel must be in place to establish safety when exchanging electronic medical record data with other health care organizations. To ensure safety of patients' medical records, encrypting all files is mandatory before outsourcing (Li, Yu, Zheng, Ren, & Lou, 2013).

Why Electronic Medical Record Systems are Important

The consequences of paper charting can cause harm to patients. Lesar et al. (2014) supported the need for providing patients and their families the best possible care, including using information systems. Lesar et al. (2014) “encouraged using an electronic medical record system to decrease mortality rates” (p. 46). Another aspect of implementing electronic medical record systems is the ability to have improved inter-professional communication for early intervention and care. Physicians who are using paper charting may be listing the incorrect medication name, incorrect abbreviations, wrong drug dosage calculations, and atypical critical dosage frequencies (Lesar et al., 2014). Another reason paper charting causes errors and could cause the patient harm.

Electronic medical record systems provide some important advantages regarding medical care and patient safety. Electronic medical record systems decrease paperwork allowing

increased focus on patients and individual health concerns, improves efficiency, increases data collection, allows the physician to collaborate with other physicians the patient sees, all in an effort to provide the best care for the patients (Bremond-Gigantic, Lewandowski, & Copin, 2015). Patient safety increases with an electronic medical record system by keeping a record of a patient's medications or allergies, automatically checking for problems whenever a new medication is prescribed; thus, alerting the clinician to potential conflicts (Kohn, Corrigan, & Donaldson, 2010). Physicians who are still using paper charting are making medical errors because of illegible handwriting, manual order entries, and use of non-standardized abbreviations.

Why a Request for Proposal was Needed to make this Change

A request for proposal fills a significant gap between the initial project definition phase and the implementation phase of the project. The request for proposal provides the structure allowing teams or organizations to take the project requirements and put them into a form that suppliers can use, and understand. The request for proposal also identifies the steps of the project and states how success is measured.

By creating a request for proposal, the inter-professional team and physician chose the most appropriate software for their needs. Research findings by Dempsey (2007) shows that by creating a request for proposal, organizations can purchase the right software for their organization. One advantage of creating a request for proposal is that once the bids are received, the team can sort out the vendors that do not meet the organization's needs (Kakimzhanov et al., 2015). A request for proposal narrows the bidders only to those meeting the particular needs of the organization, which for this project was an orthopedic office. The advantages of using a request for proposal far outweigh the potential problems of working directly with suppliers. A

request for proposal forces vendors to create competitive solutions that not only respond to the request for proposal requirements but also go beyond the requirements; thus, providing additional value for a given price (Bach, Risko, Zaran, Farr, & Polk, 2015). One benefit of a request for proposal is that proposals do not favor one supplier over another but allows fair competition based on the same set of rules and requirements (Burns & Grove, 2007). Because vendors are working from the same standards and requirements, it will be easier to understand the differences between proposed solutions (Kakimzhanov et al., 2015). Paper files and paper charting contribute to human medical errors on a daily basis, making the transition to electronic medical record systems imperative for safe practice (Barcia, 2006). The outcome of this project substantiates research findings that a request for proposal will enhance the efficiency of the selection of software for physicians and staff (Yu & Hou, 2014).

Documentation Improvement

With the implementation of an electronic medical record system comes the necessary selection of hardware. Medical staff takes handheld computers into the rooms when the physician sees patients. Handheld computers help collect the proper information and appropriate prescribing of medications. Using handheld computers improves documentation and increases communication in the office and among other medical providers, such as pharmacies. An example is e-prescribing, where physicians have direct contact with the pharmacies, decreasing patient and pharmacy calls after hours to question prescription directions (Duffy, 2010). Patients recognize that when their physician e-prescribes medications, the idea is to make it easier for patients to obtain medication and decreases medication naming and dosing errors (Duffy, 2010).

The addition of the handheld computers provides physicians with access to patient's medical records promptly and enables accurate and complete documentation of patient's issues

(Huang, Shaurf, & Huang, 2013). Furthermore, healthcare professionals gain instant access to evidence-based decision support and an improvement in clinical decision-making using the handheld computers (Lu et al., 2015). Physicians who have already implemented the electronic medical record system reported an improvement in the quality of care provided and improvement in the readability and availability of patient records (Yookyung, Noh, Kim, & Kim, 2012). Utilizing an electronic medical record gives each healthcare provider the ability to review patient's care across the continuum, avoiding the possibility of duplication of services. Electronic medical record systems improve treatment efficiencies and reduce cost per procedure or treatment (Cecila & Rebelo, 2015).

How Patient Outcomes are Effective by the Implementation of EMR

The electronic medical record system can track results for patient's tests over time, allowing physicians to determine the progress patients are making. By tracking test results over time, physicians can incorporate guidelines so changes can trigger recommendations for further treatment. Patient's outcomes also increased because of education material provided through the patient portals at the time of examination (Klein, Hunt, & LeBlanc, 2006). Older adults who had access to online records were more likely to engage in self-care, attending all physician appointments, and additional testing appointments; thus, increasing outcomes and compliance for the patients per doctor orders (Palen, Ross, Powers, & Xu, 2012). Engaging older adults in self-care provides an opportunity to read and understand healthcare material and ask more detailed questions when at the physician's office (Kumar, Maskara, & Chiang, 2014).

The electronic medical record system is part of the solution to solve the problems with human error documentation. Electronic medical record systems are a quick and accurate tool allowing physicians to enter orders and directly retrieve data. Efficient management of medical

information with electronic decision support also contributes to improvement in the quality of care patients receive. Electronic medical record systems also provide valuable services to the patients and create improvement in the quality of care, flexibility, and patient safety. Because of the digital nature of the electronic medical record system, patient's information is easily accessible and can be shared among providers to develop improved inter-professional collaboration, and ultimately, provide a safe environment based on patient outcomes.

Local Problem

Paper charting is a nationally recognized problem; hence, the reason for meaningful use and the move to electronic medical records throughout health care. One issue with paper charting is human error. Unclear and inefficient paper charting can lead to hazardous practice environments and Health Insurance Portability and Accountability Act violations (HIPAA) (Liginlal, 2015). Consequences of paper charting are the harm to patients. Kakimzhanov et al. (2015) and Leser et al. (2014) supported the need for providing patients and their families the best possible care, including information systems use. The findings from these studies also helped encourage the use of an electronic medical record system to decrease mortality rates. Another aspect of implementing the electronic medical record system is the ability to have improved inter-professional communication for early patient intervention and care. Physicians who are using paper charting are recording the incorrect medication names, incorrect abbreviations, wrong drug dosages, and atypical critical dosage frequency considerations (Lesar et al., 2014).

Another problem with paper charting at the orthopedic office where this project took place was patients were not getting the highest level of care from this physician that they should. Physicians are not collaborating, in turn, decreasing patient outcomes. Pharmacists are unable to

read the doctor's handwriting on written prescriptions presented to the pharmacy. The lack of communication between physicians causes a delay in treatment because the pharmacist must call the office and verify the prescription. If the pharmacist notices a contraindication between current and newly prescribed medications, they would need to call the physician to verify the accuracy of the prescription.

Implementing an electronic medical record system will help eliminate human error, increase patient outcomes through collaboration, identify any drug-to-drug interaction, and health care workers are not looking at illegible handwritten prescriptions. With paper charting, not only are the patients at risk but also the physician who is not using an electronic medical record system. The inter-professional team completed the request for proposal to send out to three informatics systems companies. This allows the orthopedic office to accept bids and get a breakdown of what each system has to offer.

Purpose Statement

The primary purpose of this capstone project was to improve patient outcomes. Implementing an electronic medical record system at the participating orthopedic office is the first step in meeting this goal. An additional outcome of implementing the electronic medical record system is to increase overall communication between healthcare providers and patients; thus, decreasing patient care errors.

Capstone Problem, Intervention, Comparison, Outcome, Time (PICOT) Question

In an orthopedic office setting (P), how does using an inter-professional team process to develop and evaluate a request for proposal for an electronic health record system, (I) compared to the current documentation process (C) influence a decision for a new electronic documentation system(O) within a 3 month period(T)?

Intended Improvement

Implementing an electronic medical record system will provide some advantages regarding medical care and patient safety. Using an electronic medical record system will decrease paperwork, increase the focus on patients' health concerns, improve efficiency, increase the accuracy of data collection, and increase physician-to-physician collaboration; overall, providing the best care for patients (Bremond-Gignac, et al., 2015). By implementing an electronic medical record system for the participating orthopedic office, patient safety will increase through accurate documentation and recordkeeping of patient's medications or allergies. The electronic medical record system will be helpful for automatically checking for problems when prescribing new medications to avoid potential conflicts (Kohn et al., 2010). When using paper charting, medical errors are made because of poor and illegible handwriting, manual order entry, and use of non-standardized abbreviations. When using an electronic medical record system, Rose et al. 2014, showed "a decrease in medical errors, an increase in physician communication, and follow-up of test results are enhanced, leading to better patient outcomes, and a reduction in the redundancy of testing and prescribed medication" (para. 24).

The impetus to implement this project was the lack of an electronic medical record system leading to documentation issues because of human errors with paper charting. Available data were gathered from the orthopedic office to make the decision to implement an electronic medical record system because of incomplete medical records. The request for proposal provided an opportunity for the inter-professional team to look for the best information systems that benefits the employees and patients. Providers who use electronic medical records reported tangible improvements in their ability to make better decisions with more comprehensive information (Rose, Richter, & Kapustn, 2014).

After many hours of discussion with the physician and the inter-professional team, consensus occurred to proceed with the request for proposal for implementing an electronic medical record system. During the negotiations, the inter-professional team, the physician, and the author discussed all obvious human errors made over the last year, and determined how implementing an electronic medical records system would eliminate these errors. In the future, the electronic medical record system is going to be a mandatory system; the full team agreed immediate implementation was the best option.

Setting

The project took place at an orthopedic office, where the average number of patients seen is about 300 patients weekly. This organization has been in business over 30 years. The office is an older structure, built 55 years ago. The operating hours are from 8:00 am to 4:00 pm Monday through Friday. There is one practicing physician; the physician treats patients with orthopedic issues, ranging from osteoarthritis, arthritis, bursitis, and fractures of various joints. The doctor also provides nerve blocking and steroid injection to ease the pain from the symptoms mentioned above. This office staff comprises eight employees of the eight, six are over 40 years of age. The diverse patient population is a mixture of individuals ranging from ages 21 to 85. Some patients have personal insurance, such as Highmark Blue Cross/Blue Shield and Aetna; other patients rely on workers compensation and no-fault insurance to help pay for their services. The goal of this office is to decrease human error, which means eliminating paper charting and incorporating an electronic medical record system. The electronic medical record will increase collaboration between physicians and improve patient care, and accuracy of record keeping.

Ethical Issues

Ethical, legal, and social problems related to health information technology, range from protecting private information, patient safety, user involvement, training adequacy, computer decisions support, and following the organizational policy regulations. Ethical issues were addressed through ongoing education, discussing the American Nurses Association code of ethics and providing copies to all staff. As additional support, an *ethics expert* was on site during the project implementation. The term ethics expert means a person to oversee accuracy of data exchange from paper documents to electronic documents and the privacy of all records is maintained.

Planning the Study of the Intervention

A request for proposal is a document that an organization implements to obtain bids from potential vendors; in this instance, the request was to find a vendor for the desired electronic medical records information systems solution. The request for proposal includes specifications regarding what processes and solutions a customer needs, and establishes evaluation criteria for assessing proposals. Because the inter-professional team was aware of this, the team worked toward implementing a request for proposal that would promote better outcomes once implementation of the electronic medical record system occurred. When the inter-professional team developed the request for proposal, information included the background on the orthopedic office, instructions, letter of intent, deadlines, submission process, and general requirements for project implementation.

Since the purpose of creating the request for proposal was to help the business change from a paper-based system to a computer-based system, the request for proposal focused on all the hardware, software, and user training required to establish and integrate the new system into the organization. The benefit of using a request for proposal was to allow three informatic

vendors to bid and provide perspectives regarding a particular integrated electronic documentation solution. The dissemination of the proposals provided an opportunity for full and open competition among suppliers. The reason this facility used a request for proposal was to find the best option for an electronic medical record system. The focus of the inter-professional team was to promote collaboration, obtain insight from different members who have different strengths and weaknesses, and to develop a successful request for proposal.

An operational and capital budget defined the cost model for the procurement and implementation of the project. Lewin's change theory resembles the nursing process by assessing, planning, implementing, evaluating, and re-planning, making this approach the most appropriate method for this project (Schein, 1999). The inter-professional team evaluated the office processes to assess the gaps in practice and then developed the request for proposal. Implementation and evaluation occurred once the vendors sent proposals back to the orthopedic office. The inter-professional team evaluated each proposal to discover which systems would best fit the needs of the office. This organization's budget was a contributing factor when selecting an electronic medical record system. The problem identified was paper charting. The inter-professional team completed and disseminated the request for proposal, and collected the data needed to make this project a success. The inter-professional team collected the data by discussing the 2 returned proposals. Through review and discussion, the inter-professional team reflected on the pros and cons of both proposals and selected the appropriate system for the orthopedic office. Because this project is a solution-oriented project change within the practice of nursing, Lewin's change theory was chosen to guide the implementation of developing the request for proposal. Following Lewin's theory assisted in transforming the office to electronic medical record and analyzing the proposals submitted by the vendors to improve patient safety.

and evaluation of the project. The use of Lewin's change theory required a commitment to the project, and helped guide the project when assessing, planning, implementing, and evaluating the information occurred. The inter-professional team supported the use of Lewin's change theory.

Planning the Intervention

This project began with the development of an inter-professional team, to develop a request for proposal for a new electronic documentation system. The goal of health care is better patient outcomes; thus, it takes nurses working together with experts to strengthen knowledge and improve the well-being for all. Step one was the creation of an overall project plan to help manage both the project and the expectations. The primary tasks the inter-professional team accomplished in this step was the development of a project timeline, identification of stakeholders, and quantify resources as needed. There was also discussion to determine what elements the inter-professional team would include in the request for proposal. Step 2 consisted of assessing the situation. Assessment started with an account analysis, what services were currently in place, what services are necessary, and the physicians' budget. Step 3 included addressing the business requirements. The inter-professional team worked to specify projected processing requirements, understand the organizational issues, identify areas for improvement, assess available resources, and determine the overall strategy, all of which were documented and reviewed to ensure accuracy. Step 4 was project preparation. The inter-professional team customized the request for proposal according to the need of the organization.

The request for proposal would allow the vendors the opportunity to show how and why they should be in partnership with the inter-professional team. The request for proposal was prepared based on the needs of this organization. The inter-professional team identified the vendors who would receive the proposal and provided deadlines for a response. The inter-

professional team discussed any issues needing clarification. The physician then held a phone conversation with both companies who responded according to the initial guidelines to clarify these issues.

Utilizing web-based response tools helped the inter-professional team to simplify and standardize the responses. The results consisted of the inter-professional team comparing the bidding packages, and quantifying the vendor's capabilities and offerings. The response time was 4 weeks, from the time the vendors received the proposals to the time they returned the document to the point of contact. Also in place were firm response guidelines for the request for proposal: the office staff would not accept brochures or paper responses to the request for proposal due dates were specific, ensuring no points for an early return; and the finalists were asked to schedule a company visit or presentation. Finally, step five included evaluation of the responses and selection of the vendor. Vendor responses were reviewed, evaluated, and prioritized to identify the electronic information systems most likely to meet the organizational requirements outlined in the request for proposal. The inter-professional team collected vendor responses, using online tools. The results were scored to determine a list of finalists, and a meeting with each prospective supplier occurred, to validate and determine if the vendors were the right choice for the organization.

The inter-professional team was developed to coordinate efforts with each other and collaborate with the vendor. This unique group of people has diverse strengths and weaknesses that provided great insight into the creation of the request for proposal. The reason this office had a successful project was that the inter-professional team worked together gathering information, collecting data, and offering individual knowledge from experiences, and incorporating the data into the current situation. The members of the inter-professional team

focused on the needs of the patients rather than individual or staff needs. Members of the inter-professional team were aware that successful collaboration required depending on others and contributing one's ideas toward improving patient outcomes. Inter-professional team members respected each other, understood individual and group roles, and recognized the contributions of other team members. This collaboration allowed everyone to work together and increased communication.

Methods of Evaluation

The inter-professional team developed the proposal and distributed this to three vendors. Data collection occurred immediately after receiving the returned proposals. After the inter-professional team reviewed each proposal, charted data on a data collection tool, and after several discussions, the inter-professional team, and the physician were able to select the best electronic medical record system for this office. The primary source of data collection was through the evaluation of the two proposals. The inter-professional team analyzed the two request for proposals and collected data on the chart provided in Appendix B.

Limitations

As noted by Burns and Grove (2007), project limitations are restrictions that may decrease the credibility and generalizability of the findings. The greatest limitations of this project were the credibility, reliability, and honesty of the employees. The second limitation was a collaboration of the employees while completing this project. The third limitation was the budget. The physician only wanted to spend \$10,000 on a system; fortunately, Company 2 was within budget. The fourth and final barrier for implementing this project was that the data collection tool was weak. The term *weak* means the data collection tool was not accurate enough to meet the office needs. When collecting data and discussing each system, the inter-

professional team had to keep referring to the proposal instead of looking at the data collection tool. The areas the inter-professional team marked as mandatory, were privacy and security of patient information, technical support, providing patients an electronic copy of their records, a system that would notice drug-to-drug interactions and allergy interactions. Each system provided these, meaning there was not a lot separating the companies except the price. These limitations did not get in the way of implementing and collaborating while developing the request for proposal. However, the process took longer than expected. The inter-professional team members provided honest suggestions and worked together to make this change happen effortlessly. Once the system is in full effect, the inter-professional team may weaken when it comes to implementing the real technology. Providing education to each member of the team, and holding mandatory meetings did lessen the chance of failure. The continuous training, technical support from the selected company and the inter-professional team working together will minimize the limitations.

Analysis

The inter-professional team collected information and documented the data on the collection tool (Appendix B). There was three request for proposals sent out to different vendors. Only two vendors responded to the request for proposals with a letter of intent and emailed the proposals back to the office; meeting the specific guidelines. Once the inter-professional team received the completed proposals, the information was reviewed and documented on the data collection tool. Reviewing the data collection tool provided a systematic way to view what each vendor could offer and help determine which electronic medical records system would best fit the needs of the organization.

Outcomes

The inter-professional team analyzed the proposals from both companies who responded on time. Company 3 did not follow the initial guidelines, meaning they did not reply with a letter of intent and mailed the proposal back to the office. The letter of intent was mandatory by September 15, 2016, to participate. The inter-professional team had these guidelines clearly stated in the proposal. The inter-professional team met on a daily basis collecting data and placing information into the data collection tool. After the inter-professional team had completed the data collection process, the two systems were close to matching the organization's requests. Two telephone meetings were scheduled with the two companies; to clarify questions that arose during the data collection process. There was also discussion about why the organization should choose each system. Representatives from both companies came to the office and offered a go live session demonstration, and answered additional questions from the inter-professional team and the physician. The inter-professional team at the orthopedic office chose the system that best met their office needs for a medical record systems administrator. Company 1 has been in business since 2001. They specialize in working with smaller one to two doctor medical offices, and offer billing through their system. The results of the surveys from Company 2 (5 being the highest); satisfaction 4.74, overall usability 4.73, support 4.53, training 4.62 and prescribing 4.7. Conversely, the rating for Company 1 was satisfaction 2.9, overall usability 3.3, support 3.1, training 3.42, and prescribing 2.71. Company 2 also offered to print a list of patients according to individual patient's particular problems; such a list would benefit the patients and the physician when treating the patients and providing educational material. The cost was the primary determining factor for the selection made, since both systems had similar features. Company 2 was within the doctor's proposed budget (Appendix C) of at or under \$10,000 and offered a 90-Day money back guarantee. Company 1's final price for the system was \$9,995.00,

including training, hardware, and software, any presentations needed from the company, help-sessions, and anything necessary to go live. The installment date for the electronic medical recorders system from Company 2 was as early as November 1, 2016. Unfortunately, Company 1's price was above the budgeted amount at \$13,056.86 and included the organization incurring additional expenditures; purchasing four new computers. The earliest installment date for the electronic medical records system was December 19, 2016.

Summary of RFP Creation Process

The most notable successes for this project were the implementation of electronic medical record systems for patient safety. Throughout the project, the inter-professional team collaborated to develop a successful request for proposal. Each member discussed excellent points, both positive and negative, while preparing the request for proposal; this made the request for proposal more efficient. The main difficulty initially was developing the inter-professional team and obtaining their trust in each other to make this project successful. After a few weeks, the inter-professional team started to build confidence; collaboration began to develop throughout the organization, and change happened effortlessly. This organization is now a successful practice, reducing human error, and increasing patient outcomes by using the electronic medical records system.

Interpretation

The inter-professional team anticipated the project would incur better patient outcomes for the orthopedic office. The development and implementation of a request for proposal provided an expectation of discovering which electronic medical record system would best meet the needs of this organization and help increase patient safety. The desired results were to create an inter-professional team to develop the request for proposal. The team collaborated and discussed the strengths and weaknesses of documenting, and created the request for proposal.

Once the inter-professional team completed the data collection, the team selected the best system that met the needs for this organization. The inter-professional team was formed 2 weeks into the project, the partnership started to form, decreasing hesitation, and trustworthy relationships began to develop among the team members.

Feedback from the Companies responding to the Request for Proposal

The inter-professional team selected three information systems who would receive the request for proposal. Two of the companies, according to the specific guidelines outlined in the proposal had the same questions about the proposal. The questions were, how many physicians were in the practice, how many people would need access to the programs, what were the job titles of each staff member and their duties. By integrating additional information into the request for proposal, this would decrease confusion, increasing the effectiveness of the proposals, and decreasing time spent looking for additional answers. Having the extra information in the request for proposal would have made the project end faster, and decrease the time spent sending emails to the information systems. The team spent much time looking through the request for proposal since the data collection device was not specific enough regarding the needs of the office. Technical assistance was replicated on the data collection tool twice, the budgeted price of the orthopedic office was not listed, and the tool had areas marked mandatory, these areas did not separate the companies since they all provided the necessary sections.

Conclusions

The desire of the inter-professional team was to have an informatic systems chosen by the end of this project. The request for proposal gave the orthopedic office several choices for implementing a new information system, and to move from paper charting to an electronic medical record. For this project, the inter-professional team implemented a request for proposal,

resulting in a computerized system for charting for the orthopedic office. By procuring and implementing an informatics system, the orthopedic office now has access to e-prescriptions, and patient portals. This allows for increased privacy and confidentiality among patient charts. The primary goal of developing the request for proposal was to determine the best information systems, select a project implementation vendor, and switch to an electronic medical records system based on this organization charting needs. This project was successful. With the changes made per the vendor feedback, this project is replicable.

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Appendix A

Statement of original work

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of plagiarism are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by the author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood,

and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA Publication Manual.

Learner name
and date

Renee L. Kelly, MSN, RN. 11/5/2016

Mentor name
and school

Dr. Lydia Forsythe, Ph.D., MA, MSN, CNOR, RN 11/5/2016

Appendix B

Data Collection Tool

Informatic Requirements	Company 1	Company 2	Company 3
	Yes	Yes	No
Responded to RFP on Time for Consideration			Did not send letter of intent, RFP sent via mail system
	Yes	Yes	N/A
*Technical support		No outages in the last 2 years	
	No	Yes	N/A
Cost	\$13,056.86	\$9995.00	
		90 day money back guarantee	
System Reliability	Yes	Yes	N/A
*Privacy, Security, Confidentiality	Yes	Yes	N/A
		HIPAA/ONC	
*E-Prescribing	Yes	Yes	N/A
*Electronic copy of medical records	Yes	Yes	N/A
Summaries of Office Visits	Yes	Yes	N/A
Patient Portals	Yes	Yes	N/A
	Yes	No	N/A
Will someone be on call for support 24/7		Available Monday to Friday 8AM-8PM EST	
Is the support staff certified	Yes	Yes	N/A
*Drug-Drug Interactions		Yes	N/A
Insurance cards and drivers licenses can be scanned and stored in the patient demographics	Yes	Yes	N/A
The system has the capability for a patient to sign consents electronically	No	Yes	N/A

Appendix B

Data Collection Tool (Continued)

Informatic Requirements	Company 1	Company 2	Company 3
Does the system generate patient lists by specific conditions to use for quality improvement	Yes	Yes	N/A
Is there a cap on price increases?	Yes	Yes	N/A
Will vendor staff be on site during the “go live” timeframe?	Yes	Yes	N/A
*Drug-Allergy Interaction	Yes	Yes	N/A
Record Demographics	Yes	Yes	N/A
Up to date Diagnosis	Yes	Yes	N/A
*Active medication list	Yes	Yes	N/A
*Active Allergy List	Yes	Yes	N/A
*Smoking Record	Yes	Yes	N/A
*Record Vital Signs	Yes	Yes	N/A
Exchange Key Clinical information with other Providers	Yes	Yes	N/A
Drug-Formulary Checks	Yes	Yes	N/A
*Incorporate Clinical Lab Tests	Yes	Yes	N/A
*Generate list of patients by Specific Conditions	Yes	Yes	N/A
*Send Reminders to Patients for follow-up Care	No	Yes	N/A
*Identify Educational patient information tools	Yes	Yes	N/A
*Medication Reconciliation	Yes	Yes	N/A

Note. Required material: All of the content marked with an * must be included in the informatics system. By marking one of required areas as “No,” results in vendor disqualification.

Appendix C

Dr. Mitchells Budgeted Plan

Year	Projected Spending	Budget	Reserve at the End of Year
2012	\$85,139	\$80,922	(\$ 4,217)
2013	\$62,037	\$80,922	\$ 14,668
2014	\$97,618	\$80,922	\$ 2,008
2015	\$68,781	\$80,922	\$ 14,149
2016	\$92,324	\$80,922	\$ 2,747

Note: Projected spending for 2016 included the \$10,000 allotted for the EMR system