

UMUC Family Clinic Case Study

In 1980, the UMUC Family Clinic was opened in a growing family area near UMUC, Maryland, by Dr. Tom Martin, a University of Maryland graduate after he retired from the US Navy. It is a small internal medicine medical practice. Dr. Martin has been the owner and manager of the medical practice. He has two nurses, Vivian and Manuella, to help him. Usually, one day nurse takes care of the front desk while the other nurse assists the doctor during the patient visits. They rotate duties each day. Front desk duties include all administrative work from answering the phone, scheduling appointments, taking prescription refill requests, billing, faxing, etc. So if on Monday Vivian is helping the doctor, then it is Manuella who takes care of the front desk and all office work. The two nurses are constantly busy and running around and patients are now accustomed to a minimum 1-2 hour wait before being seen. And if one nurse is absent, the situation is even worse in the clinic. The clinic has 3 examination rooms so the owner is now looking into bringing a new physician or nurse practitioner on board. This would help him grow his practice, provide better service to his patients, and maybe reduce the patients' waiting time. Dr. Martin knows that this will increase the admin overhead and the 2 nurses will not be able to manage any additional admin work. He faces several challenges and cannot afford to hire any additional staff for admin so the owner has to optimize his admin and clinical operations. The practice is barely covering the expenses and salaries at the moment.

Dr. Martin's practice operation is all paper-based with paper medical records filling his front desk shelves. The only software the doctor has on his front office computer is an appointment scheduling software. Even billing insurance companies is done in a quasi-manual way. For billing insurance, the front office nurse has to fax all the needed documentation to a third party medical billing company at the end of the day. The medical billing company then submits the claim to the insurance company and bills the patient. The clinic checks the status of the claims by logging into the medical billing system, through a login that the medical billing company has provided the clinic to access its account. There is no billing software installed at the practice, but the nurses open Internet Explorer to the URL of the medical billing company and then use the login provided by the third party medical billing company. Of course, the medical billing company takes a percentage of the amount that the clinic is reimbursed by the insurance. The medical practice does not have a Web site, and essentially still operates the same as it did in 1980.

One problem that you notice immediately is that there is no quick way to check patients in and if the nurse is on the phone while a patient tries to check in, then the patient has to wait until she is done. The doctor could be also waiting for the patient to be checked in, wasting valuable doctor time. Also many patients experience long waits on the phone when they are trying to schedule an appointment, while the nurse is checking in patients or responding to another patient's request in the office. Every year, the clinic requires its patients to fill their information and insurance information anew, rather than have them just verify what they have on file. This annoys some of the moms when they have to fill all this paperwork and take care of their sick young child in the lobby. All of the medical records, lab results and financial and payroll accounts are kept on paper, so there is not a quick way to look up a patient's history or current prescriptions if the doctor gets a call while he is away from the office. At the beginning of each day, the nurses pull the files for all patients who have appointments scheduled for that day. But the clinic also accepts walk-in patients.

At a recent medical conference Dr. Martin learned of the government's financial incentives for Electronic Health Records (EHR) and meaningful use adoption. After attending several demonstrations by the different vendors, ClinicalWorks, AthenaHealth, etc., he realized how inefficiently his practice is running and realized all the opportunities that EHR systems can bring. The owner recognizes all the benefits of moving to electronic medical records but feels very overwhelmed on how to start, or what to do. He is also concerned about disruption to his practice which may negatively affect his patients' care experience. Moreover, neither the doctor nor the nurses have any knowledge or experience when it comes to information technology. Upon the recommendation of a fellow doctor, Dr. Martin has decided to hire an independent EMR Consultant, to help him select the best EHR for his practice. His friend also advised him that he should not just buy any package from a vendor but have the EHR consultant analyze the workflow processes at the practice first, then optimize them, and then look at the EHR systems. The new

EHR system needs to work with the optimized processes of his practice. Dr. Martin needs to get his staff's buy-in and involvement in the process from Day 1, if the EHR adoption process is to succeed. Dr. Martin realizes that EHR adoption will add significant costs to his practice, which he cannot afford. Therefore, he will go for the EHR adoption at this point, only if he can expect to qualify for the financial incentives for achieving meaningful use¹. This extra money will help reduce the burden of the cost on a clinic that is barely able to sustain any more costs at this time.

Dr. Martin, the owner of the UMUC Family Clinic, has just learned that 2014 is the last year to begin participation in the Medicare Incentive Program and that beginning in 2015, Medicare eligible professionals who do not successfully demonstrate meaningful use will be subject to a payment adjustment according to CMS. To add to his confusion even more, he also learned that there is also a Medicaid Incentive Program and is confused on which one to pursue. For the Medicaid Incentive Program the last year however is 2016. Time is running out. He needs to act before it is too late. Based on his fellow doctor's recommendation, Dr. Martin has contracted with an independent EHR consultant, who is not associated to any vendor, to advise him through this process. Throughout this course you will be the EHR consultant.

Dr. Martin has several strategic goals in mind that he shares with you during your first consultation with him as his consultant. For one, he would like to see his medical practice operate more efficiently and make some financial profit that would allow him to reinvest into the clinic in order to upgrade and expand it. In a few years, he will need to invest some funds in a major renovation, primarily in the examination rooms and the waiting area. If he had extra money, he could also rent the apartment next to his clinic and open up the space to make a larger clinic. If he did that, he could also expand the clinic into a 3-physician group practice and maybe rent out some space to a physical therapy physician and generate some additional income. After much discussion with fellow MDs, he realizes that it is in his best interest to actively start the process of EHR adoption and take advantage of the incentives provided through the meaningful use program¹. So this has now become another strategic goal for the practice. By implementing an EHR system, he will be able to fulfill another strategic objective, which is to raise the level of IT-awareness among his staff. Dr. Martin also wants to use technology to improve the quality of care, safety, and financial management decisions of his practice, while also meeting the legal and regulatory requirements for health care and health care systems.

Your task is to help Dr. Martin decide which of his clinical processes can benefit from an IT solution, which processes should be automated first, how an EHR system could help his practice, which incentives program to qualify for, how to achieve meaningful use by adopting a certified EHR system and how to meet meaningful use reporting requirements. You are not expected to solve all of the problems identified or address all improvements that could be made at the UMUC Family Clinic. Note: We're looking for a technology solution. While installing a TV in the waiting room may attract new patients, it is not a technology solution.

The following is an example of how you will identify a process and optimize it using an EHR system: Last year, the medical practice had no effective way to check its members in when they arrived. Sign-in sheets were used at the front desk, and the nurse had to check off the name on the sheet against existing medical records in the filing cabinet. Some of the patients were walk-ins, so the nurses had not pulled their files off the shelf when they started the day. The nurse had to leave the desktop go search for the file on the shelf. This caused patients a long wait at the front desk, and several had complained to Dr. Martin about this situation. To address the business need of quickly checking members in, the appointment scheduling system was modified to allow the clinic office to quickly lookup patients by last name and date-of-birth (DOB) on the computer as they sign in.

¹ From the CMS.gov website: "The Medicare and Medicaid EHR Incentive Programs provide financial incentives for the "meaningful use" of certified EHR technology to improve patient care. To receive an EHR incentive payment, providers have to show that they are "meaningfully using" their EHRs by meeting thresholds for a number of objectives. CMS has established the objectives for "meaningful use" that eligible professionals, eligible hospitals, and critical access hospitals (CAHs) must meet in order to receive an incentive payment." Meaningful use will be covered in the course materials.

Note: As you approach the case study assignments, you will find it helpful to think about your own experiences with a medical practice. Making a trip to a small medical practice may help you think about the processes, challenges, and opportunities.

STAGED ASSIGNMENTS

The case study and assignments address the Course Outcomes to enable you to:

- Evaluate the organizational environment in the health care industry to recognize how technology solutions enable strategic outcomes
- Analyze the flow of data and information among disparate health information systems to support internal and external business processes
- Evaluate technology solutions in the health care industry to improve the quality of care, safety, and financial management decisions
- Examine the implications of ethical, legal, and regulatory policy issues on health care information systems.

Upon completion of these assignments you will have performed an array of activities to demonstrate your ability to apply the course concepts to a “real world situation” to:

- Analyze a clinical process and diagram the steps (Stage 1)
- Propose an appropriate EHR technology solution (Stage 2)
- Identify and explain the meaningful use reporting requirements to qualify for the financial incentives (Stage 3)
- Identify and explain the considerations in implementing the solution proposed in Stage 2 (Stage 4)

The staged assignments are designed to follow the relevant chapters of the textbook in the class schedule, and are due on the dates as assigned. Assignments for stages 2 and 3 require **external research**, outside of the textbook and other materials provided in the classroom. The **grading rubric** is included with each assignment.

These assignments are designed to help you identify how to effectively analyze and interpret information to improve a medical practice using technology. This is an opportunity for you to apply critical thinking skills and think like a professional medical consultant. When you are writing a paper or developing a presentation, prepare it as if it is going to the owner, Dr. Martin, whom you want to impress with your knowledge and abilities. Don't just go through the mechanics of pulling together information -- think about what you are doing, why you're doing it, whether it make sense, whether the information seems realistic, and what the results show. It's important that you identify relevant, timely resources that specifically support the points or information you provide in your assignment. You should read the source and assimilate the information first, and then put it into your own words and incorporate it into the flow of your writing (with an appropriate in-text APA citation and a list of references at the end of your paper). Direct quotes should be used very sparingly—only when the author's own words uniquely present a concept that would be lost if paraphrased by you.

One of the prerequisites for this course is that you have a fundamental working knowledge of word processing and presentation software. Detailed instructions for each Staged Project, 1 through 4, are posted in the Assignments area of the classroom. You are to prepare each assignment in the indicated format (i.e., table, outline, report, presentation or other specified format) and submit it as an attachment through your individual Assignments Folder in LEO. **No credit will be given for assignments submitted in file formats other than those stated in the assignment instructions.**

Do not wait until the last minute to begin an activity. You should read through all the assignments in advance to ensure you (1) understand what is expected, and (2) allow enough time to effectively create the information being requested.