

Section Reports: Internship Analysis

Section 1:

General Description of your working environment (Experiential Learning Environment):

The business is the Healthcare IT for the Phoebe Putney Health System. Our IT department provides services for 5000+ hospital employees. A few examples of what we provide are project management guidance, application replacement and/or implementation, troubleshooting for end users, analytics data for quality care, reporting services, and many others. The department has about 60 employees consisting of Helpdesk Associates, Clinical Analysts, Systems Analysts, Team Leads, Directors, and even our CIO. The department is located in a 2nd Medical Tower on the 3rd floor full of open cubicles and offices.

Section 2:

Identify the objective(s) / problem you are, will be, working on:

Describe the existing function(s), the way system is, has been, working. Investigate the process in detail.

Currently, the existing function of ambulatory orders is a paper process. Once an order has been placed, the clinical staff will print off 2 copies of the order. One copy is for the patient to take with them and one is faxed to the location where the procedure is supposed to be done.

Clearly identify the problem, or more specifically, a discrepancy between an existing and desired state of affairs.

There are a few problems with using paper orders. One, the copy given to the patient has the potential to be lost in transit to the procedure location. Two, the faxing system could be down or malfunction preventing the order from getting to its destination. Three, the previously stated problems cause delays providing timely patient care. Having to call the clinic to reprint the order and refax it has a ripple effect causing clinical workflow to slow down, which in turn causes patient care at the clinic to take more time as well.

Clearly describe your learning objective, including your duties, responsibilities, and activities for meeting objectives.

My learning objective is to better understand what processes can be changed, eliminated, and/or improved to achieve better quality care for patients. My duties are to actively work on finding broken process, fix these processes, test systems for flaws and correct them in a timely manner, and offer my knowledge and expertise to my department to aid in developing better functioning systems.

Section 3:

Identify decision criteria important to resolving the problem/objective:

These criteria reflect what management thinks is relevant in his/her decision. These might include criteria such as price, product model, efficiency of the existing system, current hardware, software, applications, technology, client/end- user knowledge, and equipment.

The decision criteria reflecting what management deems relevant above all is patient quality care. It was determined that improving the efficiency of the existing system would aid in providing better quality care by cutting down on patient wait time. Another decision factor is the financial benefit of eliminating the need to purchase paper and printer ink, that all adds up! These improvements will also impact end user workflow by dramatically cutting down the time it takes to print and fax orders. Lastly, hardware maintenance on printers/fax machines will be needed less since it they will not be used as much.

Since criteria are not equally important, you must assign appropriate weight to each criterion. A simple approach is merely to give the most important criterion a weight of 10 and then assign weights to the rest against this standard.

- Patient Care – 10
- Staff workflow – 6
- Financial Benefit – 8
- Printer/Fax Maintenance - 4

Section 4: Developing alternatives:

Develop viable alternatives that could resolve the problem/issue. This section should include at least four alternatives and/or options available for your objective or problem.

The only viable alternative that was decided is to implementing electronic orders into our current ambulatory EMR system. Doing this will resolve the above stated resolutions to quality care improvement, financial savings, and hardware maintenance.

Review these alternatives with your site supervisor prior to proceeding.

I think she might agree with most of this, but knowing her she'd probably say "why didn't you mention this?" haha.

Section 5: Analyze alternatives:

Once alternatives have been identified, you must critically analyze each one. The strengths and weaknesses of each alternative should become evident. You should

also take into consideration the criteria and weights you established in step 3.

This step needs to be reviewed, verified and approved by your site supervisor.

After reevaluating Section 3 and 4, I have come up with some potential alternatives.

One alternative solution would be implementing a network folder share system of sorts. Something like this would require a server solely for Athena image orders for the PPMH facility, in this instance, X-Ray orders. The folder architecture would have the parent folder, let's name it "Athena X-ray Orders", with the first level subfolders naming convention being months of the year for a patient's birth month. The second folder level naming convention would be based off the first letter of the patient's last name (ex. ABC, DEF, HIJ...). The last level of folders would contain the patient's digital copy of their orders. Essentially, the idea is when the Athena order is placed, instead of printing it out, the staff saves it as a PDF on their local machine and then moves into the appropriate patient's orders folder. If no folder exists, the staff creates it. The parent folder will be a shortcut placed on specific departmental and clinic desktops for staff that would need access to orders. The strengths of using this method would be financially beneficial by eliminating the need to print out the orders as well as reduce printer/fax machine maintenance. A major weakness to this method is the element of human error. With staff being responsible for creating and maintaining patient shared folders workflows, there is the risk of having misspelled patient folder names, orders placed in the wrong folder, and/or one might forget to put the order in the folder. Also, this method runs the risk of increasing patient wait time rather than reducing it due to staff trying to locate misplaced patient orders in a multilevel file system.

Another alternative solution would be to migrate to a Meditech Ambulatory system in the clinics and remove Athena from the equation. There are multiple strengths to this alternative since there would be only 1 EMR. One, orders placed in MT Ambulatory will be instantly available in the hospital Meditech system eliminating the need to print and fax orders. Obviously patient wait time would dramatically decrease due to the instantaneous access to orders. Lastly, printer/fax machine maintenance will be reduced which would allow PC tech resources to tend to more important tasks. There are also weaknesses to this alternative. Being that this would be an extremely large project, purchasing the MT Ambulatory system alone would have a negative financial impact. The resources needed to accomplish this project also play a large financial role. This would also slow down productivity because multiple departments would be affected and require training on the system functionality and new workflows developed.

Section 6:

Select the best alternative:

This is the crucial act of choosing the best alternative from among those listed and

assessed. You need to choose the alternative that generated the highest score and fits best for the objective/problem. Support your selection in detail.

This section needs to be reviewed, verified and approved by your site supervisor.

Between the two alternatives I think implementing the Meditech Ambulatory system would be the best overall solution. Even though this would be a very large and costly project, I believe the long-term benefits would pay off. As a healthcare organization, patient care is always the top priority. By transitioning clinics to the Meditech Ambulatory system we would be able to provide instantaneous and more accurate orders, faster turnaround time on results, a centralized EMR for patient records, and overall better quality care. Furthermore, this alternative has even greater benefits beyond resolving clinic electronic orders.

Section 7:

Implementing the alternative:

Explain your implementation strategy in detail. Convey the decision to those affected and get their commitment to it. Describe the time, cost, and methods in detail.

This step needs to be reviewed, verified and approved by your site supervisor.

My implementation strategy entails focusing on maintaining the alignment of the project with the staff and the leadership's organizational initiatives of providing better quality care. Gaining administrative support for this implementation is a key element for its success. Acquiring executive support helps get the backing needed for required resources and aids in preventing roadblocks that may arise. My strategy for gaining this support is to build an understanding around the implementation as patient-focused and a strategic initiative, and not just a technical process.

Other organizations that have implemented the Meditech Ambulatory EHR successfully have obtained higher quality care, happier and healthier patients, and a more cost-effective care processes. Currently, our Phoebe main hospital facility runs on the Meditech EHR which means that the clinical staff, providers, billers, and support staff are already familiar with its functionality. Additionally, there are also established workflows in various departments using Meditech as well. The technical side of the integrating MT Ambulatory would be a smooth process since we already have Meditech supported hardware in place. Furthermore, the smaller applications that are presently transmitting data to Meditech will be accessible using in the clinics using MT ambulatory that Athena does not have access too.

Having a vast majority of the hospital staff already familiar with Meditech's functionality will reduce the time needed for training and reduce the number of vendor trainers needed. This benefits us by reducing the implementation timeline and cuts down on vendor costs. Furthermore, the hardware resources for MT Ambulator would be the biggest financial impact but, being that we already have the hardware resources for the hospital side MT, configurations and upgrades would be minimal. This will cut down on overall implementation cost and a grand scale as well as reducing the timeline.

Section 8:
Evaluating the decision effectiveness:

This section should appraise the result of the decision to see whether the problem has been resolved and/or the objective has been achieved.

This step needs to be reviewed, verified and approved by your site supervisor.

The decision to replace Athena with Meditech Ambulatory has shown to be a beneficial solution for the quality care problem regarding prolonged patient wait time and has also improved other processes too. Patient wait time has been reduced by 20%, missing/misplaced order incidents reduced by 80%, and overall quality care has increased by 32%. Additionally, now that the system is unified into a single EHR, having instant access to data between clinics and the hospital makes departmental workflows smoother. Physicians and staff no longer have learn the functionality of 2 EHRs which has increased customer satisfaction exponentially. Furthermore, there has been an ongoing problem with HL7 result messages to Athena being delayed due to the interface engines will getting hung up. This is no longer a concern now because there is no interface engine needed between Meditech and Meditech Ambulatory. In conclusion, the initial goal was to increase patient quality care by integrating an electronic orders interface between Athena and Meditech. The decision to take an alternative route and implement Meditech Ambulatory instead has shown that not only was this goal achieved but other key organizational goals as well.