The University of San Francisco

USF Scholarship: a digital repository @ Gleeson Library | Geschke Center

Master's Projects and Capstones

Theses, Dissertations, Capstones and Projects

Spring 5-19-2016

Reduce the Rooming Time

Gagandeep Singh
gsingh.1976@yahoo.com

Follow this and additional works at: https://repository.usfca.edu/capstone

Part of the Medicine and Health Sciences Commons

Reducing the Rooming Time by the Medical Assistant

Gagandeep Singh RN

University of San Francisco

School of Nursing and Health Professions

Clinical Leadership Theme

The clinical leadership theme for this project will be utilizing the CNL curriculum of Care Environment Management with a CNL role as a Team Manager and Information Manager. I will be striving to improve patient satisfaction, in addition to coming up with an efficient workflow by reducing the rooming time by the medical assistant. I will be doing this by utilizing my team resources and working in an interdisciplinary team.

Statement of the Problem

The rooming process in the Department of Adult and Family Medicine has evolved over the years. Since 2003, the launch of electronic medical record, called Health Connect internally, many processes have been implemented to the rooming process. Before health connect, medical assistants used to obtain chief complaint from the patients, perform vitals, and room the patient. Now, the medical assistants have to document in health connect, not only the chief complaint and vitals but also preventive questions, and book appointments if the patient was due for any screenings such as pap and mammogram. The rooming process now can take up to thirteen minutes which leaves only seven minutes for the physicians to see their patients based on twenty minutes length of appointment.

Project Overview

The rooming project will be conducted at the Department of Adult and Family Medicine. This microsystem has about eighty physicians who are supported by medical assistants, licensed vocational nurses, and registered nurses. The department has five modules. Four of these modules are internal medicine which takes care of patients eighteen years and older population, and the other module is family medicine which takes care of newborn to elderly

population. In this department, patients are seen for variety of ailments such as routine exams and screenings, chronic or acute illnesses, follow up appointments, minor injuries etc. The department is an appointment based clinic. Patients can either get an office visit, telephone appointment, or a video appointment. Each appointment is twenty minutes in length except for a telephone appointment which is ten minutes in length. Each physician can have twenty office visits, four telephone visits in their daily schedules with an option of converting any office visit to a video visit if patient prefers.

Each physician is supported by their own medical assistant. Medical assistants are responsible for rooming patients, performing procedures, handling messages, and outreaching patients who are due for their preventive screenings such as blood pressure checks, labs etc. The medical assistant rooming process involves taking patients' vital signs, asking for chief complaint, asking rooming tool questions which includes smoking history, alcohol history, diabetic questions, and interpretation questions. In addition, medical assistants review medication lists for their patients, update allergies, and book patients for their preventive screenings if the patient is due. Also, the medical assistants pend immunization orders for the physicians to sign if a patient is due for immunization, and they also pend diagnosis for any abnormal screenings for patients like alcohol or tobacco. The rooming process can take up to thirteen minutes which leaves only seven minutes for the physicians with their patients to assess and diagnose them, talk to the patient about prevention and healthy eating etc. As one can imagine, it is nearly impossible for the physicians to see their patients in seven minutes.

Before the health connect launch in 2003, the medical assistants used to take vitals, ask for chief complaint and the patient was roomed. After the health connect launch, new processes have been added to the rooming process such as PROMPT. PROMPT is a web page within

health connect that figures out the patients' due dates for preventive screening. A medical

assistant reviews PROMPT, and books patient or send referrals to the appropriate departments

while rooming. This process in itself can take a long time. All these processes were implemented

for patients' wellbeing and it is the correct use of technology, however there is a need to evaluate

the process because of the time it takes for a medical assistant to room patient which hardly

leaves any time for the physician.

The goals and objectives of this project is to review the current rooming process and

figure out if there are any redundancies or waste that can be taken away. The questions to

consider for these are: Does every task have to be performed by the medical assistant? Do we

have other resources who can perform some of these tasks? What task can be taken out of the

exam room so physicians can have more time with their patients? The aim statement for this

project is *we aim to reduce the rooming time by the medical assistant from thirteen minutes to*

ten minutes for patients in medical 4 station 4c by June 2016. My team and I will achieve this

aim statement by studying the data and voice of the customer surveys to determine patient

satisfaction and make the process efficient and shorter.

Rationale

A root cause analysis of the rooming process was conducted to identify causes of lengthy

rooming time by the medical assistant (See Appendix A). The findings of the root cause analysis

revealed that there is lack of standardization in the process. Some medical assistants do not go in

order when documenting patient answers in health connect which can be a cause of delay in the

rooming process. The data extracted from health connect revealed that the average time spent in

the visit navigator by the medical assistant is 5.7 minutes. Visit navigator includes documenting

chief complaint, vital signs, and rooming questions such as alcohol, tobacco etc. Manual data

was collected n PROMPT (system that shows patients due dates for preventive screenings). I

followed about twenty medical assistants. A spread sheet was made on excel which patients

gender, time when the medical assistant clicked on to the PROMPT, time when the medical

assistant got out of PROMPT, screenings that are due, Based on the data collected, it was

estimated that medical assistants can spend an average of six minutes in PROMPT. The data

collection from visit navigator and PROMPT suggests that medical assistants can spend 11.7

minutes so far on rooming.

Another source of data was extracted from looking at times when patient arrives cost for their

appointment to the time medical assistant logs on to health connect to document. This data

revealed that there an average of four minute delay until the medical assistant calls the patient to

the back to room. The process map of our current state reveals that there are many areas of

opportunities that can be changed to help reduce the rooming time by the medical assistant

(Appendix B). The rationale for starting this project came from voice of the customer surveys

which revealed constant complains of not having enough time with their physicians, and

physicians wanting more time with their patients.

Cost Analysis

The average cost associated with the implementation of this project is approximately

$113,164 based on a six month long project. The total employee cost is $106, 080 which

includes physicians, medical assistants, receptionists, and management salaries. See Appendix C

for details on the cost analysis. The team will be meeting weekly for two hours which totals two

twenty four meetings and 48 hours for meetings. The physicians get paid about $120 per hour.

For a two hour meeting; each meeting will $240. This totals up to $11, 520 for all meetings per

physician. The team has five physicians which comes up to $57, 600 for total physician cost.

There are five medical assistants in the team. Each medical assistant gets paid $25 per hour. Each medical assistant will cost $50 for a two hour meeting. A total of six month weekly two hour meetings comes up to $2,400 per medical assistant and $12,000 for five medical assistants. The team also include two receptionists. Each receptionist gets paid $20 per hour. Each receptionist will cost $40 for a two hour meeting. A total for six months weekly two hour meetings comes up to $3,840 for two receptionists. At last there are three managers on the team which includes myself. Each manager gets paid $80 per hour. Each manager will cost $160 for a two hour meeting. A total for six months weekly two hour meetings comes up to $7,688 per manager and $23,040 for all three managers. The total employee cost for meetings comes out to $98,400.

The supplies cost for the project is projected to be approximately $5000. The supplies include paper, pens, sticky notes, chart pads, printer ink, toners etc. Since the meetings are during lunch, food is provided. The cost for food per meeting is approximately $200. The total cost for foo for all twenty four meetings is $4,800. One other added to the project is the six day conference that I will be attending for this project. That cost is projected to be $4,964. Out of $4,964, $3,840 is my salary, $924 for the hotel, and $200 for the gas.

A study done by Lin et. Al (2011) linked more time spent with the physician leads to higher patient satisfaction. In this study, prospective surveys of 1486 consecutively encountered ambulatory visits to sixteen primary care physicians in an academic primary care clinic. Patients were queried on perception of time spent before and after visits and whether the physician appeared rushed, and visit satisfaction. The result of this study showed that more time spent with by the physician resulted in significantly higher patient satisfaction. Patients who felt that physicians did not spend enough time with them, worried about health and lowered self-perceived health status (Lin et. Al, 2001).

Methodology

My method for the project includes to first develop a team of experts. There are five modules in the department. I wanted representation from each module who could help me achieve buy in. The team consists of one physician from each module, one medical assistant from each module, one receptionist from each area, management from each area. The team will meet once a week initially and then move to biweekly depending on the progress of the project.

A kick off meeting was planned. At the kick off meeting, I introduced the team to performance improvement tools such as fishbone diagram, process map, and SWOT analysis so they get a high level of understanding. I also introduced consensus based decision making to the team. Ground rules and a team charter was made at this meeting.

Based on our current state, the team identified many areas of opportunities. First opportunity identified was that medical assistants rely on patients to place a registration slip in the window to know when the patient has arrived rather than monitoring on health connect which tells the medical assistant that patient has arrived as soon as receptionist swipes the patient's medical card. This is considered a waste of time that can be utilized wisely. The team brainstormed and came up with their first test of change The test of change is that when the patients arrive, the receptionist will place a red dot by the patient's name in the health connect. The medical assistant will monitor their schedules in health connect. As soon as the medical assistant notice the red dot, he/she will bring the patient back to get them ready. This test of change began to be tested for two weeks within one station which include five physicians and five medical assistants. Our system analyst provided the data which included the time patient arrived to the time medical assistant logs

on to health connect before the test of change. The same data will be analyzed at the end this test of change to determine if the test of change reduced the rooming time. After the first week, the data was not favorable. It was determined that the data was not favorable because there were issues with adherence. Some float receptionists were forgetting to place the red dot and registration slips were still being placed in the windows by the patients. I discussed the issue with the team and decision was made to re-educate the staff and start the pilot again from the beginning. If the data is favorable, the plan is to then spread it to the one module first and then to the rest of the modules.

The second opportunity that was identified in the current process was booking appointments for patients' preventive care. Previously, the receptionist was able to book these appointments because it showed up on the registration slips. When PROMPT was first started, the information in PROMPT did not match what was on the registration slip because it came from two different systems that did not correlate with each other, therefore, it was decided to take it away from reception staff. Recently, it was discovered that registration slip information is accurate when it comes to preventive screenings. So, if a patient was due for pap in PROMPT, the same information was on the registration slip. In this case, the second test of change decided by the team is to have the receptionist book the appointments for preventive screening while they are checking patients in for appointments. When the receptionist will book the appointment, they will write this information on the registration slip to inform the medical assistants that appointment was booked. It is predicted that this process will save approximately three to four minutes from the rooming time. The data to show this test of change was effective will be again follow the medical assistants to determine the time saved.

The third test of change identified by the team is to utilize the back sweep report to prospectively call patients to take care of their preventive needs. The back sweep report is

generated by our analysts which shows patients that have future appointments coming up for a week and what preventive services are due for these patients. The reception staff on our team decided to give this list to the reception staff in the station where the first test of change is being tested. The reception staff will call these patients in between registering patients.

Kurt Lewin's change theory will be utilized for this project which has three stages: unfreezing, moving, and refreezing (Morrison, 2014). In the unfreeze stage, staff readiness will be evaluated. At this stage, my team is ready for the change since they have identified that rooming time does need to be reduced. Also the team has identified the first test of change, which moves the team into a moving stage. Once the test of changes have been implemented, the team will move into the refreezing phase, in which team will work on sustaining the changes. My predictions from the test of changes are that we will be successful. This will be proven based on data that will be collected after the test of changes to show improvement.

Literature Review

The PICO statement for this project is P for patients at an Adult and Family Medicine clinic, I for looking at ways to reducing rooming time, C for compare the new process with the current process and O for reduced rooming, high patients' satisfaction, and high quality of care. An article written by Rabin (2014) suggests that shorter visits are taking a toll on patient-physician relationships. Study shows that shorter visits increases the likelihood of patients leaving with a prescription rather than behavioral change like trying to lose few pounds or going to the gym (Rabin, 2014). Few studies show that there are effects of time on patient care experience. A study done by Robbins et al. found that time the physicians spent in health education and effects of treatment had an important bearing on patient satisfaction (Robbins et al., 1993). In this study, one hundred patients were randomly studied who received care from

physicians at a university medical center outpatient facility. All of these patients were given pre visit questionnaire to determine their general level of satisfaction with health care. After the appointment, the results of the post visit questionnaire revealed that most patients were satisfied if physicians spent more time on health education, physical examination and discussion of treatment effects. This study shows the importance of physician spending enough time with their patients to discuss their health rather than just prescribing medications and for this they need more time.

In an article written by Costa (2015), the author talks about why doctors do not spend enough time with patients anymore. In this article, she writes that physicians who works at hospitals are asked to see patients every eleven minutes, according to a 2014 article from Kaiser Health news. Also, a 1999 study shows that doctors let patients speak for only twenty three seconds before interrupting them. Another study out of University of South Carolina, patients were interrupted after just twelve seconds either by their doctor or a knock at the door (Costa, 2015). In my microsystem, this happens because physicians just do not have enough times. Knocking on the door is a tactic to get the doctor out of the room faster because the next patient is waiting. Patients now know this tactic and leads them to either change doctors or leave the organization all together. Physicians are asking for more time in their visits. This project will hopefully give them another five to seven minutes to spend with patient.

Another study conducted by Gulbrandsen et al. suggested how perception of physicians being rushed leads to lack of communication between patients and physicians. In this study, 461 encounters were audio recorded. Authors calculated time using the Motivational Interview Treatment Integrity Scale (MITI). Patients completed post visit questionnaire in which they reported the estimated duration of the encounter and how rushed they physician was during the

encounter (Gulbrandsen et al, 2012). The results of this study revealed that patients estimated the length of encounter shorter because of the physician felt rushed during the visit. Another study conducted by Heinrich & Kramer (2011) suggested ways to optimize an office visit. In this study, methods of getting the most out of a visit was discussed. This article has helped me in getting my test of changes for my project. This study proved that positive patient perception of their care is related to positive patient outcomes.

Timeline

The project began in late January 2016 and is projected to be completed by June 2016. See Appendix D for a Gantt chart. My project began with engaging senior leaders for approval. I interviewed staff and physicians to gather knowledge on why the project is needed. Once the need was identified, a team was developed which included a physician from each module, medical assistants, receptionists, and managers. A kick of meeting was planned to introduce the project. In this meeting, performance improvement tools were discussed. After the kick off meeting, the team worked on fishbone diagram and process map. The next step for the team is to identify their first test of change and roll it out. One the test of change is tried and improvement is seen, it will be spread to other areas and sustainability plan will need to be worked.

Expected Results

One of the areas of opportunities identified from our current process was that medical assistants do not know when patients have arrived until the patient has placed a registration slip at the window. One other opportunity identified is to look at whether the receptionist can book appointments for patients' preventive screenings which will help in reducing the rooming time by the medical assistant.

My expected result from the first place identified opportunity is that once the medical assistants start to monitor their schedules in health connect, they will call the patient back sooner which will prevent delay in rooming. In addition to monitoring their schedules, the receptionist will place a red dot by the patient's name to notify that patient has finished the check in process. The red dot by the patients name will help medical identify that patient has finished the check in process and is ready to be called back. I am expecting that this process will save at least one to two minutes from the rooming time.

The test of change for the second identified opportunity will be to have the receptionist book appointments at the time of check in. The registration slip has the preventive screen information that shows what each patient is due for and when was their last screenings. Based on this information, the receptionist will book the necessary appointments. In an event, patient refused the appointment for any reason, the receptionist will write "patient refused" on the registration slip. It is expected that this will save approximately four minutes from the rooming time.

Nursing Relevance

Reducing the rooming time will be able to provide quality service to patients. In healthcare quality is more important than quantity, however, for healthcare, service is also important. Mostly patients want to be seen as they desire. In order to provide this kind of service, like it or not, organizations have to keep quantity in mind. This project is not going to jeopardize quantity as we are not increasing the appointment time. This project will be looking to improve the efficiency of the rooming workflow. The team will first look at if there is any waste or redundancy in the process and then identify on tasks that can be completed by other resources or that can be completed outside of the room. I am hoping that this project will provide the care that

patients' want, in addition to keeping the staff and physicians happy. This project will allow

physicians to spend more time with patients that in turn will provide better service to our

patients. Hopefully, this will result in patient satisfaction which then will lead to staff

satisfaction.

Summary Report

The aim of the rooming project is to reduce the rooming time by the medical assistant

from thirteen minutes to ten minutes in the department of adult and family medicine. This project

is taking place at an outpatient medicine clinic which has approximately eighty physicians who

are supported by medical assistants and receptionists.

The implementation of this project began with a vision from the administration team.

Physicians and staff voiced their concerns regarding the rooming times. In a twenty minute

office visit, approximately thirteen minutes are utilized by the medical assistant with rooming

procedures. This leaves only seven minutes for physicians to see their patients. Patients also

showed their frustrations with the complaint cards and low markings on the member patient

satisfaction surveys.

I was given this project for the CNL internship project. I started out by gathering a team

together. A team was gathered to ensure everyone involved in this change process had a voice.

The team included physicians, medical assistants, receptionists, and management. The project

was kicked off by having a kick off meeting.

The baseline data was obtained with the help of a system analyst. The first baseline data

included the time medical assistants spend I the visit navigator which include chief complaint,

vitals, and rooming tools. This data showed that medical assistants spend an average of 5.7

minutes in the visit navigator (See Appendix F). The second data collection was to find out how much time is spent in PROMPT by the medical assistant This data was collected manually by following medical assistants while they room patients. The data showed that an average of six minutes is spent in PROMT by the medical assistant (See Appendix G).

Performance improvement tools such as fishbone diagram, process mapping, and SWOT analysis was utilized to come up the test of changes. The first test of change decided by the team was to have the receptionist place a red dot by the patients name to alert the medical assistant of the patients' arrival. There were few issues with this test of change. The test of change was not being done consistently due to lack of adherence. I had to reeducate the staff. The test of change was delayed due to this issue, however after the intervention, the pilot was reinstated.

One major challenge of this project was the scope of the project. The rooming process is affected by many aspects which include patients' arrival times and the wait times in the lobby. These two aspects are two different projects in itself. The team kept wanting to go in the direction of those other aspects. I had to steer them back to our goal. At one point, the team wanted to include these aspects into the project, however it was not included due to the scope. This is how the team came up with the first test of change.

The second challenge of this project was the data collection methods. I was hoping to get all of the data electronically. Half of the data was collected electronically and half had to collected manually and then put the two together to come up with the baseline data. The issue with the manual data collection is that it is so time consuming. When we start the test of change, I have to collect data constantly which is hard for everyone when they are trying to room patients on a timely manner. There is a ray of hope. The system analyst found out that region may be able

to help with PROMPT data and she is looking into getting this information electronically. That

will help tremendously with moving the project forward.

The data will be collected on a daily basis for a two week pilot and trend on an annotated

run chart to determine if the change was successful. Once it is determined that the test of change

was successful, it will be spread to the other stations and eventually to the whole department.

The sustainability plan will include changing and writing the new workflows for the department.

These workflows will be used for training the existing staff and new staff coming in to the

department.

I want to acknowledge and thank my team, my sponsors and my preceptor for the support

in this project. I would also like to thank my professors, and my fellow students with the

discussion feedbacks that has helped in this project. I will continue to work on this project until it

is complete.

Reference

Costa, C. (2015). Why doctors do not spend enough time with their patients anymore. Retrieved from https://www.cheatsheet.com/personal-finance/why-doctors-do-not-spend-enough-time-with-patients-anymore.html/?a-viewall

Gulbrandsen, P et.al. (2012). The influence of physician communication style on overweight patients perceptions of length of encounters and physicians being rushed. *PMC Journal,* 44(3), 183-188.

Heinrich, C., & Keiner, K. (2011). Ways to optimize understanding health related information: the patients' perspective. *Geriatric Nursing*, 82(1), 29-38.

Lin, C et.al. (2011). Is patients' perception of time spent with the physician a determinant of ambulatory patient satisfaction? *Arch Inter Med*, 16(11), 1437-1442.

Morrison, M. (2014). Kurt Lewin change theory three step model – unfreeze, change, freeze. Retrieved from https://www.rapidbi.com/kurt-lewin-three-step-change-theory/ (Links to an external site.)

Rabin, R. (2014). 15 minute doctor visits take a toll on patient-physician relationships. Retrieved from https://www.pbs.org/newshour/rundown/need-15-minutes-doctors-time/
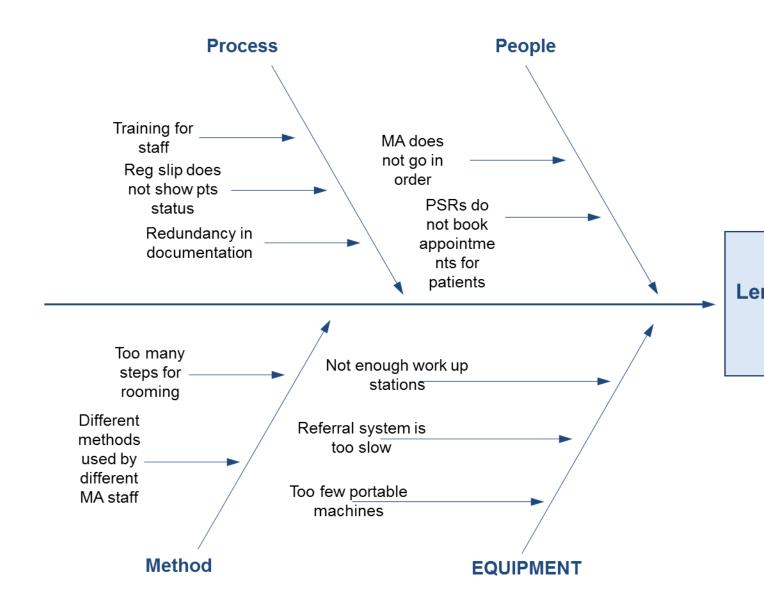
Robbins, J et.al. (1993). The influence of physician practice behaviors on patient satisfaction. *Fam Med*, 25(1), 17-20.
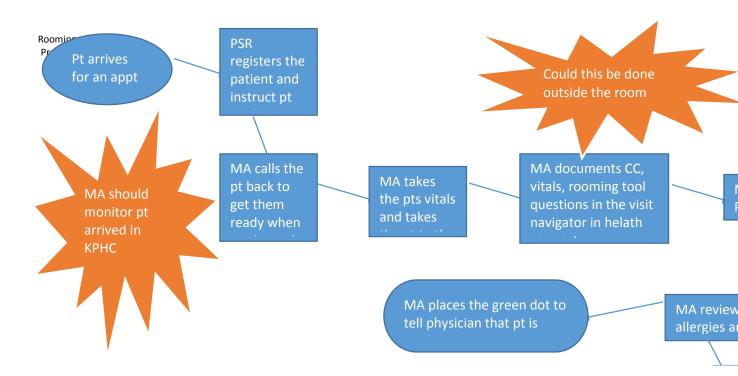
Appendix A

ROOT CAUSE ANALYSIS

Fishbone Diagram

CAUSES OF LENGTHY ROOMING

Process

People

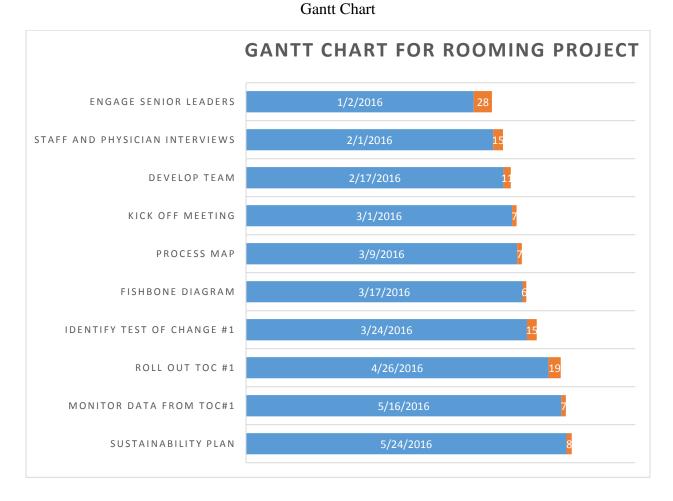Training for staff

Reg slip does not show pts status

Redundancy in documentation

MA does not go in order

PSRs do not book appointments for patients

Ler

Too many steps for rooming

Different methods used by different MA staff

Not enough work up stations

Referral system is too slow

Too few portable machines

Method

EQUIPMENT

Appendix B

Process Map

Rooming
Pr

Pt arrives
for an appt

PSR
registers the
patient and
instruct pt

Could this be done
outside the room

MA should
monitor pt
arrived in
KPHC

MA calls the
pt back to
get them
ready when

MA takes
the pts vitals
and takes

MA documents CC,
vitals, rooming tool
questions in the visit
navigator in helath

MA places the green dot to
tell physician that pt is

MA review
allergies a

Appendix C

Cost Analysis

Rooming Project:
Total Projected Cost: $113, 164

Meeting Cost:

Meeting Plan	Length of meeting	Frequency of the meeting	Total meetings/6 months	Total hours of meetings/6 months	
	2 hours	once a week	24 meetings	48 hours	

Type of personnel	Number of personnel	rate/hr	cost/meeting	Cost/all meetings/per person	Cost/all meetings for all persons involved
MD	5	$120	$240	11,520	57,600
Medical Assistant	5	$25	$50	$2,400	12,000
Receptionist	2	$20	$40	1,920	3,840
Manager	3	$80	$160	7,680	23,040
Total Meeting Cost					96,480

Conference:

Number of days	6
Hours/day	8
# of persons attending	1
Cost/person/hr	80
Total Cost/person/6 days	3,840
Cost of hotel room/6 days	924
Cost of gas	200
Total Conference cost4,964	4, 964

Food Cost:

Cost/meeting	200
# of meetings	24
Total Cost	4,800

Miscellaneous Cost:

Supplies	5,000

Appendix D

Gantt Chart

GANTT CHART FOR ROOMING PROJECT

Task	Start Date	Days
ENGAGE SENIOR LEADERS	1/2/2016	28
STAFF AND PHYSICIAN INTERVIEWS	2/1/2016	15
DEVELOP TEAM	2/17/2016	11
KICK OFF MEETING	3/1/2016	7
PROCESS MAP	3/9/2016	7
FISHBONE DIAGRAM	3/17/2016	6
IDENTIFY TEST OF CHANGE #1	3/24/2016	15
ROLL OUT TOC #1	4/26/2016	19
MONITOR DATA FROM TOC#1	5/16/2016	7
SUSTAINABILITY PLAN	5/24/2016	8

Appendix E

SWOT Analysis

Strengths	Weaknesses
• Focus is on prevention so the patient stays healthy • Technology available to identify what the patient is due for (PROMPT) • Easy appointment accessibility (same day specialty appointments for pap, mammo and diabetic retinopathy)	• Appointments are 20 minutes in length • Space challenge (not enough exam rooms, small and crammed stations for medical assistants) • 13-14 minutes are taken up by the medical assistants to room each patient • Physicians do not have enough time to adequately see their patients (physicians run behind)
Opportunities	Threats
• Looking at how other organizations room and compare workflows. • Use of technology (I-pads). • Increased service scores	• Low member patient satisfaction (MPS) scores • Market comparison • Increased cost due to patients come back or use resources for similar illnesses • Facility will not meet quality goals and reimbursement will be cut. • May result in staff leaving the department and will have to deal with low staffing ratios. • Patient may leave the organization

Appendix G

PROMPT Times Data

Total Time spent in min	M/F	CRC Due	Pap Due	Mammo Due	Imm Due	Bone Density Due	DB Photo
4	m	√					
5	F					√	
2	F				√		
4	F		√		√		
10	M	√			√	√	
5	F				√		
8	F		√	√			
10	F		√		√		√
9	M	√			√	√	
15	F		√	√			√
6	M	√			√		
7	M					√	√
11	F	√	√	√			
6	M	√			√		
7	M					√	v
5	F		√	√			
3	M				√		
2	M				√		
3	M	√					