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Optimizing Electronic Healthcare Records and Improving Process in the Healthcare Clinic

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### **Optimizing EHR and Improving Process**

Today, electronic healthcare record (EHR) is widely used in the hospitals, clinics and healthcare agencies. It is a technology that helped transform the healthcare system. It is efficient which makes work easier for healthcare professionals. Documentation is an essential part of using the EHR because it captures necessary data and able to track trends. Although the EHR is productive and facilitates processes; however, documentation compliance is an arising issue. In the clinic where this project took place, staff compliance in documenting data in the EHR is decreasing. Therefore, implementing the project will focus on improving the process in the clinic to increase compliance.

### **Clinical Leadership Theme**

The Clinical leadership theme that describes this project is informatics and health information technologies, and the leadership role will act as an information manager and systems analyst/risk anticipator (AACN, 2013). The project's global aim is to optimize the use of electronic healthcare record (EHR) in the clinic to qualify and recognize as level II Patient-Centered Medical Home (PCMH).

### **Statement of the Problem**

Before the clinic became a federally qualified healthcare center, it was then a free clinic and documenting was not part of the workflow. Now, the need for implementing this project is due to issues that continually arise in the clinic especially when EHR documentation is part of the process. The clinic is trying to qualify for PCMH. While reading and assessing the standards and prerequisites necessary for the application, proof of documentation is required for qualification; however, during the documentation and data assessments, it was found that there are inconsistencies. Data is not captured in the system when reports and chart reviews are

generated and analyzed, respectively. It is concluded that there is a low percentage of data from the measures, homelessness and client's income. When generating reports, the baseline data shows 65% of patients have provided homelessness status, and 1.5% have provided for income level (See Appendix A).

As seen in the Process Map (See Appendix B), issues may arise from the point when patients fill out the forms to the point of staff entering data into the EHR. Patients may not fill the forms completely if they are not informed properly. In another situation, the staff may not follow standard process and fail to use the checklist to guide them in charting the information. In general, there is a little compliance of staff entering data into the system. In this case, the workflow must improve, and staff needs to be reminded that entering data into the EHR is necessary. Therefore, the need for this project emphasizes on providing visual reminders to increase staff compliance in performing proper input of data in the EHR which will be helpful in providing the required evidence in the application for PCMH.

### **Project Overview**

Although the clinic is recognized as level I, improvements in the EHR is still needed to meet the standards and qualify for PCMH 2014 level II. The use of information technology is essential to optimizing the use of EHR that will successfully provide structured data, acquire reimbursement claims, and refine quality improvement process for future users and efficiently use it. The Clinical Nurse Leader's role is to function as a health informaticist and systems analyst that generates reports and analyzes chart reviews in a three-month period to verify that data is correct and stored in the system. To verify data, searching social detriments of health (homelessness and clients' income) are two of other requirements for PCMH official recognition.

In this case, collaboration with the staff particularly the front desk is necessary to develop and provide visual reminders that will assist them in entering data correctly and consistently.

By the end of this project, staff will use EHR efficiently and will have an increase of data input of homelessness and clients' income. The specific aim of this project is to enhance overall staff compliance in entering data into the EHR system. The statement aligns with the global statement in which it aims to improve quality improvement and documentation by optimizing the use of EHR in the clinic.

### **Rationale**

As stated above, the need for this project is due to meeting the standards and benchmarks to acquire recognition for PCMH level II. The project needs to be implemented because of the reduced compliance of staff entering data in the EHR. The use of Fishbone diagram identifies multifactorial causes related to low staff compliance. (See Appendix C). In this case, the project highlights to closing the barriers and ensuring that staff are making improvements in entering data in the EHR. To achieve success in implementing the project, application of evidence-based data is going to be utilized that will likely result in creating a positive change and benefit the clinic if implemented correctly. Further evidence will also be used for resources such as visual cues needed for the project. Fortunately, the cost of supplies to implement the project to create visual reminders are so little that it will not create a huge impact on the clinic's finances. Before the application of this project, a stakeholder analysis is performed to determine financial support for the project (See Appendix D). Moreover, staff are open to positive changes and willing to adapt to implementing the project. As a result, it will create more opportunities such as positive cash flow to the clinic.

However, if staff continues not to be compliant in the documentation, potential FQHC and PCMH eligibilities and monetary loss will happen, and staff will lose their jobs. FQHC and PCMH are incentive programs that help sustain the clinic's resources to providing high-quality care and accessible services to the population who are in need such as the homeless, uninsured, low income, LGBTQ, and people of color. Per FQHC policy, a sliding scale based fee between \$0-\$50 is issued depending on income and size of the family.

If the FQHC standards are not met for this year's survey, the agency will lose \$650,000 worth of grant for over a three-year period. Moreover, if the agency doesn't qualify for PCMH level II, providers will lose a potential reimbursement of \$22 per patient. Although EHR is already implemented in the agency, maintenance and proper use of EHR are reported to cost up to \$150,000 per year (Berryman et al., 2013). Also, if the clinic requires hiring an external consultant for reorientation in the use of EHR, they will need to pay \$250 per hour for a minimum of one day. Overall, if the clinic does not meet the standards, the total potential loss will lead to a sum of \$367, 272 (See Appendix E).

### **Methodology**

For this project, the approach to optimizing the EHR and to increasing staff compliance are through creating visual cues to remind staff on entering accurate data into the system. Based on research and literature reviews conducted, which are explained later in the paper, it is found that using visual reminders improve staff compliance. Lewin's force-field change theory will be utilized as a guide to this project. In using this theory, driving forces and barriers to change are analyzed to determine contributing factors to both promoting and preventing a change in the clinic. Bruce (2015) states that by looking closely at the force-field action of change, a better transformation will result if procedures and force-fields collaboration are incorporated. By

identifying the strengths and weaknesses of the clinic depicted in the SWOT analysis, it will be much easier to implement the project (See Appendix F).

In this case, discussing and explaining the importance of the plan with the staff and encouraging them to be consistent and accurate in date entering can lead to desirable outcomes such as maintaining eligibility and receiving national monetary grants. During a three-week period, a small test of change is implemented to see if there is an increase in the percentage of staff compliance. After three weeks, verifying compliance includes generating new reports and reexamining charts. However, conducting a small test of change can vary results due to limited time and other uncontrollable factors, such as staff retention, which can play a role in the study. In this case, I plan to discuss with the team about follow-up and supervision as reinforcements for the project.

### **Literature Review**

The PICO strategy:

**P:** Clinic staff

**I:** Provide reminders, prompts to enter data accurately

**C:** Nothing, stay with the same process

**O:** Increase compliance in entering data into the EHR

Literature reviews related to optimizing the use of electronic healthcare record are found to be linked to the intervention. Compelling information, which will be discussed in this paper, are reviewed from articles that describe the importance of training, education, and using “reminders,” “prompts,” or “cues” to promote and improve EHR compliance and staff performance. The literature reviews that found evidence directly related to the objective of improving staff compliance, practice and effectiveness of reminders include studies from Arditi

(2012), Ahmed, Mehmood, Rehman, Ilyas and Khan (2012), and Buttner, Goodman, Love, McLeod, and Stearns (2015).

Arditi (2012) studied and reviewed the effectiveness of reminders. His study consisted of cluster-randomized controlled and non-randomized controlled trials in a sample population of qualified healthcare professionals. The author explained that computer-generated reminders delivered on paper have improved practice, the process of care and clinical outcomes. The author found that predictors of improvement consist of allowing time to respond to the reminders and providing reminder explanation.

Similarly, Ahmed et al. (2012), described how structured and standardized template with written cues has enhanced compliance, information exchange, clinical handover and decreased potential error. His study consisted of quasi-experimental design, and junior doctors were the sample population. The author described that in addition to improving compliance, it was also evident that improvement in communication, leadership, collaboration, and critical thinking skills are achieved.

Buttner et al. (2015) also discussed and identified the advantage of using templates and prompt in improving the quality of care, coordination, information exchange and entering complete data in the EHR. Authors also added that using a well-formatted template, it facilitated documentation and provided support from incentive programs such as a patient-centered medical home (PCMH). Another study conducted by Esper and Walker (2015) supported the improvement and efficiency of EHR documentation by using and incorporating SmartPhrases. The authors based their study from a survey of nurse practitioners' documentation in using SmartPhrases.



Other relevant articles for this project but not directly address compliance improvement include Kruse, Kristof, Jones, Mitchell, and Martinez (2016) study that identified common barriers to using electronic healthcare record consistently. They discussed and suggested that policymakers should consider providing better-reformed policies and incentive programs that enhance EHR utilization and increase EHR adoption rates. Another article was written by Kersting and Weltermann (2016), which they conducted a survey of providers using reminders and found that majority of providers use electronic based reminders which were delivered by systems during patient and routine care. While this article does not directly relate to the objective; however, it will be useful for providers to know how electronic based reminders can improve the process of patient care.

Moreover, the majority of the authors such as Ahmed et al. (2012), Buttner et al., (2012), and Esper and Walker (2015) suggested that staff education, training, and monitoring facilitate in improving and optimizing the use of EHR. Although the articles do not discuss compliance, it is important to incorporate these methods into practice.

### **Timeline**

The project began in early February of 2017 and will conclude at the end of May 2017. A small test of change in a span of three weeks will be implemented to allow staff to comply and improve EHR data entering. After three weeks, an assessment will be conducted to verify improvement (See Appendix G).

### **Expected Results**

The project serves as a pilot project because it is hard to fix or change the microsystem. However, if the project is successful, it is expected to improve EHR utilization and increase the percentage of staff compliance in data entering. The project should lead to the qualification for

the PCMH application due to improvement in the documentation which will be used as evidence. Nevertheless, due to several barriers that the clinic is facing, expecting a significant result is unlikely. Some of the obstacles include lack of workflow processes, high turnover rate, and most workers are temporarily employed and have no access to using the EHR, and the pay is not competitive. Further, employees also assume different roles and perform multiple tasks which increase their responsibility.

### **Nursing Relevance**

By performing accurate and consistent data entering into the EHR, it can affect practice in the clinic particularly for reimbursement purposes and to maintain status as an FQHC. The project will also contribute significantly to CNL's understanding in the importance of obtaining recognition in the clinic as a PCMH because it leads to providing a high-quality level of services while meeting standards and benchmarks for patient-centered care. It should also assist staff in incorporating innovations that will promote better processes in the clinic. Moreover, because the clinic provides services catered to the most vulnerable population, compliance is essential to keep track of data necessary to sustain the needs of the patients.

### **Summary Report**

The aim of the project was to optimize the use of EHR in the clinic by increasing staff overall compliance in entering data into the system. After conducting a small test of change in the course of three weeks, a slight increase in the staff compliance of 17.5% for entering income data and 20% for homelessness data are achieved. Reminder cards were created and posted at the front desk for staff to use and given to patients during check-ins to complete the process and forms, respectively. The staff was educated on how to facilitate workflow and documentation by using reminders. Data was generated, and reports were reviewed; it has shown an increase in the

percentage of entering data of patients' income into the EHR by 19% compared to the baseline data presented which is 1.5%. Concurrently, the rate of compliance in entering data of homelessness status has also increased to 85% compared to 65% from the previous report (See Appendices A and H). The process of data gathering for the evaluation of success is continuing. The staff is progressing towards consistent data entering. However, the limitation to this project is identified due to a limited time frame.

Sustainability was an anticipated challenge due to the clinic's old processes and staff performance; however, after the implementation of the project and educating the staff regarding the use of reminders, consistent documentation is observed and will continuously apply. The application and adoption of the use of reminders in the clinic have been successful with an increase in staff compliance. As for PCMH level II recognition, plans to meet all the necessary requirements are already in progress to continue providing high-quality patient-centered care services in the clinic.

### **Conclusion**

In conclusion, maintaining patience and flexibility is important. I must understand and learn the clinic's culture to be successful in implementing my project. Because the clinic is considered a small microsystem, it is not hard to spot barriers and issues that potentially need improvements. Due to staff's routine on "how they do things," application to change tends to progress slowly. Although the process to change is slow, the staff is perceptive about needs in the clinic and accepting in performing the necessary change.

Another lesson I learned from this experience is a difficulty in changing the whole microsystem. It is an eager expectation to see an entire microsystem changed. It will take time for the staff and employees to adapt to a change and see improvements. However, promoting a

culture of change which includes open communication, shared knowledge, shared decision-making, participation, and feedback system can lead to a better and effective change. In the end, the clinic possesses a lot of potential for improvement in becoming a better microsystem that serves the marginalized and vulnerable population.

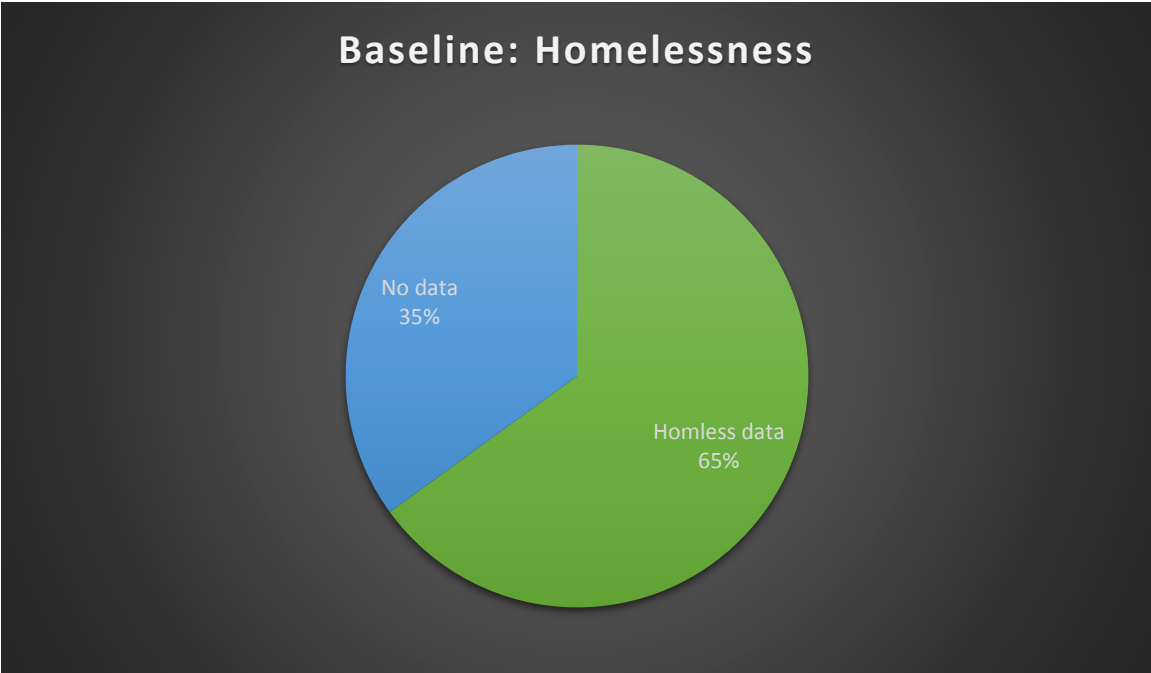
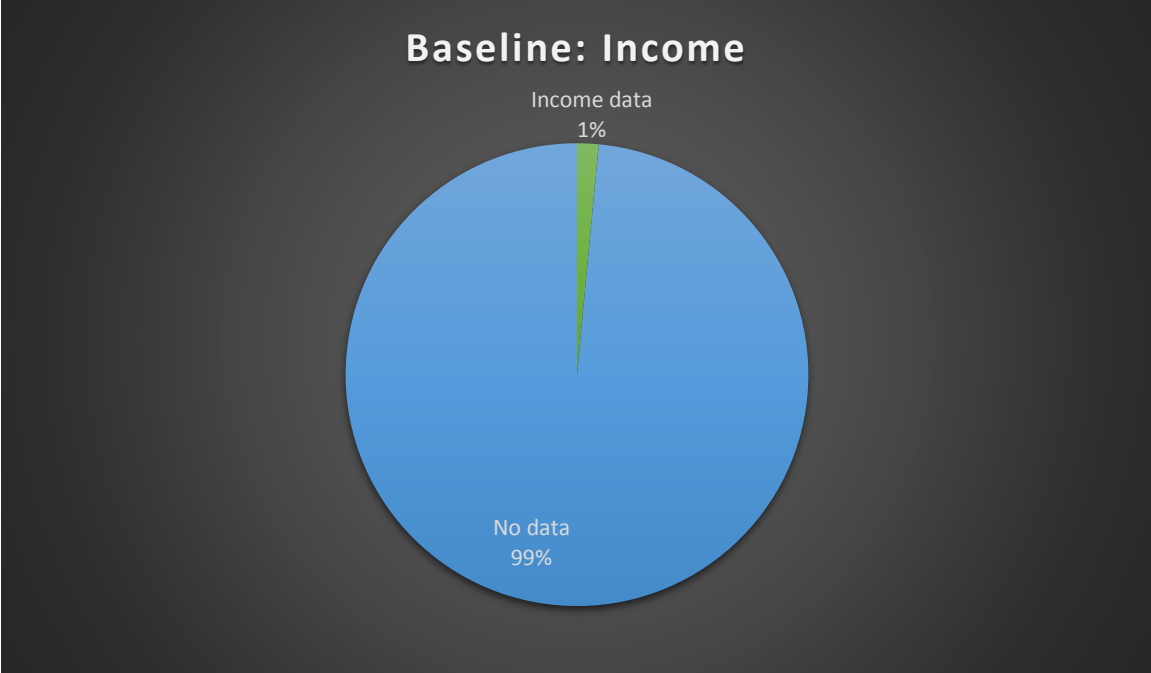
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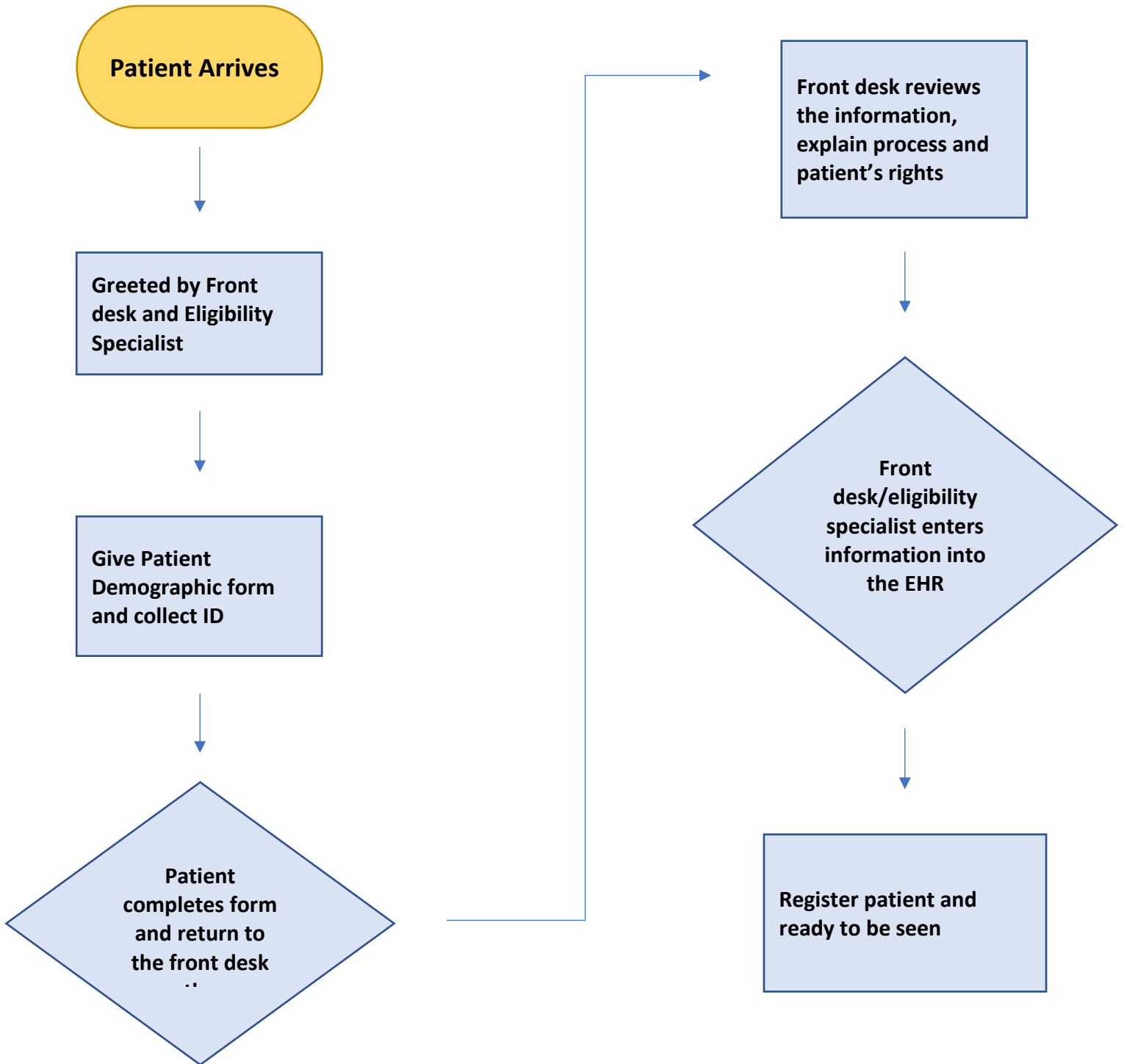
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Appendix A



Appendix B

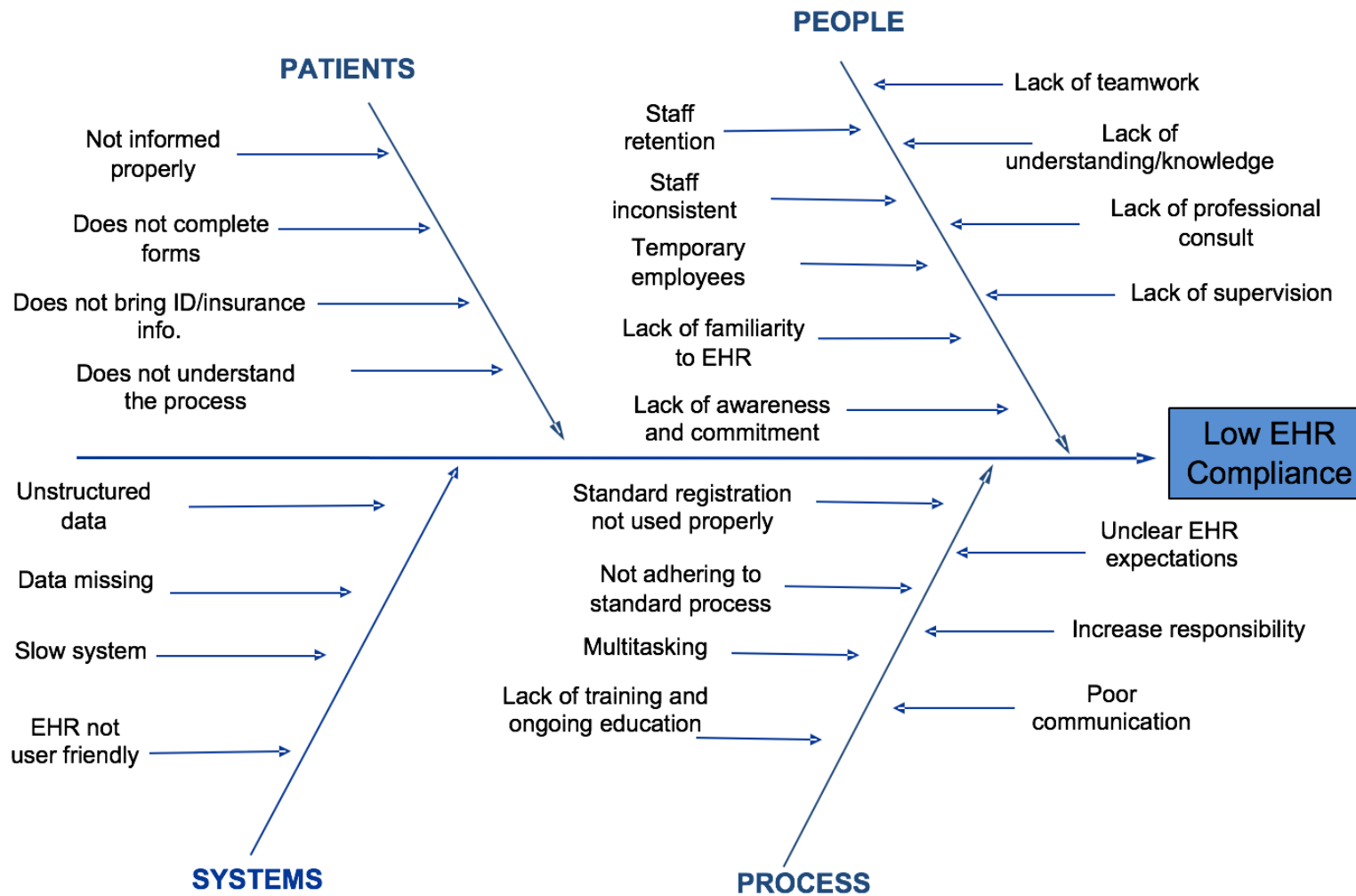
# Front Office Clinic Workflow





Appendix C

### Fishbone Diagram: Causes of Low Compliance



Appendix D

## Stakeholder Analysis

<b>Stakeholder Name</b> <i>How much does the project impact them? (Low, Medium, High)</i>	<b>Impact</b> <i>How much influence do they have over the project? (Low, Medium, High)</i>	<b>Influence</b> <i>What is important to the stakeholder?</i>	<b>What is important to the stakeholder?</b>	<b>How could the stakeholder contribute to the project?</b>	<b>How could the stakeholder block the project?</b>	<b>Strategy for engaging the stakeholder</b>
<b>Management</b>	High	Low	Maintaining facility operations and working conditions.	Agree to allow members to implement changes.  Allows healthcare staff to apply for incentive programs to improve facility.	Not approving of project changes for the practice.	Weekly discussions of PCMH implementation.  Explain that implementation of the project will not use a great amount of money and will not impact clinic's finances.
<b>Provider/Nurse Practitioner</b>	High	Low	Maximising quality of care for patients.  Getting reimbursements from billing.	Communicate with other stakeholders to express their support.	Not following standard process and fail to enter data/information into the EHR	Provide information about the project and how it will lead to better outcomes and increase cash flow
<b>Medical Assistants/Front Desk</b>	High	High	Ensuring a smooth workflow process to facilitate patient care.	Being consistent with data input  Can contribute by entering insurance correctly  Can point out inconsistencies or missing information in the chart	Not following standard processes and accurate documentation	Collaborating and conducting sessions to discuss implementation of project.  Asking and listening to their opinions and ideas in improving the EHR

<b>Stakeholder Name</b>	<b>Impact</b> <i>How much does the project impact them? (Low, Medium, High)</i>	<b>Influence</b> <i>How much influence do they have over the project? (Low, Medium, High)</i>	<b>What is important to the stakeholder?</b>	<b>How could the stakeholder contribute to the project?</b>	<b>How could the stakeholder block the project?</b>	<b>Strategy for engaging the stakeholder</b>
<b>Patients</b>	<i>High</i>	<i>High</i>	<i>To receive high quality of care</i>	<i>Providing appropriate information and bringing ID, insurance and other necessary documents</i>	<i>Not providing information. Not filling out forms appropriately.</i>	<i>Explaining the process and asking questions and feedback.</i>

Appendix E

**Cost Analysis**

<b>Resources</b>	<b>Potential Loss</b>
EHR healthcare training per hour	\$250.00
FQHC per year	\$217,000.00
PCMH per patient reimbursement	\$22.00
EHR maintenance per year	\$150,000.00
Total Loss	\$367,272.00

<b>Resources</b>	<b>Potential Benefits</b>
PCMH per patient reimbursement	\$22.00
FQHC per year	\$217,000.00
Sliding scale fee	\$5.00 - \$50.00

Appendix F

## SWOT Analysis

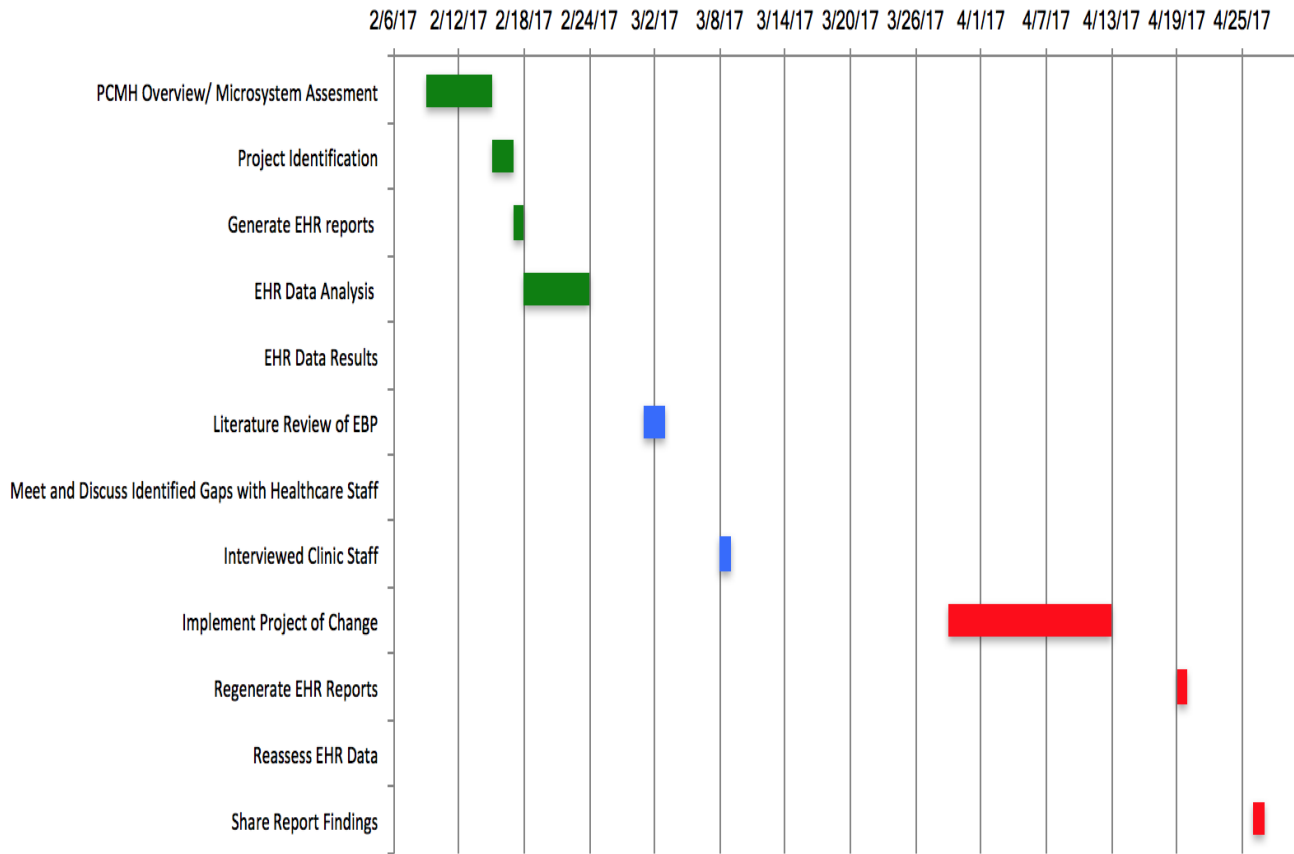
INTERNAL FACTORS	
STRENGTHS (+)	WEAKNESSES (-)
<p>Multitask                      Flexible                      Open to process change                      Determine to grow/improve                      Good training ground</p>	<p>Staff has hard time utilizing EHR                      Temporary staff lack experience in using the EHR                      Unstructured EHR                      Poor communication                      Money is tight                      Inconsistent set of processes                      Staff leave due to low pay, yet increase responsibility</p>

EXTERNAL FACTORS	
OPPORTUNITIES (+)	THREATS (-)
<p>Recognized as PCMH level II will receive reimbursement                      Maintain FQHC status can increase clinic money                      Hire more people/professionals if receive more money</p>	<p>Standards and benchmarks not met for PCMH, clinic will lose money                      If not maintain FQHC status, clinic will lose money                      Management will not approve any expenses</p>

Appendix G

# GANTT Chart

## Gantt Chart Template for Excel



Task Name	Start	End	Duration (days)
PCMH Overview/ Microsystem Assessment	2/9/17	2/15/17	6
Project Identification	2/15/17	2/17/17	2
Generate EHR reports	2/17/17	2/18/17	1
EHR Data Analysis	2/18/17	2/24/17	6

EHR Data Results	2/24/17	2/24/17	0
Literature Review of EBP	3/1/17	3/3/17	2
Meet and Discuss Identified Gaps with Healthcare Staff	3/3/17	3/3/17	0
Interviewed Clinic Staff	3/8/17	3/9/17	1
Implement Project of Change	3/29/17	4/13/17	15
Regenerate EHR Reports	4/19/17	4/20/17	1
Reassess EHR Data	4/20/17	4/20/17	0
Share Report Findings	4/26/17	4/27/17	1

Appendix H

