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# Reducing Preventable Emergency Department Visits by Improving Patient Care Access to Primary Care

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Fall 2015

**Reducing Preventable Emergency Department Visits by Improving  
Patient Care Access to Primary Care**

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Reducing Preventable Emergency Room Visits by Improving Access to Primary Care

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### **Clinical Leadership Theme**

This project emphasizes on the CNL components of *Clinical Outcome Manager* and leadership element of *Care Environment Manager*. “Clinical Outcomes Manager uses data to change practice and improve outcomes” while the care environment manager serves as leader on the interdisciplinary team (AACN, 2013). As the CNL of this project, I have assumed the responsibility to function as a leader. Supported by my preceptor, interdisciplinary team members, and administration leaders. This project aims to reduce preventable emergency department (ED) visits by improving access to primary care.

### **Statement of the Problem**

Although access to primary care appears to be unavoidable, increasing access to primary care ensures preventive care, improves health care outcomes, and lowers costs. According to the National Association of Community Health Centers (2014) approximately 62 million people nationwide have no or inadequate access to primary care given local shortages of such physicians. Primary care is critical to building a higher-performing health care system that fosters welfare and higher quality of care. With access to primary care, health problems are discovered and treated prior to progressing to a more serious condition that might require hospitalization.

Another factor that contributes to the difficulty of obtaining prompt access to primary care is the shortage of primary care providers. In a 2007 survey of fourth-year students at eleven U.S. medical schools, only 7 percent planned careers in adult primary care (Hauer, et al., 2008). The 2008 Medicare Payment Advisory Commission (MedPAC) beneficiary survey found that 28 percent of beneficiaries without a primary

care physician reported a problem finding such a physician. The ratio of primary care physicians to population in urban areas is 100 per 100,000 population. In rural areas, it is less than half that rate, 46 per 100,000 (Hauer, et al., 2008). A 2006 California survey found one of the principal causes of emergency department use to be lack of access to primary care. Forty-six percent of patient-respondents believed that the problem bringing them to the emergency department could have been handled in primary care (CHCF, 2006).

The Emergency Department is an essential component of the healthcare system in the United States. Receiving emergency treatment intends to offer urgent medical care, not to provide on going medical care. However, patients commonly seek the ED for non-emergent complaints. Though this might seem appropriate from the patient's standpoint, preventable ED visits places a burden on the healthcare system, by increasing the demand on the ED for situations that could be more appropriate for an outpatient setting. Therefore, increasing access to primary care can help to reduce hospitalization and ED visits. Health Centers can save \$1,263 per person per year because their care is timely, appropriate for the patient and efficient. As a result, costs are lowered across the delivery system from ambulatory care settings to the emergency department to hospital stays (NACHC, 2014).

In the United States the emergency department provides a significant source of medical care, with over 131 million ED visits occurring in 2011 (Weiss, Wier, Stocks, & Blanchard, 2011). But over the past decade, there has been an increase in ED utilization. In California, fewer than three in ten visits by the population over age 65 were considered potentially avoidable (Johnson, 2008). According to the ANACHC (2014) greater federal

Health Center funding and capacity have been shown to lower emergency department utilization among populations that historically experience access challenges, including the low-income, Medicaid-enrolled, uninsured, and rural communities.

One of the most significant motives for this project is related to offering patients an opportunity to engage and establish care with a primary care provider in their community. Community health centers have been highly successful in improving primary care access, and will remain a key source of primary care for the uninsured and underinsured. In both developed and developing countries, primary care has been demonstrated to be associated with enhanced access to healthcare services, better health outcomes, and a decrease in hospitalization and use of emergency department visits. Primary care can also help counteract the negative impact of poor economic conditions on health (Shi, 2012).

Increasing access to primary care services can improve patient care outcomes. A review of studies conducted in 6 countries regarding primary care quality suggests that better continuity may decrease hospitalizations and ED visits, lowering healthcare costs (Hsiao, Boulton, 2014). In contrast, inappropriate use of the ED can lead to excessive healthcare cost, unnecessary treatment, and lose an opportunity for patient and primary care provider to establish a relationship. Health Centers serve over 22 million people through over 9,000 urban, suburban and rural locations in every state and territory. Research demonstrates their ability to improve access to a regular source of care while holding down emergency room visits and overall health care costs (ANCHC, 2014).

### **Project Overview**

Implementing innovative strategies to reduce preventable ED visits by improving patient care access. The purpose of this project is to identify patients without a primary care provider, provide access to a primary care provider by connecting patients, registering patients in a FQHC (Federally Qualified Health Center), provide them with a *new patient* appointment, and taking the opportunity to educate patient of resources available to them. Offering patients with a possibility to establish care, as well as, continuity of care for their acute or chronic medical conditions. Furthermore, our objective is to reduce preventable ED visits by 10%, while patients will gain access to primary care services. Receive ongoing treatment for acute or chronic medical conditions, referrals to specialty clinics, medication refills, follow-up care, preventative care, dental care, and become informed of other resources available to them in their community.

Patients will have the opportunity to establish care at a FQHC located in the East Bay. The organization is composed of two urgent cares; an adult care center, and over fifteen health centers. The FQHC provides high-quality health and social services to underserved people of all ages; creating models of care for the elderly, people with disabilities and families; and advocates for continuous improvements in the health of our communities. Offering services to over 45,000 underserved individuals, many with complex health conditions every year. They continuously advocate for public policy improvements related to quality care access, the reduction of health disparities, and expanded home and community based care.

For this course project, data will be acquired from ED physicians, ED social workers, ED case managers, internal EPIC data (remotely connected), and Deputy

Medical Director, aside from, literature review. Primarily, collecting data from EPIC database by generating a daily report with a list of ED visits. This report will contain patient's name, ED date and time of arrival, patient's contact information (face sheet in EPIC), medical diagnosis, most importantly, name of provider. Secondly, comparing patients with access to a provider against those without access to a provider. Next, EPIC allows me to create a *patient list* that contains the report of the patients who require access to primary care services. When patients have established medical care at one of the health centers. The *patient list* will continuously be updated. Having access to the list provides easier access to ED notes, discharge date and time, history and physical records, and discharge summary.

The objective of this course project is to improve access, and the goal is to reduce preventable ED visits. The ED physicians will play a vital role in this project (only four ED doctors will initially participate in this project) by assisting to also identify those patient's that require urgent follow-up care, most importantly, those patients that do not have a primary care provider. They will send a *consult note* to the care transitions team (as part of the care transitions team, I can access these consult notes) then I can generate a daily list from EPIC containing the patients referred by our ED physicians. The note will include the critical information: diagnostics, exam findings, and the type of follow-up care.

In conjunction with the *consult note* sent by the ED physicians, I will be conducting a daily *patient report* form EPIC that allows me to identify patients without a medical home. After discharge, patients will receive a phone call, 12 to 24 hours after



their discharge to help them establish medical care. We can then proceed to enter their respective information manually into an excel spreadsheet. Information gathered in the tracking list includes: provider's name, FQHC location, patient's name, date of birth, date of service, diagnosis, disposition, insurance information, contact efforts, and appointment information. This system allows me to keep track of the patients, even after discharge. If additional information is required, I can contact the social workers at the ED, or directly contact the patients. Our care transitions liaison will then proceed to verify health insurance; if patients are uninsured, they are directed to our patient services/eligibility department. They are then scheduled a *new patient* appointment. Once they have attended their *new patient* appointment, the patients will come off my tracking list. Additionally, monthly reports will be generated to evaluate our data. Data gathered could potentially support a proposal for a new approach that can help fund for a position at the Emergency Department to manage patients without a primary care provider. Reducing preventable emergency department visits by 10% and improving patient care access to primary care by August 2016.

### **Rationale**

To identify the needs and contributory factors that drive patients—without a primary care provider—to seek non-urgent medical care at the emergency department, a cause and effect analysis was conducted. This analysis is based on observation, nursing reports, emergency and inpatient assessments, case management assessments, social worker assessments, ED physicians evaluations, care transitions data, ED data, and EPIC data collected. According to the data studied, there are numerous barriers that patient's face when attempting to access primary care services, such as, lack of health insurance,

publicly insured, low income, language barriers, and lack of education about resources in their community.

In 2011, there were over 131 million ED visits in the United States. Medicaid beneficiaries made up 27 %, Medicare made up 22%, and 16% of all ED visits had no insurance coverage (Weiss, Wier, Stocks, & Blanchard, 2011). Of those visits, Medicaid recipients utilized the Emergency Department at an almost two-fold higher rate than compared to the privately insured. Since 2010, with the expansion of the Affordable Care Act and the increased number of Medicaid recipients it is expected this number will continue to trend upward (CDC, 2010). Current and future Health Center patients become eligible for Medicaid, adequate Medicaid payments become even more essential for Health Centers' sustainability. Medicaid is the largest insurer of Health Center patients and represents 38% of total revenue (NACHC, 2014).

Thus, research shows that access to primary care physicians in a community means lower rates of mortality, better preventive care, and fewer hospitalizations and emergency room visits (NACHC, 2014). An analysis of the data revealed that patients without a primary care provider are more likely to return to the ED for ongoing care. Approximately 66% of those visits could be safely treated in the primary care setting (Taylor, 2013). For instance, 50% of the patients I am tracking returned to the ED seeking medical care, for conditions that could have been treated in a primary care setting. For instance, upper respiratory infections, urinary tract infections, or other preventative care conditions. Regardless of healthcare coverage, patients will continue to seek medical care at the ED for their medical needs. However, the issue remains that those patients who transition through the ED with preventable ED visits might dearth

access to primary care services. Therefore, it is crucial to implement successful strategies that can help reduce preventable ED utilization, which can benefit by improving care in the utmost proper healthcare settings while lowering healthcare cost.

Providing patient education about proper use of the ED can help increase access to primary care services while reducing inappropriate ED utilization. A 2006 California survey conducted by the California Healthcare Foundation found that the principal causes of emergency department use to be lack of access to primary care. Of this 46 percent, two-thirds would have seen a primary care practitioner instead of visiting the emergency department had they been able to obtain an appointment. Thus, efforts to ensure that appropriate care is delivered in the most appropriate settings are crucial.

Another contributing factor included: recent or current illegal immigrant status. Unfortunately, not enough data has been collected to be presented, but it is an element that contributes to the matter been discussed. The contact information gathered at the ED is not consistent. According to social workers at the ED, patients are fearful in releasing certain contact information. Access to resources available in the community is limited for this group. Therefore, educating patients is important. Community health centers are vital in supporting in the prevention of unnecessary and avoidable ED visits. As they provide care for everyone, regardless of ability to pay.

According to the National Association of Community Health Centers (2014), Health Centers have a proven record of reaching people and communities most in need, delivering high-quality care, and saving the health care system \$24 billion a year. The New England Healthcare Institute (2010) estimated that ED overuse is costing

approximately \$38 billion annually. Avoiding preventable ED visits can save a single institution millions of dollars. The intervention implemented in this project is estimated not to be very costly. The major expense would be to funding a FTE position to continue to carry out this role, and compensating the care transitions liaison for her time when checking patient's eligibility. According to a job posting for a family service liaison position at a northern California hospital, liaisons earn \$26 per hour. Additionally, there is no expected expense for social workers, case managers, ED physicians and hospital liaisons, as they would simply be carrying out their responsibilities. Preferably, a nurse would be hired to take on this project. According to the Bureau of Labor Statistics (2011) a registered nurse in Northern, California estimates an average of \$50.80 hour. In this respect, as a clinical nurse leader student implementing this project, my 220 clinical hours are part of my unpaid internship. However, reducing preventable ED visits can increase revenue for the hospital. According to the Health, United States (2012) an average adult ED visit costs \$969, and the mean expense ED visit for an older adult costs \$1,062. Other minor expenses include computer, double monitor, paper, printer, scanner, chair, and envelopes.

### **Methodology**

For this project, which focuses in reducing preventable ED visits by improving access to primary care, Kotter's eight-step model of change will be utilized. The steps include create urgency, form a powerful coalition, create a vision for change, communicate that vision, remove obstacles, create short-term wins, build on the change, and anchor the changes in corporate culture. It is important to recognize that a model of change is needed to help others recognize that primary care is essential to building a

higher-performing health care system that promotes welfare. Every phase of the project recognizes a key principle acknowledged by Kotter connecting individual's approach to change. In regards to this project, Kotter's eight-step model of change will lead me throughout the various phases in my project. Kotter's ensuing eight-step process will prevent organizations from failure and develop proficiency at change. Guiding me to develop new strategies for achieving my vision of improving access to primary care. Incorporating Kotter's model of change will instruct me predictability and manageability of the change processes in my project. Each stage in Kotter's eight-step model of change (Appendix C) facilitated into my project's aim to reduce preventable ED visits and increasing access to primary care.

In change management, models' of change can be an effective tool that can bring organizational transformations. In my project, increasing urgency in the need for increasing access to primary care services is fundamental in order to reduce preventable ED visits. Furthermore, communicating the benefits of the urgency, such as, reducing healthcare cost, decreasing the demand on emergency departments, as well as, improving healthcare outcomes can help to guide others. Incorporating motivational strategies, inspiring approaches, and how the change will create new opportunities for patients, has assisted me to introduce change initiatives in my project. "To lead change, you need to bring together a coalition, or team, of influential people whose power comes from a variety of sources, including job title, status, expertise, and political importance" (Vanderbilt University Medical Center, 2014). It is important to facilitate for others to understand the vision, inspire them to pursue the change, and achieve the vision. "The change leader must communicate clearly, powerfully and frequently the vision including

the benefits the desired change will bring” (Josephson, 2014). A strong support system is crucial as they can enable constructive views. In my project, I have a solid support system that enabled me to introduce and implement this project.

I have plan for short-term goals in order to achieve noticeable performance improvements. Early successes can help to motivate others to want to pursue the change, which can create a positive approach. One of my achievements in this project has been to acquire the ED physicians on board with this project. Building on the change will require evaluation of what has worked and what needs improvement. Without learning about Kotter’s change model, it is possible that I would have not been able to achieve the project’s objectives. This model has simplified the different phases of my project.

Patients without an established primary care physician, health insurance and safety net often seek care in the emergency department instead of in a more appropriate care setting for their medical conditions. Therefore, a proactive transition process is essential. Moving forward with this project, I would like to use algorithms to identify high-risk patients such as those without a primary care provider that provides an automated or real time notification that allows someone to intervene.

In order to evaluate the project effectiveness, a monthly report will be generated and shared with the ED utilization task force team at the hospital. The monthly report will be obtained from my tracking list. Once patients have kept their *new patient* appointments, my goal have been achieved. To evaluate the success of my project, my plan is to complete surveys at the emergency room to ensure the ED interdisciplinary team members have an opportunity to offer any feedback about the project. It is estimated

that the data gathered will be encouraging. Quarterly evaluations will also be implemented to measure effectiveness and sustain with project's objectives.

### **Data Source/Literature Review**

The aim of my project is to reduce preventable emergency department visits by 10% and improve patient care access to primary care by August 2016. The ED is becoming the safety net as patients often seek medical care in the emergency department instead of in a more appropriate care setting for their medical conditions. In 2005, the annual number of emergency department visits in the United States increased nearly 20%, from 96.5 million to 115.3 million (NEHI, 2010). Patients face several barriers to proper access to primary care services. The difficulties patients face gaining timely access to primary care are caused by multiple factors, related to primary care practitioner shortages, geographic maldistribution, and organizational issues within primary care practices. These factors are listed here, along with suggested policy reforms (Bodenheimer, Hoangmai & Phan, 2010). Barriers identified in this project for proper access to primary care services include: lack of health insurance, lack of education for properly using medical care services available in the community, limited access to timely primary care services, transportation, or after-hours and weekend care.

ED utilization for non-emergency or preventable visits has been an ongoing concern in the healthcare system. Thus, my project focuses on improving access to primary care for preventable ED visits. Research shows that access to primary care lowers ED utilization among populations that historically experience access challenges, including patients who are low-income, Medicaid-enrolled, uninsured, and living in rural communities (NACHC, 2014). Health centers reduce preventable ED visits by

successfully employing a model of care designed to increase access to high-quality primary and preventive services (NACHC, 2014).

The literature surrounding preventable ED visits support that patient care access to primary care services reduced preventable ED visits. According to Weinick, Burns & Mehrotra (2012) an estimate between 13.7 and 27.1 percent of all emergency department visits could be treated at one of these alternative sites with a potential cost savings of approximately \$4.4 billion annually. Successful strategies to reduce inappropriate ED use can have the enhanced benefit of improving care and lowering costs.

Furthermore, the results of Mathisons (2013) study analysis supports previous findings although most ED patients have insurance, the patients with public insurance are more likely to visit the ED for non-urgent reasons. It demonstrated that social dynamics cause families to visit EDs for non-urgent care, rather than a PCP, which are complex and likely differ by socioeconomics, culture, location, and the availability of other health options. Low-acuity, non-urgent emergency department (ED) visits by children account for 37% to 60% of the 30 million ED visits made by children in the United States annually (Mathison, 2013).

The literature also defines various interventions that are effective in reducing preventable ED visits and improving patient care access to primary care. In Enard's (2013) study, it demonstrated that the patient navigation intervention was associated with decreased odds of returning to the ED among less frequent Patient Care Related-ED users. The intervention is facilitated by a community health worker who provides education on the importance of primary care, assisting with appointment scheduling, and



follow up with patients to monitor and address additional barriers. Using a standard set of questions, the Patient Navigators engage with patients to identify and understand the specific barriers to appropriate primary care utilization (e.g., lack of insurance, lack of financial resources) and to begin to determine local, state, and federal resources that can support the clients' needs.

A PICO statement allows the CNL to initiate the planning process and, by using it, developing a concise statement for project in hand.

**P:** patients visiting the emergency department with preventable visits

**I:** connecting patients with a PCP

**C:** unassigned PCP

**O:** improving access to primary care services

### **Timeline**

The project was initiated in August 2015 and will be completed in August of 2016. The first phase of the project included implementing the project, second phase includes introducing findings to ED administration for potential funding of this project. Thirdly, hiring an FTE for the position that can continue to take on the project. Finally, expanding the project to other hospitals. One challenge with this timeline includes preparing for the CNL certification exam. Another ongoing challenge is ensuring that communication with different disciplines is completed in a timely manner. For instance, obtaining a response from hospital ED administration, community health center's administration that prevent me from moving forward with the next phases of the project.

### **Expected Results**

My expected results focus amongst the emergency department and community health centers. The expected outcome is to reduce preventable ED visits and improve patient care access to primary care by 10%. The expected timeframe target is set for August 2016. Improving access for patients without a medical home will improve patient care outcomes, reduce cost, and help patients overcome their barriers.

Proceeding with the proposed intervention, patients will engage with primary care services. Establishing care at a community health center will reduce preventable ED visits. Patients will be educated in resources available in their community. Education for appropriate usage of care settings can be provided. Patients will have the opportunity to engage with their providers and will be less likely to return the ED for preventative care.

I envisage progressive and astonishing results that can lead to a permanent position at the Emergency Department. The project ropes quality of care, improve patient care outcomes, advocates for undeserved populations, improves communication between various disciplines, and improves patient care outcomes.

### **Nursing Relevance**

It is essential to direct patients to the appropriate care settings for their healthcare needs. Reducing preventative ED visits by improving access to primary care will significantly impact patient health outcomes. Offering patients with continuity of medical care, effective chronic disease management, increasing collaboration and communication between various disciplines across the healthcare system.

Facilitating access to primary care can help to ensure patients to engage in enabling services at the health centers ( NACHS, nd). Therefore, providing high-quality,

continuous primary care services at community health centers has been recognized.

Nearly all (95.8%) have an Electronic Health Record installed to support care management and 59% are currently recognized as Patient Centered Medical Home.

Community Health Centers are an important part of prevention of preventable and avoidable ED visits. They are intended to serve community members and provide care for everyone, regardless of their ability to pay. In addition to comprehensive primary care services, community health centers offer specialty care referrals, dental, mental health and other supportive services (Rothkopk, & Brookler, 2011). Utilizing primary care services is associated with lowering healthcare costs, minimizing the use of acute care services, and reduces hospital admissions and readmissions. Community health centers also offer typically offer extended hours on evenings and weekends, same day and walk-in appointments, after-hours phone access to clinicians for medical advice, and continuity of care (Rothkopk, & Brookler, 2011).

### **Summary Report**

This project focuses on improving patient care access to primary care services to reduce preventable Emergency Department visits. The metrics utilized for this project are the tracking the number of standardized patient visits (Nextgen), EPIC reports, chart audit, percentage of kept “*new patient*” appointments, and the percentage of patients that had access to primary care.

The steps involved in the benchmarking for this project included the following. Daily EPIC reports were completed to get a baseline of the amount of preventable ED visits from our Federally Qualified Healthcare Centers located in Alameda County. I also decided to collect data on the total number of patients attending to the ED without a

primary care provider. Data collected from one hospital's ED located in Alameda County showed that approximately 145 daily ED visits, 45% to 50% of those patients reported not having a primary care provider; and 10% of those ED visits belong to our FQHCs. While my project continues to develop, it is important to identify other barriers such as type of health insurance, demographics, disabilities, or other factors that inhibit patients from having a primary care provider. If my CNL project demonstrates to improve patient care outcomes by improving access to primary care services while reducing preventable ED visits. Ideally, funding an FTE position to provide patient's with education on appropriate usage of healthcare settings, information on community resources, identify barriers of access can help to provide continuity of care, improve collaboration and communication between disciplines.

Improving patient care access to primary care services to reduce preventable Emergency Department visits. Evidence-based practice demonstrates that preventable ED use is problematic from both a cost and quality standpoint. The high costs impact both patients and payers and create a drain on resources. Preventable ED use reduces the quality of ED care (NEHI, 2010). Presently, the ED is becoming a primary resource for more people as the U.S. primary care system finds itself unable to meet the growing demand for medical care.

Research shows that in the ten years ending in 2005, the annual number of emergency department visits in the United States increased nearly 20%, from 96.5 million to 115.3 million (Nawar, Niska & Xu, 2007). A study showed that treatment for an acute upper respiratory infection in the emergency department costs more than double that at a family practitioner's office, \$221 versus \$106 (Martin, 2000). An intervention to

improve access to primary care services can help to reduce the cost of preventable ED visits. As my quality improvement project can be less costly, it can help to redirect the patient to avoid unnecessary ED usage, improve quality and result in cost savings by increasing continuity and coordination of care.

The Root Cause Analysis is a tool for identifying prevention strategies. It is a process that is part of the effort to build a culture of safety and move beyond the culture of blame” (United States Department of Veterans Affairs, 2014). Furthermore, RCA thus uses the systems approach to identify both active errors and latent errors. It is one of the most widely used retrospective methods for detecting safety hazards (AHRQ, 2014). For this project, RCA has been a tool that has helped me to identify not only what and how an event occurred. Also why this event happened. This is important because it can help to identify preventable strategies to prevent future errors.

After the implementation of my project, which focuses on improving patient care access to primary care. It is key to develop a sustainability plan in order to continue to achieve desired outcomes of the project’s goals. Moving forward with my project utilizing the five factors to maintain sustainability, it is fundamental to make modifications when necessary. As with quality improvement projects include small samples, frequent changes in interventions, and implementation of new strategies that appear to be effective. Physicians at the ED and providers at the clinics can be the champions in this project. Supporting the importance of connecting patient’s primary care and proving continuity of care. Data from this project shows that care coordination has improved their patients’ health and well-being. It is important to share the benefits of this project with other staff members, as some people within the organization may be resistant

to participate in quality improvement efforts. However the impact of these barriers can be perceived as opportunities to embrace the need for change. This aligns with the CNL end of program competency of System Analyst.

I want to thank and acknowledge my preceptor and supporters of this project from ED staff members, care transitions team members, and FQHC team members. I am grateful to have been given the opportunity to work as a CNL, and implement this project.

## References

- Block, L., et al. (2013). Does access to comprehensive outpatient care alter patterns of emergency department utilization among uninsured patients in East Baltimore? *US National Library of Medicine*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23799723>
- Bodenheimer, T., Hoangmai, H., & Phan. (2010). Primary care: current problems and proposed solutions. *Health Affairs*. Retrieved from <http://content.healthaffairs.org/content/29/5/799.full#ref-26>
- California Health Care Foundation. (2006). Overuse of emergency departments among insured Californians. Retrieved from <http://www.emsworld.com/news/10410324/report-why-californias-ers-are-filled-with-insured-patients>
- Carret, M.R., Fassa, A. G., & Domingues, R. M. (2009). Inappropriate use of emergency services: a systematic review of prevalence and associated factors. *Universida de Federal de Pelotas, Pelotas, Brasil*. Retrieved from <http://www.scielo.br/pdf/csp/v25n1/02.pdf>
- Center for Disease Control and Prevention. (2010). National Hospital Ambulatory Care Survey: 2010 Emergency Department Summary Tables. Retrieved from [http://www.cdc.gov/nchs/data/ahcd/nhamcs\\_emergency/2010\\_ed\\_web\\_tables.pdf](http://www.cdc.gov/nchs/data/ahcd/nhamcs_emergency/2010_ed_web_tables.pdf)

Center for Disease Control and Prevention. (2012). Health, United States: with special feature on emergency care. Retrieved from <http://www.cdc.gov/nchs/data/hus/hus12.pdf>

Council on Graduate Medical Education. (2007). New paradigms for physician training for improving access to health care. *Eighteen report*. Retrieved from <http://www.cogme.gov/18thReport/default.htm>

DeHaven, M. (2012). The effects of a community-based partnership, Project Access Dallas (PAD), on emergency department utilization and costs among the uninsured. *US National Library of Medicine*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22653885>

Enard, K. R. (2013). Reducing preventable emergency department utilization and costs by using community health workers as patient navigators. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4142498/>

Hauer, K.E., Durning, S. J., Kernan, W.N., Fagan, M.J., Mintz, M., O'Sullivan, P. S., & et al. (2008). Factors associated with medical students' career choices regarding internal medicine. *The Journal of the American Medical Association*, 300(10), 1154–64.



Hsiao, C.J., & Boulton, C. (2014). Effects of Quality on Outcomes in Primary Care: A Review of the Literature. *American Journal of American Quality*. Retrieved from <http://ajm.sagepub.com/content/early/2008/05/16/1062860608315643.short>

Johnson, H. P. (2008). Emergency department care in California. *Public policy Institute of California*. Retrieved from [http://web.pplic.org/content/pubs/cacounts/CC\\_808SMCC.pdf](http://web.pplic.org/content/pubs/cacounts/CC_808SMCC.pdf)

Mathison, D. J., & et al. (2013). Primary Care Spatial Density and Nonurgent Emergency Department Utilization: A New Methodology for Evaluating Access to Care. *University School of Medicine and Health Sciences*, 13(3), 278-285.

Medicare Payment Advisory Commission. (2008). *Report to the Congress: Medicare payment policy*. Washington (DC): MedPAC.

NEHI Research Brief. (2010). A matter of urgency: reducing emergency department overuse. *New England Healthcare Institute*. Retrieved from [http://www.nehi.net/writable/publication\\_files/file/nehi\\_ed\\_overuse\\_issue\\_brief\\_032610final edits.pdf](http://www.nehi.net/writable/publication_files/file/nehi_ed_overuse_issue_brief_032610final edits.pdf)

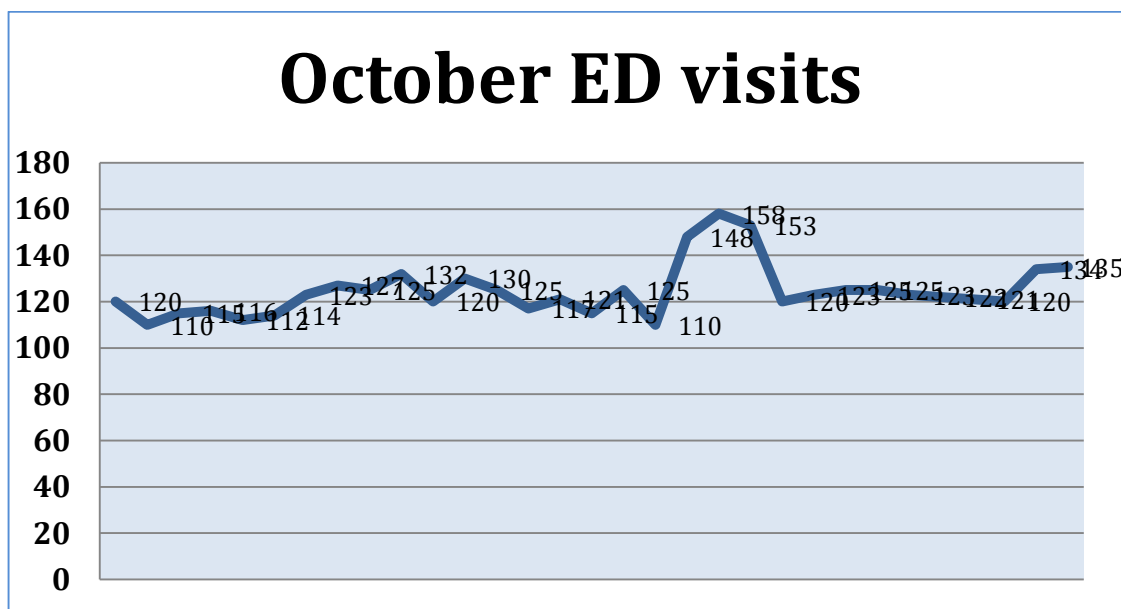
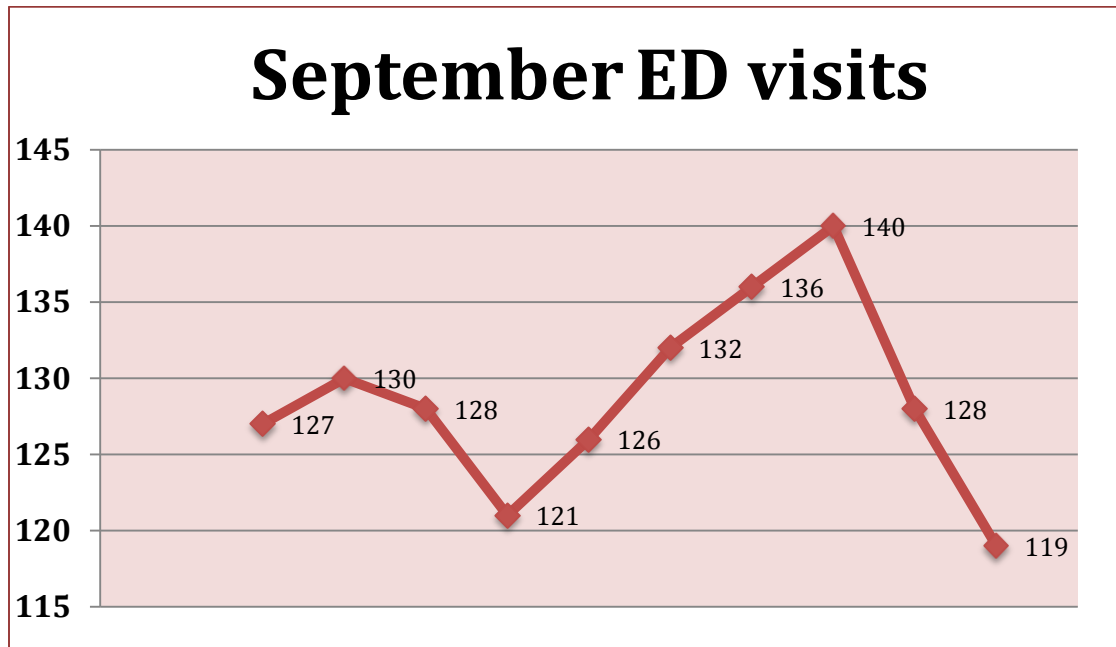
Oterino de la Fuente, D., Banos Pino, J. F., Fernandez Blanco, V., Rodriguez, & lvarez, A. (2006). Does better access to primary care reduce utilization of hospital

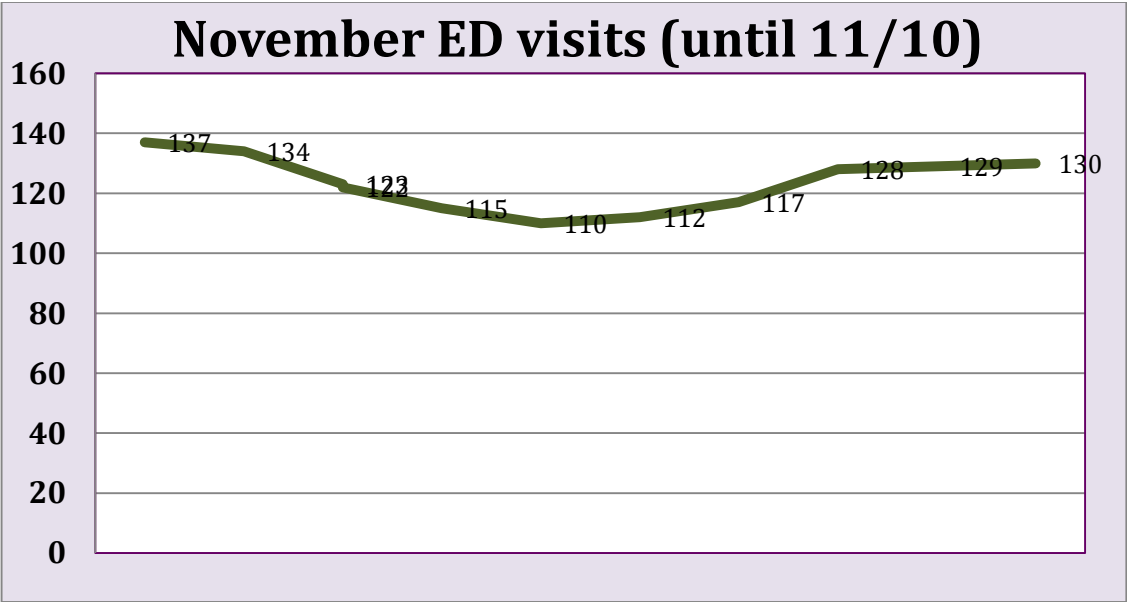
- accident and emergency departments? A time-series analysis. *European Journal of Public Health*, 17(2), 186-192.
- Rothkopf, J., Brookler, K., & et al. (2011). Medicaid patients seen at federally qualified health centers use hospital services less than those seen by private providers. *Health Affairs*, (3), 1335-1342.
- Shi, L. (2012). The impact of primary care: a focused review. *Scientifica*. Retrieved from <http://www.hindawi.com/journals/scientifica/2012/432892/>
- Taylor, M. (2013). Avoidable Emergency Department Usage Analysis. *Truven Health Analytics*. Retrieved from <http://truvenhealth.com/blog/appropriate-emergency-room-utilization>
- United States Department of Labor. (2011). Bureau of labor statistics: occupation employment statistics. Retrieved from <http://www.bls.gov/oes/2011/may/oes291111.htm>
- Weinick, R. M., Burns, R. M., & Mehrotra, A. (2012). How Many Emergency Department Visits Could be Managed at Urgent Care Centers and Retail Clinics? *US National Library of Medicine*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3412873/>

Weiss, A. J., Wier, L. M., Stocks, C., & Blanchard, J. (2011). Overview of Emergency Department Visits in the United States: HCUP Statistical Brief. *Agency for Healthcare Research and Quality*. Retrieved from <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb174-Emergency-Department-Visits-Overview.pdf>

## Appendix A

## Monthly Emergency Visit Rates

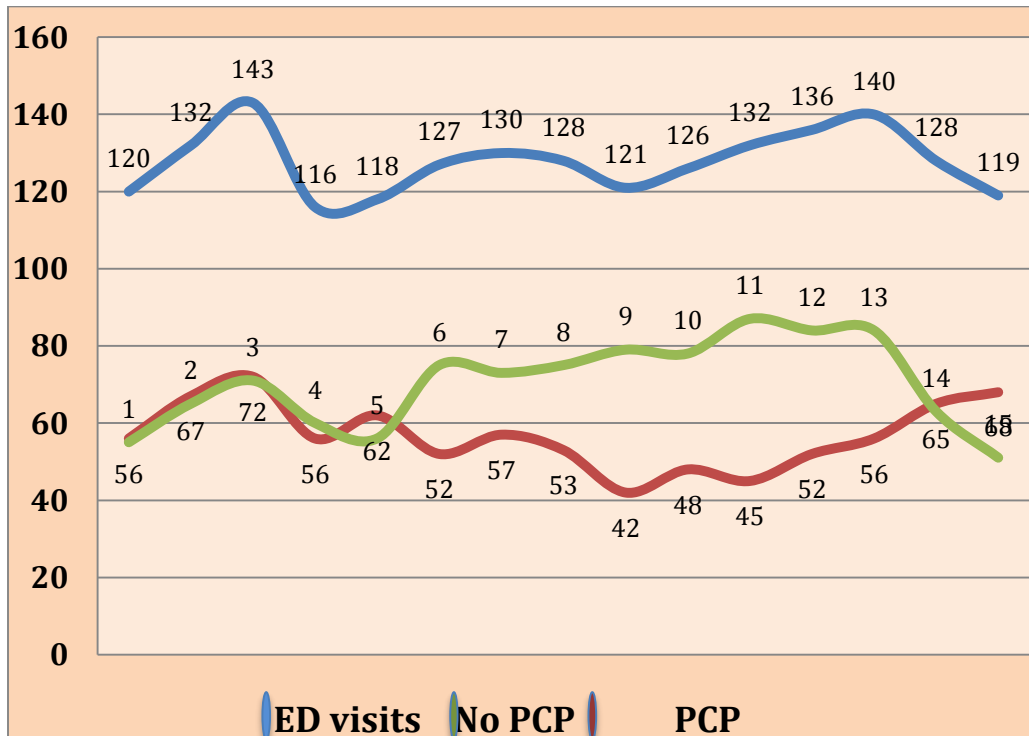
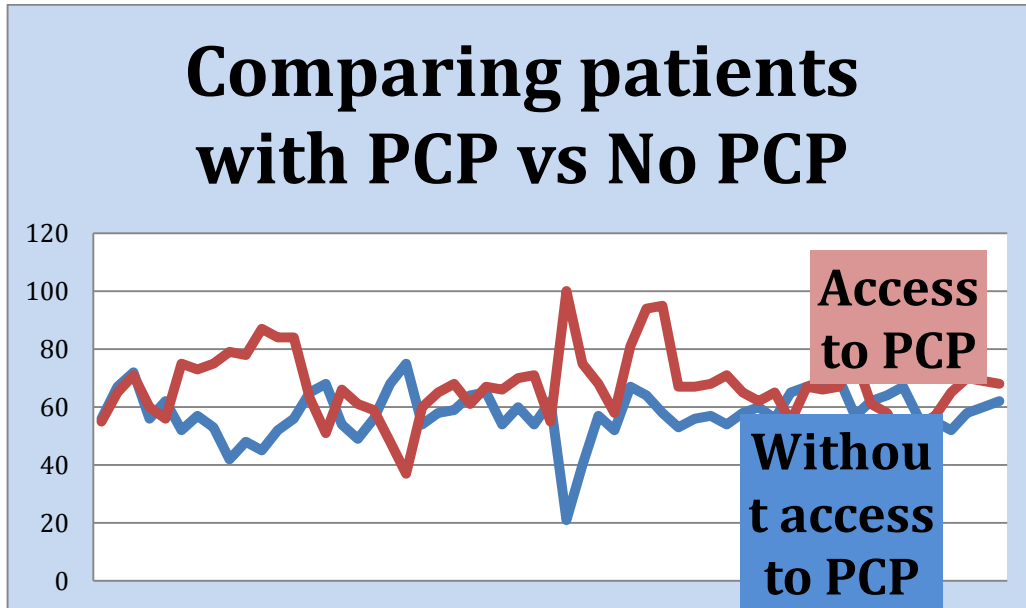




## Appendix B

Comparing ED visits with primary care access against

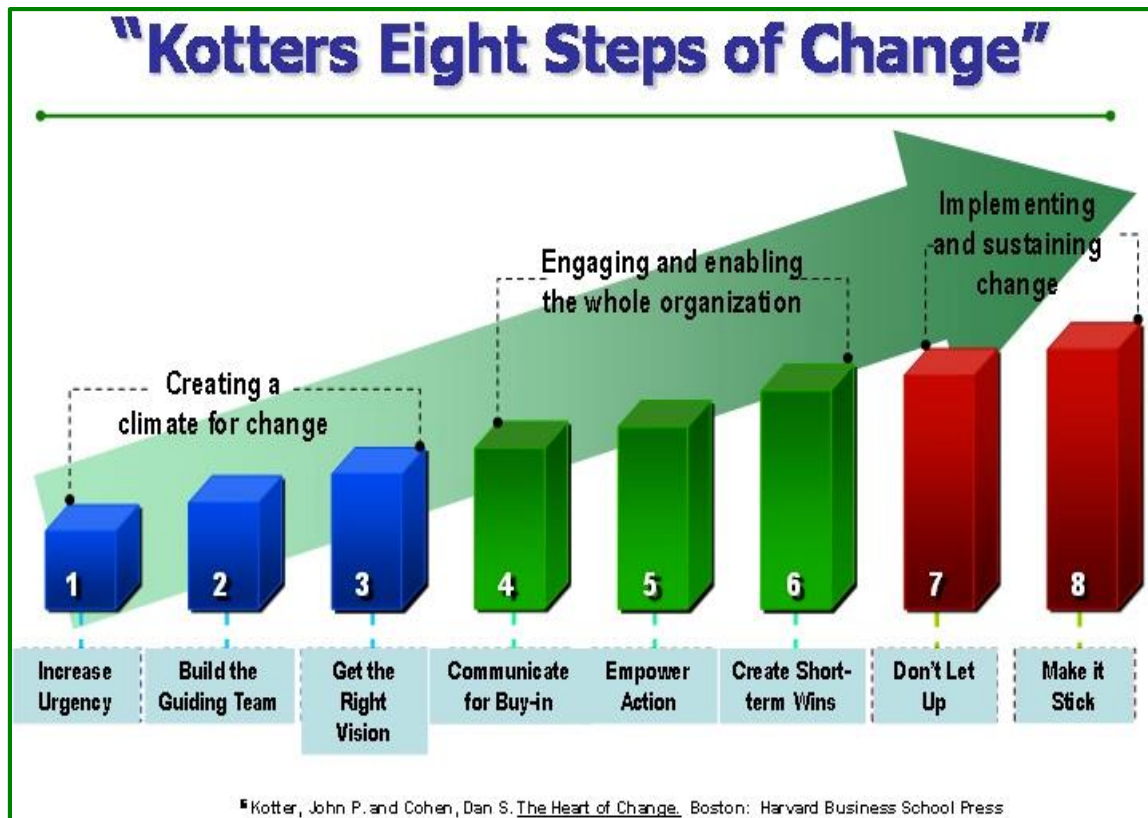
those without access to primary care



## Appendix C

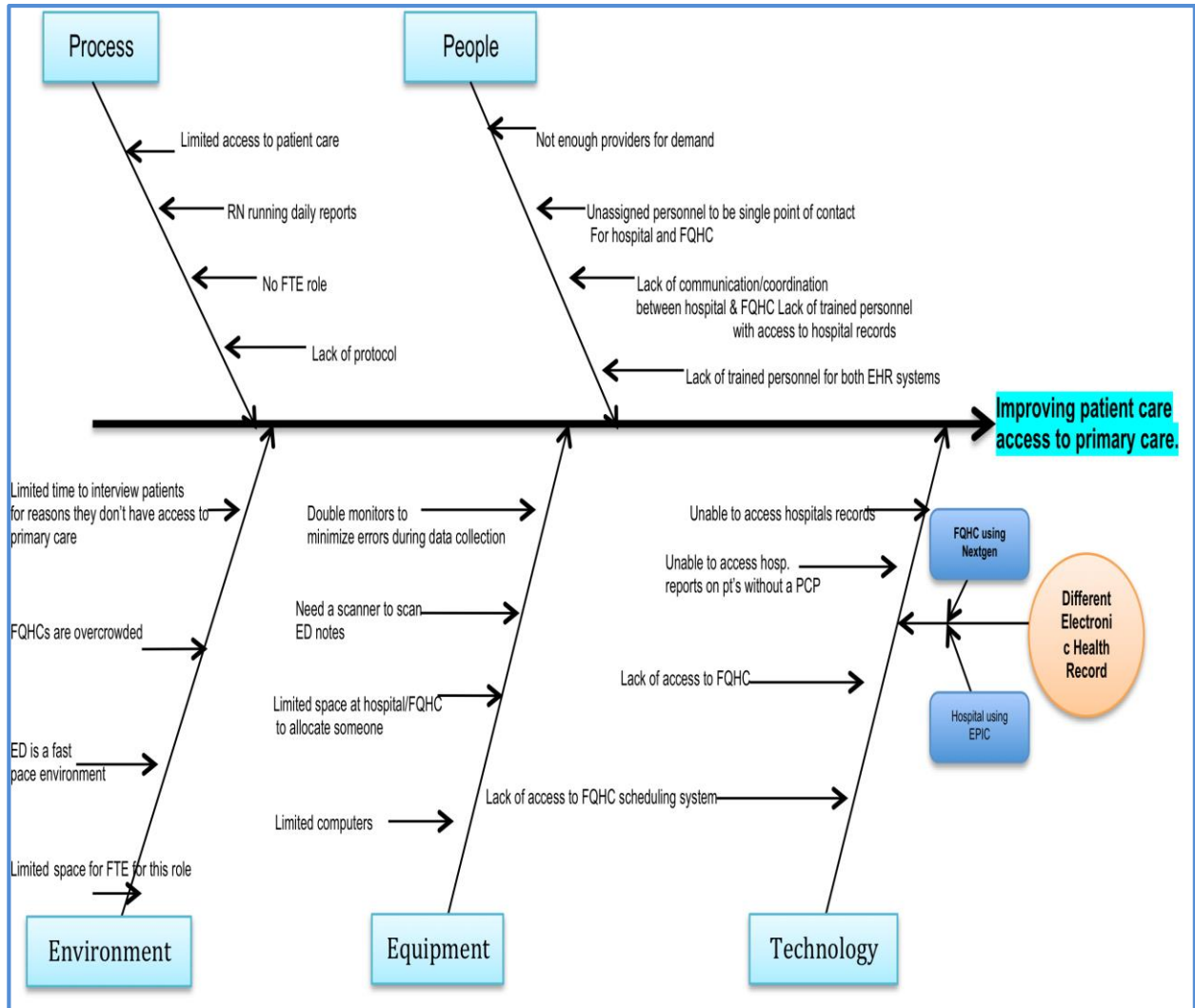
## Supportive Theory

## Kotter's eight steps of change



## Appendix D

## FISHBONE DIAGRAM





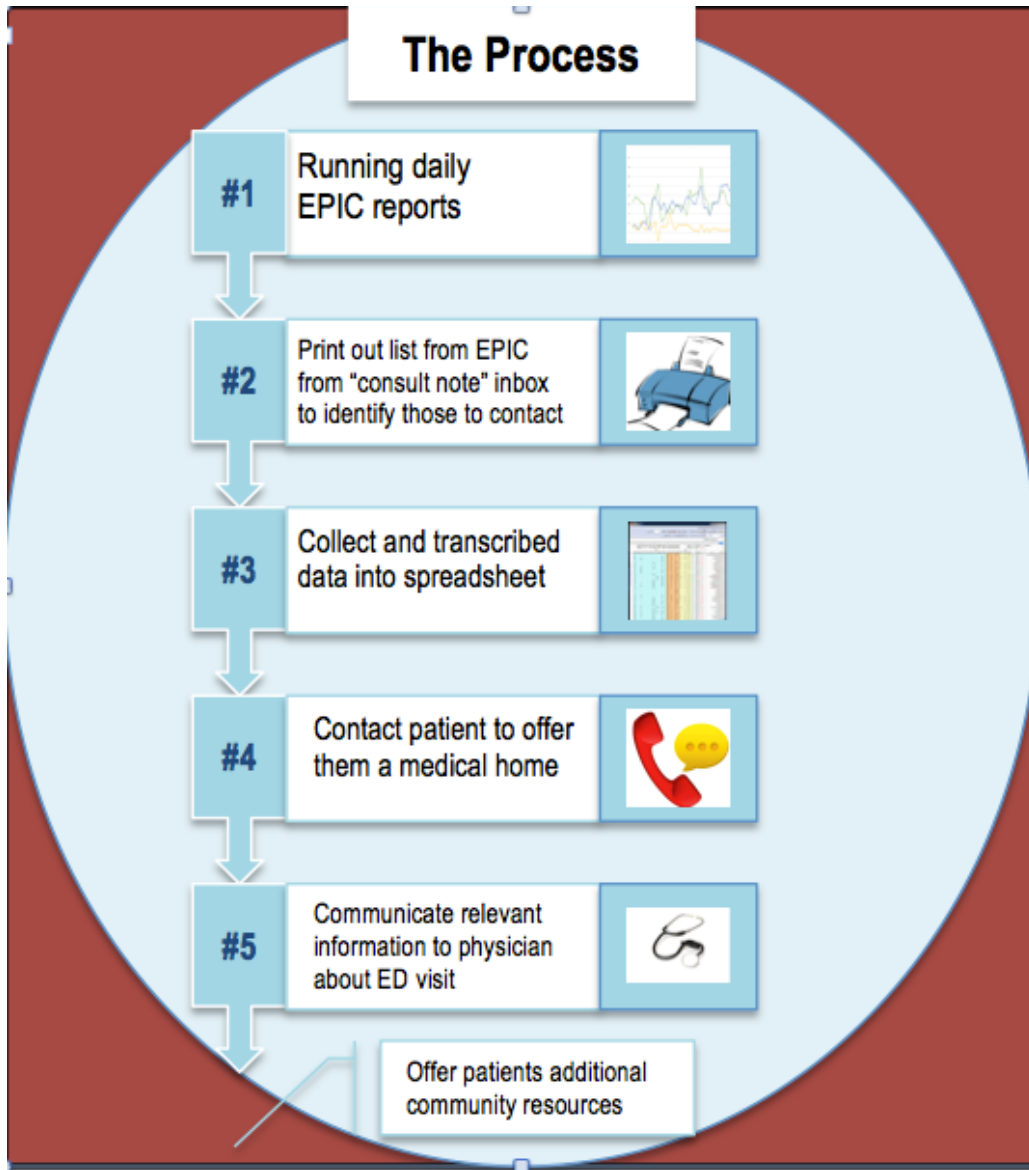
## Appendix E

## SWOT ANALYSIS

<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>✓ Access to primary care</li> <li>✓ Continuity of care</li> <li>✓ Collaboration between ED/FQHC</li> <li>✓ Improving management of chronic medical conditions</li> <li>✓ Implementing evidence-based practices</li> <li>✓ Improving patient care outcomes</li> </ul>	<p style="text-align: center;"><b>Weakness</b></p> <ul style="list-style-type: none"> <li>✓ Fragmented care</li> <li>✓ Limited access to timely primary care services</li> <li>✓ Multiple EHR systems</li> <li>✓ Lack of coordination between disciplines</li> <li>✓ Lack of communication between disciplines</li> <li>✓ Limited access to hospital's EHR</li> </ul>
<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>✓ Findings can lead to developing a permanent position at the ED</li> <li>✓ Additional funding from hospital to our FQHCs</li> <li>✓ Opportunity to educate patients about using community resources</li> <li>✓ Improve communication between disciplines</li> <li>✓ Identify other patient barriers</li> </ul>	<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>✓ Minimizing "no show" percentage for new patients</li> <li>✓ Non-compliance from patients</li> <li>✓ Limited resources</li> <li>✓ Lack of support from hospital's staff members</li> <li>✓ Problematic workflow</li> </ul>

## Appendix F

## The Process Map



## Appendix G

## Sample Tracking Spreadsheet

Clinic	PCP	Patient Name	Patient DOB	Hospital	ED visit Date	Discharge Date	Diagnoses	Detail	Disposition	Follow-Up Appointment	Follow-Up Provider	Notification	Follow-up Phone Call	Return to Clinic
OSHC	O'Neil	Doe, John	1/11/28	Summit	7-Sep	4-Oct	Urpsepsis	GI bleed post sphincterotomy	Home with HC	11-Oct	O'Neil	Yes	Yes	Kept
WBFP	Edmunds	Doe, John	6/23/75	ABMC	16-Sep	2-Oct	Sickle Cell Crisis		Home	24-Oct	Edmunds	Yes	no answer	No show
BPC	Joiner	Doe, John	12/2/61	ABMC	17-Sep	1-Oct	Cellulitis	left leg cellulitis, I&D in OR	Home	7-Oct	Joiner	yes, NG	Yes	kept
EOC	Fogel	Doe, John	12/30/75	Summit	23-Sep	4-Oct	Resp. failure	Resp distress, ESRD, Abscess, AV fistula	Home	9-Oct	Fogel	yes, NG	unable to reach	admitted
BPC	Joiner	Doe, John	4/22/85	Summit	24-Sep	3-Oct	Sepsis	TB sputum - x3, UTI, chronic pain-dilaudid PO	Home	10-Oct	Unable to Schedule	NG	no answer	n/a
WBFP	Woolf	Doe, John	7/30/89	Summit	24-Sep	6-Nov	Endocarditis	6 wks Vanc	home	14-Nov	Larsen	email	yes	no show
BPC	Lovett	Doe, John	4/19/47	ABMC	26-Sep	30-Sep	Nephrectomy	renal tumor - R partial nephrectomy	Home	22-Oct	Lovett	NG	Yes	kept

