Summer 8-17-2015

Priority 1

rj burgess

rjburgess@dons.usfca.edu

RJ Burgess

Priority One

In A Correctional Institution

University of San Francisco

Clinical Leadership Theme

The Clinical Leadership Theme I have targeted is the development and use of *Informatics and Healthcare Technologies.* As a project manager for the implementation of Jail Information Management (JIM), I will be playing a Clinical Nurse Leadership role in the development of measuring tools within a new more effective and efficient electronic health record (EHR). The tools will measure specific key performance indicators (KPIs) selected by the clinicians and nurses in Jail Health Services to allow us to better assess our services and implement change in areas of weakness. My target goal for the purpose of this paper was to develop the initial quantitative key performance indicators and to specifically measure whether our clinicians were meeting the benchmark of seeing 85% of urgent Priority 1 referrals within 24 hours. I developed metrics that would allow JHS to establish a baseline and track over time JHS's ability to meet the above KPI as requested by our clinician team.

Statement of the Problem

Jail Health Services had been laboring under an EHR that was a very inefficient, disconnected, non-intuitive DOS-based computer system for 25 years. Although state-of-the art at that time, the system currently was very difficult to teach to new employees who had no experience with DOS-based Information Technology (IT) systems. As a result, important health information was continuously being lost within the system. Even when entered appropriately, it took many steps to retrieve the information. For example, to retrieve lab values one would need to move through a dozen or more screens to obtain the information. If I then wanted to check a radiology result, I would need to back out of all those screens and go through another protracted series of screens to obtain my radiology result. Over the course of an average day, this would

take a significant amount of valuable time away from both the clinicians and the nursing staff.

We decided to implement a new EHR. While moving through the EHR selection, the clinicians

requested measurement tools not available in the previous EHR that would allow them to assess

their productivity. The selection and implementation of the EHR was an entire planned process

that took well over a year and continues to have ongoing development and support. The creation

of KPI's was wrapped into this process in the last two steps of EHR implementation and also

continues to be an ongoing process. During steps five and six of our new EHR implementation,

my CNL goal was to develop and build into JIM queries that would enable us to track different

key performance indicators to determine whether we were meeting national, state and DPH

standards of care. Our old system allowed for only very rudimentary query development

(Appendix A). For JIM, query development was required for each indicator involving meetings

with staff from all areas of the health system and then actual development and data validation

with IT. A modern EHR system would allow better and safer organization of information while

enhancing assessment, planning, documentation and delivery of care. Developing advanced

ways to measure our quantitative productivity and outcomes of care would allow us to

continuously improve our care.

Rationale

A primary concern with health care in any jail system is cost containment while

providing health care comparable to the care one would receive in the community (Glowa-

Kollosch, Andrade, Stazesky, Teixeira, Kaba, Macdonald, Rosner, Selling, Parsons, & Venters,

2014). A second concern within any jail system is providing a positive work environment to

retain quality clinicians and nursing staff (Flanagan, 2006). The seeds of my KPI development

and tracking were secondary to a request from the clinicians that the new EHR system would be

able to measure how many Priority 1 and Priority 2 patients they were seeing within specific

timeframes. The clinicians were unsure how many Priority 1 patients were being seen within 24

hours and whether it was possible to see a greater number of patients. A root cause analysis was

done to determine if there was something in the process that would assist in the clinicians seeing

a greater number of Priority 1 patients and what would be involved in developing a measurement

system to track their percentage of Priority 1 visits seen within 24 hours. The root cause analysis

(Appendix B) clearly identified numerous factors affecting the flow of patients to Priority 1 visits

and the current inability to track these patients. The flow of patients in a jail is often chaotic

even on a productive day. According to Glowa-Kollisch, Graves, Dickey, Macdonald, Rosner,

Waters, & Venters (2015), a central challenge for health providers in jail settings is dealing with

dual loyalty where the impact of the security setting on the health mission can be stressful and an

impediment to the efficient provision of care. Certain prisoner-patients can only be moved with

one or two deputy escorts and no other patients can be present in the clinic. If a patient has been

placed in a safety cell for danger to self and/or danger to others, the clinician may not enter the

cell to assess the patient. The patient may have been transferred to another jail or is in court and

unavailable. The jail itself may be in "lockdown" for a variety of reasons (i.e., death) and no

movement is allowed. The prisoner-patient may also be unavailable because he/she is working

in the jail, attending school, speaking with their attorney or in with another service (i.e.,

Behavioral Health, Dental). The patient may refuse to see the clinician for a variety of reasons

(i.e., psych issues, playing basketball). Measurement of Priority 1 visits also had many

influencing factors. The old EHR could only provide a simple count of visits. I needed to create

a query for the new system that would tell us how many visits were being completed within a

specific time frame in order to produce meaningful data that could be analyzed and reported.

Cost-Analysis

The projected cost analysis will apply only to KPI development. The general benefits of EHR's are well established in the correctional literature. According to Ben Butler of Community Oriented Correctional Health Services' issue paper, "Jails and Health Information Technology: A Framework for Creating Connectivity" (2013), EHR's within the jail setting have many benefits including, but not limited to creating better coordination between providers, reducing unnecessary tests and procedures, integrating mental health questions and decreasing paperwork. The benefits of KPI measurement within the EHR framework from a cost-analysis framework are varied and significant according to David Raths' editorial "How Do You Justify Spending $50 Million on an EHR?" in Healthcare Informatics (March, 2014). He provides examples of process improvements that occur by being able to flag high risk patients. He also discusses the benefits of measuring processes and outcomes so we can identify problem areas to improve. Better tracking of problem patients, decreased duplication of tests, tracking various KPIs for chronic disease management provides San Francisco County Jail with better patient care and decreased waste. Avoidance of adverse events and decreased Emergency Department trips decreases the chances of litigation that easily reaches into the millions once all the affected cost center impacts are broken out and added up. However, since we are using HEDIS measures for many of our KPIs, we will potentially be eligible to receive incentive payments for the Medicaid meaningful use program if we can meet the 2016 deadline. Appropriate KPI measurement will ideally place us in a position in the future to receive routine reimbursement for eligible patients we have linked to the health care system. Savings from decreased litigation, fewer preventable adverse events and potential Medicare reimbursement in the future greatly outweigh the relatively small expense of my KPI project. An approximate count of 150 meetings were

required for KPI development. Meeting times ranged from 30 minutes to five hours. Our

approximate cost was $138,000.

In addition, the costs of an ER visit are nothing less than astronomical. The average cost

of this event is $10,250. This equates to a typical loss of 34-35% of revenue each visit.

Moreover, the number of ER visits has dramatically increased on a consistent basis. From

January to June of last year, the number of people admitted into the ER rose by 50%. This trend

ripples into the health factor of patients and is another issue that cannot be overlooked.

Here, I have chosen to list our most basic costs at the average wage for this part of the

country. Therefore, the medical doctor ($175/hr), nurse practitioner ($90/hr) and nursing wages

($70/hr) were determined from the most recent U.S. News and World Report, Careers, Money

Rankings & Advice (2013). I was able to calculate an approximate cost of 150 meetings ranging

in length from 30 minutes to five hours. With an estimated expense of $920.00/hour, we may

have spent close to $138,000.00 for KPI development.

Project Overview and Methodology

The San Francisco Jail Medical Services is comprised of approximately 25 clinicians

with five medical doctors and 20 nurse practitioners. Nursing staff is comprised of

approximately 120 registered nurses and 35 licensed vocational nurses. We have an average

daily census of approximately 1200 prisoners. The nurses process an average of 2000 Medical

Care Request's (MCRs) per month. These requests for care result in a monthly average of 160

Priority 1 referrals where the patient should be seen within 24 hours for urgent health care issues.

The MCRs generate an average of 600 Priority 2 referrals where the patient should be seen

within two weeks for routine health care. The clinicians previously had no way to measure their

ability to see the patients within the benchmark timeframes. My project was to develop the

queries to provide the medical staff with this information. We had no history regarding the

percentage of Priority 1 referrals being seen within 24 hours, but we did know the clinicians

were seeing an average seven to ten patients per day. The clinicians wanted to increase this

number overall as well as track the timeframes for Priority 1 referrals. Priority 1 referrals for

health care are very important as the early intervention often prevents adverse health

consequences and/or sentinel events.

The clinicians' morale was low as our beloved medical director was retiring. Random

rumors of quotas for a minimum number of clinician visits per day were being thrown at the

clinicians from unidentified sources. For example, the rumor indicated that soon the clinicians

would be expected to see 12 to 15 clients per day. Although there was nothing in writing, the

clinicians were all consistent that this would soon be the expectation. With the help of our

Quality Improvement coordinator, I developed a survey for clinician satisfaction (Appendix C).

Our medical director was now gone and morale was lower than ever. The surveys indicated a lot

of fear and uncertainty on behalf of the clinicians. I reviewed these comments with the

temporary medical director and the CQI Coordinator. The acting medical director (also highly

respected by the clinicians) was able to reassure the clinicians quashing their fears and easing

their resentments about the rumored quotas.

However, the whole idea of "quotas" created an eagerness on behalf of the clinicians to

better understand their productivity when measured against NCCHC and HEDIS benchmarks.

They requested my help to assist them in obtaining this data. The timing coincided almost

perfectly with my paper.

Methodology

I applied Kotter's *Eight-Step Model of Change* (1995) to the process of creating a framework for the development of KPI data capture. The following guidelines were applicable and implemented into the CNL competency.

1. Establish sense of urgency: The sense of urgency was already in place as the EHR had been in place for approximately six months and the bulk of the initial "go-live" bugs were resolved or in the process of being resolved. However, our support period was limited and so I needed to take advantage of the IT support while available. The clinicians were in a perfect "zone of motivation" to support change and provide input for the project. The biennial state survey was in the near future and the data would be very helpful to the staff and the surveyors. Wright (2008) writes of the urgency and the legal obligation of jails and prisons to meet the serious medical needs of people in custody so as not to violate their Eighth Amendment protection against cruel and unusual punishment. The level of care must also meet the "evolving standards of health care in the general community".

2. Create powerful guiding coalition: Thankfully, I was surrounded by support from a powerful guiding coalition of JHS leaders who have long advocated for our marginalized and under-served community of prisoners. San Francisco County Jail has long been known for its willingness to be the first to offer education and cutting edge health care to our inmates. Historically, we were using an EHR when first available on the market. This would be our first upgrade providing us the ability to track and trend our care and outcomes. The JIM EHR was the first of its kind and San Francisco County Jail was the pilot test site.

3. Develop a vision: As a result, I needed only to reinforce our vision of providing superior health care while working to create queries to measure our ability to deliver and improve our care. We always had an EHR, but now we would have an EHR with extreme flexibility that is generally not seen in other correctional facilities. Other facilities often use EHRs that were created for hospitals and thus these facilities have limited flexibility to alter the EHR for jail health purposes. Our EHR was written by IT professionals who worked with jail health for a collective 40 years.

4. Communicate the vision: I was able to communicate the above vision through clinician training, information and brainstorming sessions at clinician meetings and listening carefully to clinician and nursing needs and communicating these needs to IT.

5. Empowering others to act on vision: Clinicians were eager to see the results of their labors via graphs that reflected their productivity. The whole process opened their eyes to the infinite amount of clinical data that could be subjected to measurement. This led to a discussion of meaningful data and further KPI development.

6. Planning for and creating short term wins: I communicated and reinforced our short term wins frequently. Every meeting, progress toward a meaningful KPI list was emphasized. We started and ended each meeting with measures of progress completed to date.

7. Consolidate improvements and produce more change: The first big win occurred with our baseline measurement with clinicians seeing 84.55% of Priority 1 patients within 24 hours. The next month clinicians saw 87.50%. Every month there has been a slight increase with clinicians seeing 90.87% of Priority 1 referrals within 24 hours in July, 2015 (Appendix D). I believe this information was a great morale booster and created motivation to keep improving. They could

see their improvement through the data creating a win-win stimulus. I observed and received

verbal feedback from the clinicians that indicated their excitement over JHS's new ability to

measure change.

8. Institutionalizing new approaches: The institutionalization of this project will be to graph

these measures on an Excel spreadsheet and create a dashboard that can be easily updated every

month when the numbers are pulled from the EHR. The spreadsheet is complete. The first

version of the dashboard will be simple with a September, 2015 target date. Our long term goal

is to create a more complex dashboard based on the dashboard developed for the California State

Prison System by California Correctional Health Care Services (Appendix E). Per their request,

the clinicians now wish to address obesity as a problem within JHS.

Reaching our goal took many baby steps in the form of two to three meetings a week.

The easiest way to have a stable number and variety of people involved in the change was to go

to them. I met with clinicians every other week. I met with the Executive Committee once a

week. I met with CQI once a week. I met with IT software up to three times a week. Meetings

would move to every other week and once a month if the tasks to be completed or reviewed were

less. But these frequent, time limited meetings were very productive over time. Most

importantly, this use of time was supported by the acting medical director and the program

director.

Over the course of two months, I was able to establish some initial goals for data queries

in our new JIM EHR. Another two months were required for group approval and to build the

computer metrics (Appendix F). Once the metrics were built, I met with IT to review the metrics

and to refine our numerator and denominator inclusions and exclusions for data capture. Once

initial data pulls were obtained, I needed at least one to two days for data validation. Since that

time, we have refined or modified our goals to include meaningful data measures as well as

measures the clinicians are simply curious about (i.e., high priority specialty referrals).

A new EHR was mandatory to replace a dangerously outdated DOS-based system. The

platforms necessary to maintain the system would soon be extinct within the DPH healthcare

network. A new system would allow data collection to be measured against benchmarks

developed within the correctional community and to aid in the provision of care that reflects the

level of care provided in the community.

The first primary process we aimed to change was providing a more efficient and useful

EHR for San Francisco Jail Health Services. Our objectives for this phase of the project

included selection of the EHR, working with the vendor to tailor the EHR for our documentation

and data collection needs and training staff with ongoing support from the vendor and our

dedicated IT analysts. Although the new EHR implementation was not initially a topic in this

project, I realized very late in my project development that a clear explanation of how my KPI

development around Priority 1 clinician visits came about required an explanation of the JIM

EHR implementation project in its entirety. My KPI Priority 1 project was possible only because

of a new flexible and current EHR. I would not have been able to develop new measuring

systems without our new EHR. EHR implementation required six phases (Appendix G). My

KPI study was an inherent part of steps two, five and six of the EHR implementation. Each of

these phases had multiple steps. My primary purpose as project manager was to represent and

develop the changes requested and necessary from a clinician and nursing perspective. The

financial, security and technical preparation was completed in separate Executive Committee

meetings. First, we collected and organized thoughts, requests and complaints from clinicians

and nurses. The project managers met and confirmed why the current system was no longer a

viable EHR. Then I was required to meet with the clinician and nursing staff multiple times over

the course of two months to obtain input regarding what we needed in a new EHR system. The

final goals from clinicians and nurses I returned to the group with were to have a system that was

time efficient and could grow with advances in healthcare technology. Staff wanted a system

that was less cumbersome and time consuming to find results from our partner hospital San

Francisco General Hospital. Both clinicians and nurses wanted to be able to tailor screens so that

we could collect health information unique to the prisoner-patient population. The second step

required me to clarify and prioritize with clinicians and nursing staff what workflows we wanted

to keep, what workflows we wanted to get rid of and what workflows we wanted to develop (i.e.

KPI's such as measuring our ability to meet Priority 1 benchmark). Our third step was the

selection of the EHR. During step three, I reviewed vendor proposals and attended

demonstrations often bringing interested front line staff members to obtain their feedback once

vendors were narrowed down. Step three also took place over the course of several months as it

was considered one of the most important steps in our project. It was here we were able to ask

vendors regarding quantitative data collection that would encompass selected KPI's, meaningful

use data and data capture required for various grants in the jail. Step four entailed the installation

of JIM. This took more time than initially allocated and continues to require more time and

expense than anticipated. My primary activity here was participation in the training, mock "go-

live" sessions, "go-live" and pilot testing. Again, each section under this step required multiple

phases. For example, training required developing a "training" version of JIM, training scenarios

and medical files to practice, a training manual, train-the-trainer sessions and schedules to train

staff. Our step five is on-going and entails, among other things, tailoring our system to capture

the necessary data necessary for safe, effective and efficient care. Midway through this process,

JHS was pulled under the Ambulatory Care umbrella of SF DPH. Prior to restructure, JHS was a

stand-alone entity. As a result of our inclusion in Ambulatory Care, we have broadened our step

five goals to include the capture of meaningful use data so that we are potentially ready to have

our prisoner-patients enrolled in Medi-Cal and Medicare as we move towards our long term goal

of seamless community care for our population. In step six, we continue to expand on many of

the tasks described in step five. The general aim is to continue training where needed as

indicated by weaknesses in documentation during pilot testing, refining data elements we want to

capture, changing and adding documentation workflows and screens and finally developing the

metrics after defining what data elements we wish to capture for reportable quality measures and

our own internal quality measure. I had difficulty clearly defining my project until I realized my

project involved changing a process wrapped into a larger process.

My specific aim was to build queries to measure specific KPI's (i.e., what percentage of

Priority 1 clinician appointments are seen within 24 hours) to determine if we were meeting

national benchmarks for correctional care. My development and selection of KPI's was aided by

the National Commission on Correctional Health Care and HEDIS measures. The process is

ongoing. However, initial KPI selection took over two months. Again, I held multiple meetings

at every staff level to obtain input to re-evaluate measurement goals and needs post-EHR

implementation. Clinicians were unanimous in requesting feedback on their workflow and

productivity. The KPI clinicians were most interested in was whether they were meeting the

NCCHC benchmark of seeing 85% of Priority 1 referrals within 24 hours. I worked with IT,

clinicians and nursing to develop a workflow that would capture this data. This KPI query was

developed simultaneously with several other KPI measurements. I developed multiple KPI's to

track at scheduled intervals based on measures identified by NCCHC and HEDIS. For each query, I was required to first develop the metrics necessary to capture the data (Appendix H). Next, I had to perform initial pulls and perform data validation on the results. Consequently, we were able to achieve a baseline measurement for January, 2015 and monthly thereafter in order to assess whether JHS was meeting the recommended benchmark of 85% of Priority 1 visits being seen within 24 hours. The results were much better than anticipated by the clinicians and nurses alike. The positive results created a whole new wave of enthusiasm for the benefits of measuring our work and looking at other outcome data to improve care. Many of the clinicians confided in me that they had been afraid of what the numbers would show. I took this moment as an opportunity to reinforce the idea that we were hard workers and that measuring our productivity confirmed our ability to provide excellent care. Any numbers that came out lower than we wanted only provided an opportunity to look at the process to see if changes could improve our outcomes. The challenge is to find the low numbers so that we know where we need to improve.

Literature Review

"Improving prison health care requires a robust measurement dashboard that addresses multiple domains of care" per Asch, Damberg, Hiatt, Teleki, Shaw, Hill, Benjamin-Johnson, Eisenman, Kulkarni, Wang, Willaims, Yesus, & Grudzen (2011) in their classic research project identifying indicators of quality care and access that prisons and jails could use to identify performance weaknesses and to guide quality improvement. The KPI measuring the number of Priority 1 patients seen within 24 hours is an access to care measure that will tell us if our patients are receiving timely care. "Priority setting refers to the distribution of resources…among competing patients or patient groups" (Barasa, Molyneux, & Cleary, 2015).

Priority setting within the jail requires that the sickest patients are seen first. Treating the most

seriously ill patients and/or the chronically ill patients first, consistently at a high level should

minimize adverse events and unscheduled emergency department runs. Access to care and the

timing of visits is considered a critical success indicator according to the Division of

Correctional Healthcare Services (2006). The DCHS (2006) further elaborates that "a clinical

indicator is a tool used to measure, over time, the performance of functions, processes and

outcomes of an organization". Here, I developed an EHR query to establish a baseline and

measure over time the clinicians' ability to see 85% of Priority 1 visits within 24 hours. We then

wished to see if an increase of Priority 1 visits would show a correlating decrease in emergency

room visits. I selected this KPI and several other KPI's per the clinicians request and with the

aid of the National Commission on Correctional Health Care (2014). Correctional health care is

only beginning to develop national standards. The NCCHC's standards are recommended

requirements for the proper management of a correctional health services delivery system

(Standards for Health Services in Jails, 2014). With the advent of the meaningful use program in

jails, we decided to also include HEDIS measures in our KPI's related to chronic diseases.

Although it is unclear when the San Francisco County Jail could meet the many requirements to

qualify for Medi-Cal reimbursement, it is still helpful to meet the standards necessary if we hope

to participate in the future. Ben Butler, CIO at Community Correctional Health Services, wrote

in a June, 2014 issue brief that "EHR development in jails is still in its infancy…in an ideal

world, the health care [inmates] received in jail would be connected to the health care that they

receive in the community, both to ensure continuity and avoid duplication of care". This is the

goal of JHS within the San Francisco Department of Public Health. The work of Glowa-Kollisch

et al. (2014) elaborates nicely the benefits of EHRs in New York City jail system. The study

found that the EHR improved the jail's ability to detect and provide care for patients injured in

jail, patients with mental health issues and increased the ability to track trends and improve

response efforts. Further, Glowa-Kollisch et al. (2014) found three specific ways data collection

within an EHR care contributed to patient safety: a) the ability to change data collected on

patient care, treatment and abuse; b) the ability to connect to a health information exchange for

continued care and monitoring in the community after release and c) the ability to produce

reports based on patient clinical outcome, location, profile and time. I selected an access to care

issue because measuring the timing of visits once requested seemed to be a logical place to start

in measuring our quality of care. In the 2015 study by Glowa-Kollisch et al., the United States is

identified as having the highest rate of incarceration in the world and 95% of these incarcerations

occur in jails where the setting can be chaotic, with short stays where patients can nonetheless

experience new morbidity and mortality secondary to medication interruption, injury and

exacerbated mental health issues during solitary confinement. SFCJ believes that making any

patient with medical symptoms and/or a chronic illness requires a Priority 1 referral as this will

decrease the chances of worsening health while incarcerated in our jail. The practice of ensuring

prisoner-patients in poor health are evaluated within their first day of admission should decrease

the chance of an adverse event occurring with that patient while in jail. We wanted to measure

the timeliness of our Priority 1 visits and then determine if there was a related decrease in

Emergency Room (ER) visits. Espinoza, & Regenstein (2014) explain that a review of the

literature shows that engagement with the criminal justice system exacerbates poor health, drives

recidivism and weakens efforts to improve health outcomes. SFCJ strives to engage the patient

early on so that this does not have to occur routinely with our population. Marks and Turner

(2014) describe the potential for benefit to the community's health by elaborating on the critical

link between health care and jails. They explain that jails far outnumber prisons and jails serve

as the entry point to the criminal justice system and provide health care to a population that has

high levels of unmet needs. A consistent high percentage of completing Priority 1 visits within

24 hours ensures that the health community in jail can begin to establish or re-establish a link to

the community when the patient leaves jail. Marks and Turner (2014) also elaborate on the

benefits of education of the prisoner-patient on health maintenance and how to access health care

in the community. Jail is often the only source of healthcare for many prisoner-patients.

Clinicians receive this education and then provide it to the patient beginning with the first

clinician visit. If the patient has lost contact with a provider, contact is reestablished through the

clinician. Marks and Turner (2014) recommend further studies on jail populations because the

jail-population is unique from the prison population with different impacts on the health and

public safety of local communities. Jail-involved individuals can cycle in and out of jail with

infectious and chronic diseases putting the community at risk. Untreated mental health and

substance abuse issues also create a vicious circle in and out of the jail for often low level crime

continuously perpetuated on the community. Using the time prisoners are in jail to treat and

stabilize diseases and establish community treatment upon release benefits the individual and the

community.

Timeline

My KPI project timeline started in with vague thoughts in November, 2014. I began to

earnestly address the process to an increasing degree with the most important developments over

the past four months. The last three months I have been able to put names to many of the

activities in the process. The result is a solid project that will continue to develop as we continue

to measure KPIs. The entire process has taken longer than I anticipated, but I feel my goals are

much clearer and more focused. Jail Health Services will reap the benefits as we continue to develop our skills for data collection.

Expected Results

I did not have any expectations regarding outcome although the clinicians clearly felt the numbers would not be good. When the baseline number came back at 84.5% with an average to date of 88.3% of Priority 1 visits being seen within 24 hours, the clinicians were very relieved and happy. They indicated that without any way to know how they were doing, they had assumed the worst especially in light of the "quota" rumor. It was a very joyful experience to see the group respond to all the information provided to them proving how productive they were within the context of Priority 1 visits. As stated earlier, the KPI result was a great morale booster and has generated even more enthusiasm for data review. Overall, when taken with the other KPIs we measured, this project provided some solid positive feedback regarding Jail Health Services quality of care when measured against the recommended NCCHC benchmarks.

Another unexpected bonus from working on this project was that nurses' also became excited about measuring clinical indicators to provide feedback about care outcomes and productivity. The CNL project forced all of us in Jail Health to learn many things new to us. We all learned about queries and numerators and denominator in the context of query development. We learned about NCCHC standards and benchmarks. We trudged through hours of tedious meetings and metric reviews before we were able to see the information obtained with the end results.

I compared our KPI rates against our unscheduled ED visits. The initial KPI result was just under the 85% standard, but measured above 85% for every month after up to July, 2015.

Developing the KPI and obtaining validated measures with the query made this portion of my project a success.

My second part of this project was to determine if unscheduled ED visits would decrease as a result of adequate and improved Priority 1 access to care timing. When I compared the first six months of ED visits of 2014 and 2015, I found significantly decreased ER admits for four out of the six months in 2015 (Appendix I). However, I realized this could not be clearly linked to the clinician Priority 1 KPI measurements, if at all. We had no KPI measurements from January to May, 2014 as JIM was not implemented until late November, 2014. This portion of the project failed. I could not clearly isolate a KPI Priority1 measure to a decreased ED rate. Other factors that probably contributed more to the decreased ED visit rate would be a new training program for the Triage and Intake nurses and increased clarification of patients Triage would reject until health clearance at SFGH was obtained. I realized the many complexities and nuances involved in any kind of change measurement.

Nursing Relevance

Although I was unable to establish a definitive link of decreased ER visits to increases in the percentage of Priority 1 visits, I was able to develop some of the tools to measure KPIs developed as a team. The learning process was long and at times arduous, but successful and rewarding in many different ways. It brought Jail Health Services together and working towards goals that would not have been possible without our new EHR. This one project brought many people, including myself, to a whole new level of understanding of the benefit of tracking our performance to validate and improve our work. One request by our clinicians sparked the beginning of a process that will be carried forward by the momentum of our initial success. The

enthusiasm created by this initial creation of data collection opens our world to the huge

potential of evaluating our work in a continuous manner actually looking for weaknesses in our

care delivery now that we have a certain amount of confidence in our work.

We are still at a very early stage in our informatics and technology skills; however, with

the help of leaders like the California Correctional Health Care Services, Jail Health Services

hopes to continue growing and refining our measurement capabilities to a point where our

dashboard will continue filling out with KPIs that help us improve our care and identify

weaknesses in our care delivery.

Prisoner/patients enter jail acutely ill (severe ETOH and/or opiate withdrawal) and/or

with chronic conditions in poor control (most often secondary to noncompliance or lack of a

solid connection to health care in the community) and are at extremely high risk for adverse

events once incarcerated (Wang, White, Jamison, Goldenson, Estes, & Tulsky, 2008).

According to Wang and colleagues (2008), patients identified as acutely sick due to

opiate withdrawals or other serious health conditions are placed as highly vulnerable for adverse

events. Moreover, these conditions have been labeled as a "state of emergency" by Governor

Brown claiming it places staff and inmates at a heightened risk while causing unnecessary

spending (Prison Overcrowding State of Emergency Proclamation, 2010). San Francisco Jail

Health Services believes that timely assessment of these prisoner-patients within 24 hours of

admission will ensure intervention that will help improve patient outcomes preserving jail

resources by preventing avoidable ER visits.

Developing the practice of immediately trying to link these patients to community care in

preparation for release will enhance the future well-being of the patient and the community.

Flegel and Manson (2013) succinctly summarized in their editorial that our responsibilities are to both the prisoner-patient and the community. The better we are able to control the communicable diseases, depression and other mental disorders and chronic, degenerative diseases of patients released back into the community, the lesser the burden on their families and communities. Measuring our care and improving on that care has a long term positive ripple-effect on the overall related health, social and economic costs of the individual, family and community.

References

American Nurses Association. (2013). *Correctional nursing: scope and standards of practice.*
        Silver Spring, MD: American Nurses Association.

Asch, S, Damberg, C., Hiatt, L., Teleki, S. S., Shaw, R., Hill, J., Benjamin-Johnson, R.,
        Eisenman, D., Kulkarni, S., Wang, E., Williams, B., Yesus, A., & Grudzen, C. R. (2011).
        Selecting performance indicators for prison health care. *Journal of Correctional Health
        Care, 17*(2), 138-149.

Barasa, E., Molyneux, S., & Cleary, S. (2015). Setting healthcare priorities in hospitals: a review
        of empirical studies. *Health Policy and Planning, 30*, 386-396.

Butler, B. (August, 2013). Jails and health information technology: a framework for creating
        connectivity [paper]. *Community Oriented Correctional Health Services.* Retrieved from:

        http://www.cochs.org/files/HIT-paper/cochs_health_it_case_study.pdf

Division of Correctional Health Care Services. (2006). *Inmate Medical Services Policies and
        Procedures.* Retrieved from: www.cphcs.ca.gov/doc/imspp-v04ch04.pdf

Espinoza, J. F., & Regenstein, M. (2014). Law and the public health. *Public Health Reports, 129,*
        369-373.

Flanagan, N. (2006). Testing the relationship between job stress and satisfaction in correctional
        nurses. *Nursing Research, 55*(5), 316-327.

Flegel, K., & Bouchard, F. (2013, March). [Editorial]. Let us get prison health care out of jail.
        Canadian Medical Association Journal, 185(4), 281.

Glowa-Kollisch, S., Andrade, K., Stasesky, R., Teixeira, P., Kaba, F., Macdonald, R., Rosner, Z.,

Selling, D., Parsonsm, A., & Venters, H. (2014). Data driven human rights using the

electronic health record to promote human rights in jail. *Health and Human Rights*

Journal, 1(16), 157-165.

Glowa-Kollisch, S., Graves, J., Dickey, N., Macdonald, R., Rosner, Z., Walters, A., & Venters,

H. (2015). Data driven human rights using dual loyalty trainings to promote the care of

vulnerable patients in jail. *Health and Human Rights Journal, 1*(17) 124-136.

Marks, I. S., & Turner, N. (2014). The critical link between health care and jails. *Health Affairs*

33(3), 443-447.

National Commission on Correctional Health Care. (2014). *Standards for health care services in*

jails. Chicago, IL: National Commission on Correctional Health Care.

Office of Governor Edmund G. Brown Jr. (2010). Prison overcrowding state of emergency

proclamation. Retrieved from: http://gov.ca.gov/news.php?id=4278

Raths, D., (2014, March 4). How do you justify spending $50 million on an EHR? [Web log

post] *Healthcare Informatics*. Retrieved from http://www.healthcare-

informatics.com/david_raths

U.S. News and World Report, Careers, Money Rankings & Advice. (2013). Retrieved from

http://money.usnews.com/careers/best-jobs/salary

Wang, E. A., White, M. C., Jamison, R., Goldenson, J., Estes, M., & Tulsky, J. P. (2008).

Discharge planning and continuity of health care: findings from the San Francisco

County Jail. *American Journal of Public Health*, *98*(12), 2182–2184.

Wright, L.N. (2008). Health care in prison thirty years after Estelle v. Gamble. *Journal of*

  Correctional Health Care, 14(1), 31-35.

Appendix A

CATEGORY	
1. Number Triaged	
2. Number Screened	
3. Health Inventory Screenings	
4. Sick Call Visits	
Clinician Sick Call	
RN Sick Call	
5. Emergency Room Visits	
SFGH	
6. X-rays performed	
7. PPDs Given	
PPDs Read	
8. HIV Voluntary testing	
9. Number of identified HIV nfected individuals	
10. Reported transmissions of infectious or contagious diseases	
11. Pharmaceutical Costs	
	ne
12. Number of Prescriptions	
13. Adverse medication reactions	
14. In Patient Days	
Ward 7D	
Ward 7L	
15. Deaths and causes thereof	
16. Sexual Assaults reported or treated	
17. Assaults leading to injury of inmates	
18. Dental Visits	
19. Mental Health evaluations / initial assessment	
JPS Group Therapy	

Jail Health Services	External Aud
JPS Individual Treatment	2
JPS Medication Planning	3
Jail Aftercare	
Case Management	9
Collateral Services	
Discharge Planning	6
Substance Abuse Counseling	
20. Medical Care Requests	4
Number of patients*	6

* Non-Dupli

Appendix B
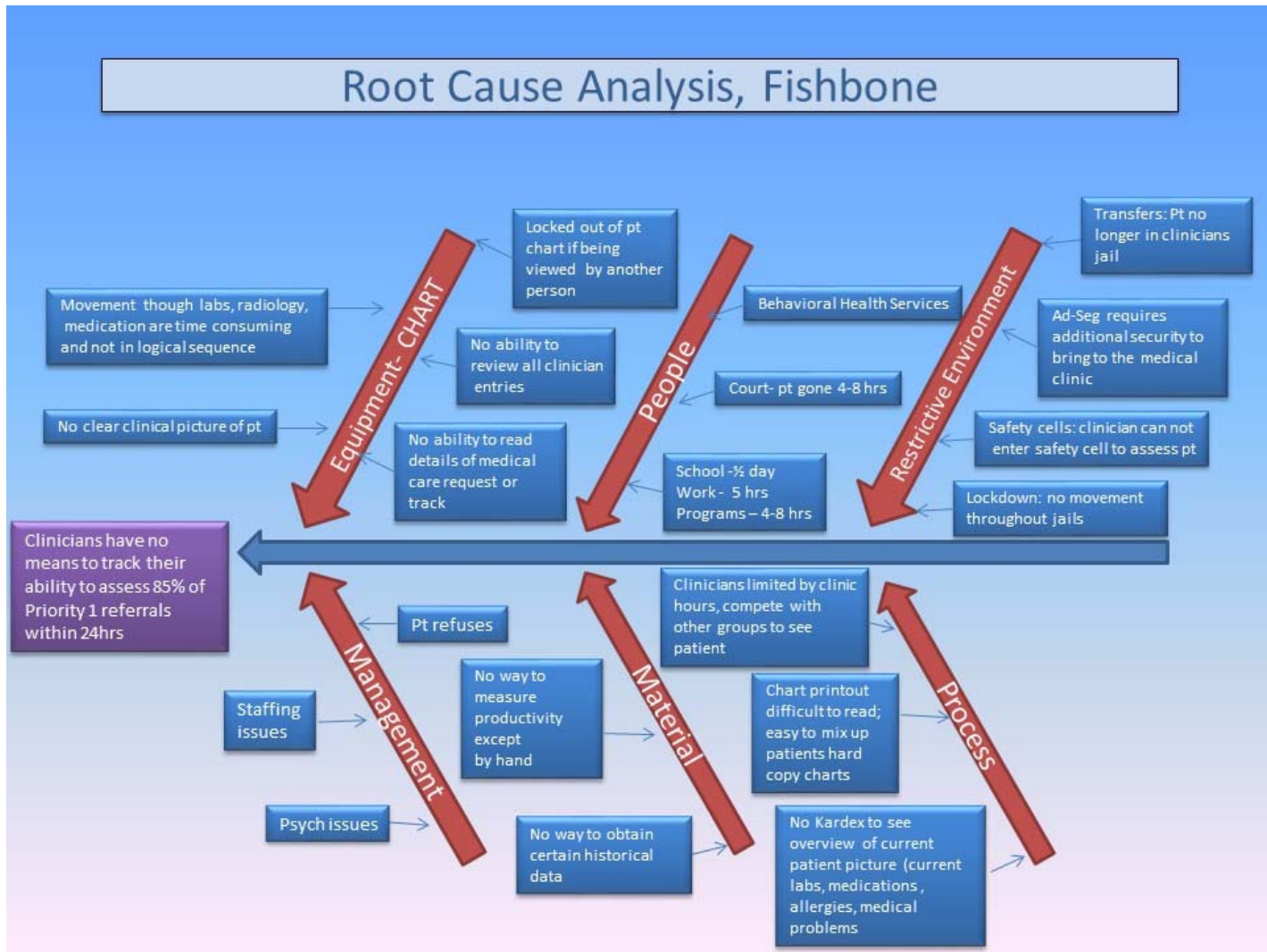
Appendix C

CLINICIAN SATISFACTION SURVEY

Checking the pulse of our medical staff

The San Francisco Jail Health Services strives to provide a stable medical staff with minimal turnover. Through this survey we hope to begin to measure the satisfaction of our current medical staff and also provide an opportunity for you to express your likes, dislikes, and those job-related issues that matter most. We realize that a satisfied medical staff will, in turn, provide our patients with the highest quality of care.

Please return the completed survey in the addressed envelope

1=	Strongly Disagree, Very Unhappy	➢Do you practice in one jail setting? _____
2=	Disagree, Unhappy	
3=	Ambivalent about this issue	➢Do you practice in multiple jail settings? _____
4=	Agree, Happy	
5=	Strongly Agree, Very Happy	IMPORTANT NOTE: If a statement is not applicable to you, please write in N/A

1.   RECRUITMENT
The San Francisco Jail Health Services (SF JHS) recruitment objective is to locate qualified candidates, make them feel welcome, and employ those that can succeed in our system.

a.   When I consider my initial attraction to come to the SF JHS, I am
       satisfied with my decision.   1   2   3   4   5

b.   When I interviewed for employment I was made to feel welcome, felt free to ask questions
       and had an opportunity to visit my work location, to tour the site and visit with staff.   1   2   3   4   5

c.   The JHS orientation was appropriate and important for me to understand the organization
       and structure of the San Francisco jail health system.   1   2   3   4   5

d.   I have a good understanding of what is expected of me both by the peers within my service,
       other medical staff and administration.   1   2   3   4   5

e.   Lifestyle change is a common reason sited by providers choosing to work here. The lifestyle
       I found after employment is what I had hoped for.   1   2   3   4   5

f.   When I consider my expectations when I joined the staff. I am pleased with how things turned out.   1   2   3   4   5

2.   **JOB SATISFACTION**
The SF JHS strives to keep employees satisfied and provide every employee with the tools
to meet their personal and professional goals.

a.	When I consider the policies and processes that affect my medical practice, I feel I am provided an opportunity for adequate input into decision-making and policy formation.	1	2	3	4	5
b.	In my clinic setting, I am satisfied with the equality of patient load, hospital admissions (if applicable), and on-call responsibilities (if applicable).	1	2	3	4	5
c.	When I consider my practice setting, I feel I receive adequate support while performing my job functions and taking care of my patients.	1	2	3	4	5
d.	If I had a wish list, it would include having the same nurse in my clinic everyday, being able to supervise that nurse and having oversight of the clinic.	1	2	3	4	5
e.	Considering my practice today, I feel the chief of my service does a good job of communicating the responsibilities of the job and promptly notifies me of updates and changes.	1	2	3	4	5
f.	Overall, I am satisfied with my job and don't anticipate leaving within the next five years.	1	2	3	4	5
g.	Overall I feel the quality of care provided by my service is of good quality.	1	2	3	4	5
h.	I feel I am able to meet my professional and personal goals with my current position.	1	2	3	4	5

3.   **APPRECIATION / RECOGNITION**
The SF JHS administration values and appreciates the medical staff.

a.	I feel valued and appreciated.	1	2	3	4	5
b.	I receive the level of administrative support needed to accomplish my daily workload and provide a high level of service for my patients.	1	2	3	4	5
c.	I receive both formal and informal support and recognition from my peers and administration.	1	2	3	4	5
e.	I am comfortable with the level of social activity outside of work with my peers. It is adequate for me to feel welcome, nurture friendships and makes me feel like an integral part of the					
	medical staff.	1	2	3	4	5
f.	Is it important for me to have outside interaction with my medical staff colleagues.	1	2	3	4	5
g.	Is it important for me to have interaction with my medical staff colleagues during the work-day.	1	2	3	4	5

****

Please feel free to provide any additional comments below. We are especially interested in what makes you want to remain with the San Francisco Jail Health Services. You may attach additional sheets to document your response. We value your opinions. Thank you for taking the time to complete this survey. If there is something you would like for us to address, it will be easier for us to act on your concerns if you identify yourself or your work location.

_____

_____

_____
                                                                    Printed Name (optional)

Appendix D

Clinician Priority 1 Appointment 24 Hours

	Total Clinician Priority 1
	Clinician Priority 1 seen 1 day
	%

1/2015 — 84.55% — 123, 104
2/2015 — 87.50% — 96, 84
3/2015 — 89.82% — 167, 150
4/2015 — 89.87% — 227, 204
5/2015 — 90.87% — 208, 189
6/2015 — 86.03% — 179, 154
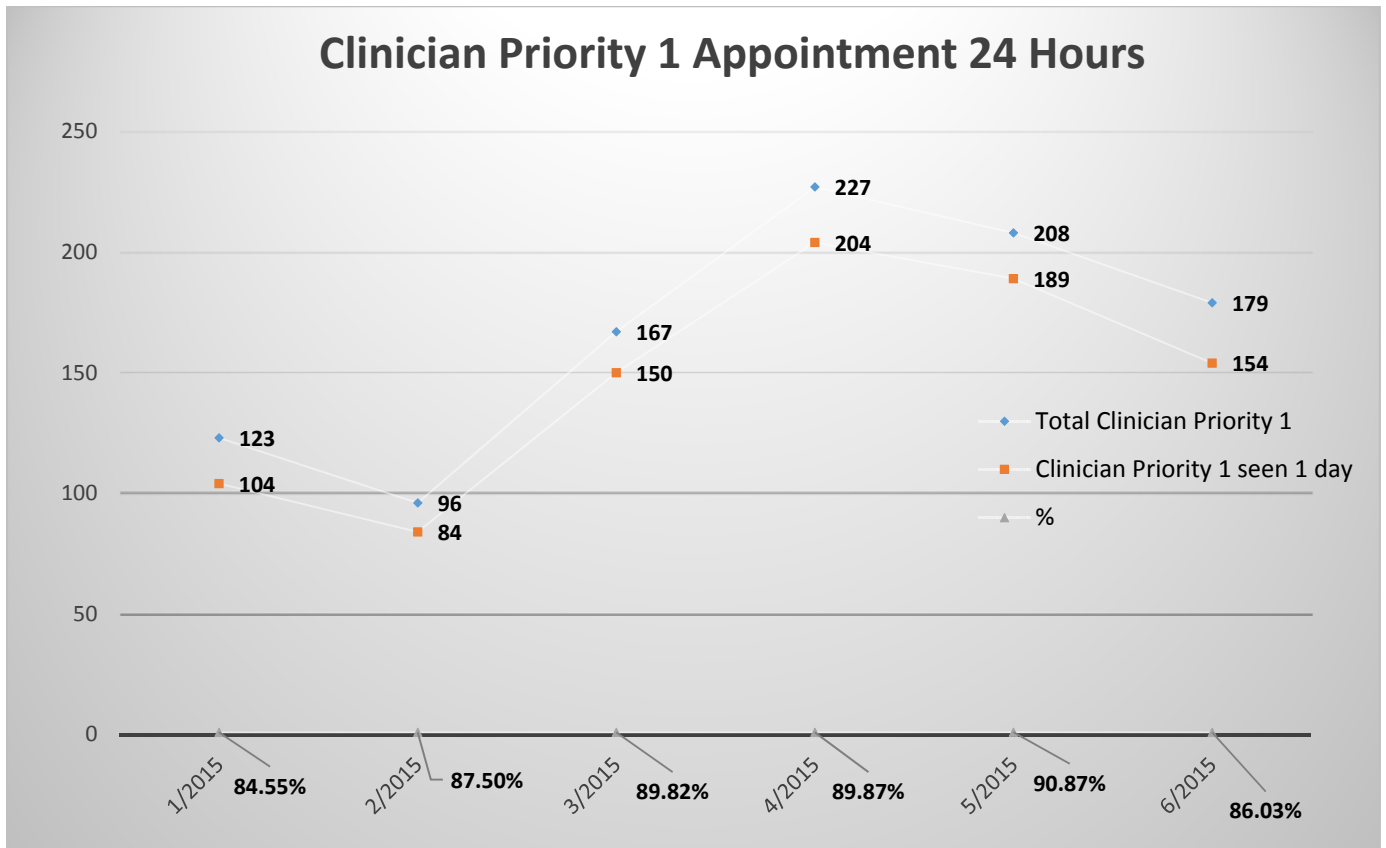
Appendix E

DASHBOARD ...1 GLOSSARY

Click on any measure below to see detailed specifications

SCHEDULING & ACCESS TO CARE

ACCESS	6 Mth Trend	Statewide
Medical Services		
Dental Services		
Mental Health Services		

APPTS COMPLETED AS SCHEDULED		
Cancelled Due to Custody		
Seen as Scheduled		

EFFECTIVE COMMUNICATION		
Effective Communication Provided		

MEDICATION MANAGEMENT

MAPIP	6 Mth Trend	Statewide
Medication Continuity-Transfer		
Medication Non-Adherence Counseling		
Medication Administration		

FORMULARY MANAGEMENT		
Non-Formulary by Psychiatrists		
Non-Formulary by Medical Providers		

STAFFING IN FULL TIME EQUIVALENTS (FTE)

	Actual	Authority	% of Auth
Total Staffing FTE			
Medical FTE			
Nursing FTE			
Pharmacy FTE			
Dental Clinical FTE			
Mental Health Clinical FTE			
Clinical Support FTE			
Administrative Support FTE			

	6 Mth Trend	Statewide
Total Actual FTE		
Civil Service FTE		
Overtime FTE		
Registry FTE		

POPULATION HEALTH MANAGEMENT

	6 Mth Trend	Statewide
Asthma Care		
Therapeutic Anticoagulation		
Diabetes Care		
End Stage Liver Disease Care		
Utilization Specialty Services		
Colon Cancer Screening		
Breast Cancer Screening		
Diagnostic Monitoring		
Polypharmacy Medication Review		

AVAILABILITY OF HEALTH INFORMATION

	6 Mth Trend	Statewide
Non-Dictated Documents		
Dictated Documents		
Specialty Notes		
Community Hospital Records		
Scanning Accuracy		

APPEAL PROCESSING

	6 Mth Trend	Statewide
Timely Appeals		

MAJOR COSTS PER INMATE PER MONTH

LABOR	YTD 13/14	FY 12/13
Medical Staff		
Nursing Staff		
Pharmacy Staff		
Dental Clinical Staff		
Mental Health Clinical Staff		
Clinical Support Staff		
Administrative Support Staff		

NON LABOR	YTD 13/14	FY 12/13
Hospital		
Emergency Department		
Specialty		
Medications		
Diagnostics		

CARE MANAGEMENT

	6 Mth Trend	Statewide
Appropriate Placement High Risk Patients		
High-Risk Patient Case Mgt		
Follow-Up After MHCB/DSH Admission		
30-Day Community Hospital Readmission		
30-Day MHCB or DSH Readmission		
Potentially Avoidable Hospitalizations*		

CONTINUITY OF CLINICIANS & SERVICES

	6 Mth Trend	Statewide
Primary Care Provider (PCP)		
Mental Health Primary Clinician		
Psychiatrist		

RESOURCE MANAGEMENT

	6 Mth Trend	Statewide
Claims Processed		
Specialty Teleservices		
Health Care Staff Training		

CONTINUOUS EVALUATION & IMPROVEMENT

	6 Mth Trend	Statewide
QM & Patient Safety Program		
Health Care Review		

WORKLOAD PER DAY

	6 Mth Trend	Statewide
Appointments per PCP		
Appointments per PCRN		
Encounters per Primary MH Clinician		
Encounters per Psychiatrist		

OTHER TRENDS

	6 Mth Trend	Statewide
Hospital Admissions*		
Emergency Department Visits*		
Specialty Care Referrals*		
Prescriptions Per Inmate		
Diagnostics Per Inmate		
Appeals Received*		
Prison Population Capacity		

- STATEWIDE PERFORMANCE IMPROVEMENT PLAN
- INSTITUTION PERFORMANCE IMPROVEMENT WORK PLANS (CDCR ACCESS REQUIRED)
- PATIENT REGISTRIES (CDCR ACCESS REQUIRED)
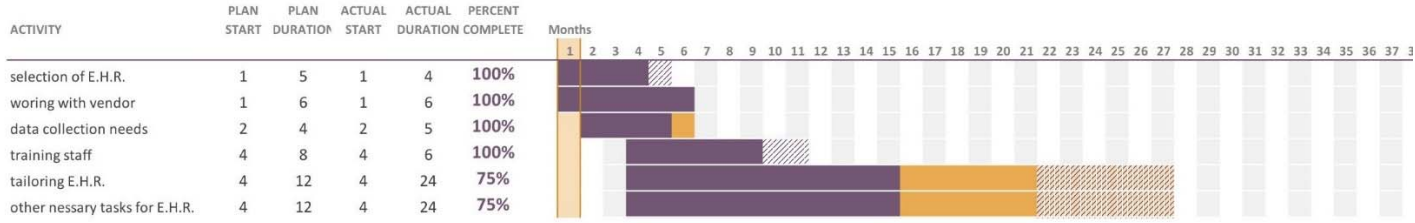- INSTITUTION POPULATION AND CHARACTERISTICS SPECIFICATIONS

Appendix F

Ambulatory Care Performance Improvement

Section: JHS

Strategic Priority and Primary Measures	Measure/Metric	Denominator	Numerator	Title XV	State Survey	SF JHS Benchmark	Source of Data/Location	Ownership/Data or Quality Lead	Audience	Specifications - Denominator	Specifications - Numerator
1. Addresses patients and clients' health care concerns in the manner and timeframe they expect											
Percentage of MCRs that received FTF RN triage within 1 day.	Monthly, based on the compliance date of the FTF RN MCR triage appointment. Compliance date from the first day of the month to the last day of the month.	Total number MCRs received within 1 day.	Number of MCRs from the denominator that received FTF RN MCR triage within 1 day during the measurement period.	X	X	85%	JHS EHR	Shayne/Marlene	JHS Director, JHS MD Director, Nurse Manager, Charge Nurse	Excluded from the denominator are appt's closed "NOT seen as scheduled" for any of the following reasons: 1. Scheduling error 2. Cancelled- a. Not in custody b. Patient refuses c. Lockdown d. Patient transferred Also, when an appt has been rescheduled, the original appt is excluded.	Included in the numerator are appt's closed for either of the following reasons: 1. Walk-in seen 2. Seen as scheduled Excluded from the numerator are appt's closed "NOT seen as scheduled" for any of the following reasons: 1. Patient in Court 2. Patient at SFGH 3. Patient refuses 4. Lockdown
Percentage of MCRs that received FTF RN triage within 2 day.	Monthly, based on the compliance date of the FTF RN MCR triage appointment. Compliance date from the first day of the month to the last day of the month.	Total number MCRs received within 24 hours that received FTF RN MCR triage within 2 days.	Number of MCRs from the denominator that received FTF RN MCR triage within 2 days during the measurement period.	X	X	85%	JHS EHR	Shayne/Marlene	JHS Director, JHS MD Director, Nurse Manager, Charge Nurse	Excluded from the denominator are appointments closed "NOT seen as scheduled" for any of the following reasons: 1. Scheduling error 2. Cancelled- a. Not in custody b. Patient refuses c. Lockdown d. Patient transfer Also, when an appt has been rescheduled, the original appt is excluded.	Included in the numerator are appt's closed for either of the following reasons: 1. Walk-in seen 2. Seen as scheduled Excluded from the numerator are appt's closed "NOT seen as scheduled" for any of the following reasons: 1. Patient in Court 2. Patient at SFGH 3. Patient refuses 4. Lockdown

Strategic Priority and Primary Measures	Measure/Metric	Denominator	Numerator	Title XV	State Survey	SF JHS Benchmark	Source of Data/Location	Ownership/Data or Quality Lead	Audience	Specifications - Denominator	Specifications - Numerator
Percentage of Priority 1 Clinician visits seen within 1 day of referral created when FTF RN MCR triage closed in JIM.	Monthly, based on the compliance date of the Clinician Priority 1 referral appointment created when MCR closed in JIM. Compliance date from the first day of the month to the last day of the month.	Total number of Priority 1 Clinician referrals created when MCR closed in JIM after FTF RN MCR triage.	Number of Priority 1 Clinician referrals from the denominator seen within 1 day. Included in the numerator are appt's closed for either of the following reasons: 1. Walk-in seen 2. Seen as scheduled	X	X	85%	JHS EHR	Marlene/Shayne	JHS Director, JHS MD Director, Clinicians, Nurse Manager, Charge Nurse	Excluded from the denominator are appointments closed "NOT seen as scheduled" for any of the following reasons: 1. Scheduling error 2. Cancelled- a. Not in custody b. Patient refuses c. Lockdown d. Patient transfer Also, when an appt has been rescheduled, the original appt is excluded.	Included in the numerator are appt's closed for either of the following reasons: 1. Walk-in seen 2. Seen as scheduled Excluded from the numerator are appt's closed "NOT seen as scheduled" for any of the following reasons: 1. Patient in Court 2. Patient at SFGH 3. Patient refuses 4. Lockdown
Percentage of Priority 2 Clinician visits seen within 14 days of referral created when FTF RN MCR triage closed in JIM.	Monthly, based on the compliance date of the Clinician Priority 2 referral appt created when MCR closed in JIM after FTF RN MCR triage. Compliance date from the first day of the month to the last day of the month.	Total number of Priority 2 Clinician referrals resulting when MCR closed in JIM after FTF RN MCR triage.	Number of Priority 2 Clinician referrals from the denominator seen within 14 days.	X	X	85%	JHS EHR	Marlene/Shayne	JHS Director, JHS MD Director, Clinicians, Nurse Manager, Charge Nurse	Excluded from the denominator are appointments closed "NOT seen as scheduled" for any of the following reasons: 1. Scheduling error 2. Cancelled- a. Not in custody b. Patient refuses c. Lockdown d. Patient transfer Also, when an appt has been rescheduled, the original appt is excluded.	Included in the numerator are appt's closed for either of the following reasons: 1. Walk-in seen 2. Seen as scheduled Excluded from the numerator are appt's closed "NOT seen as scheduled" for any of the following reasons: 1. Patient in Court 2. Patient at SFGH 3. Patient refuses 4. Lockdown
Percentage of Priority 2 Clinician visits seen within 21 days of referral created when FTF RN MCR triage closed in JIM.	Monthly based on 21 days from the date Clinician Priority 2 referral appt created when MCR closed in JIM. Compliance date from the first day of the month to the last day of the month.	Total number of Priority 2 Clinician referrals resulting when MCR closed after FTF RN MCR triage.	Number of Priority 2 Clinician referrals from the denominator seen within 21 days.	X	X	90%	JHS HER	Marlene/Shayne	JHS Director, JHS MD Director, Clinicians, Nurse Manager, Charge Nurse	Excluded from the denominator are appointments closed "NOT seen as scheduled" for any of the following reasons: 1. Scheduling error 2. Cancelled- a. Not in custody b. Patient refuses c. Lockdown d. Patient transfer Also, when an appt has been rescheduled, the original appt is excluded.	Included in the numerator are appt's closed for either of the following reasons: 1. Walk-in seen 2. Seen as scheduled Excluded from the numerator are appt's closed "NOT seen as scheduled" for any of the following reasons: 1. Patient in Court 2. Patient at SFGH 3. Patient refuses 4. Lockdown

Appendix G

E.H.R. Implementation

	Months	1		Plan		Actual		% Complete		Actual (beyond plan)		% Complete (beyond plan)

ACTIVITY	PLAN START	PLAN DURATION	ACTUAL START	ACTUAL DURATION	PERCENT COMPLETE
selection of E.H.R.	1	5	1	4	100%
woring with vendor	1	6	1	6	100%
data collection needs	2	4	2	5	100%
training staff	4	8	4	6	100%
tailoring E.H.R.	4	12	4	24	75%
other nessary tasks for E.H.R.	4	12	4	24	75%

Months: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

Appendix H

KPI Development

ACTIVITY	PLAN START	PLAN DURATION	ACTUAL START	ACTUAL DURATION	PERCENT COMPLETE
selection & development	1	5	1	4	100%
mult meetings	1	6	1	6	100%
re-eval goals	2	4	2	9	90%
post implementatin	3	7	4	6	100%
work with IT	3	2	3	8	100%
track intervals	4	3	4	12	90%
data validation	5	4	5	12	90%
achieve baseline	5	2	5	5	100%

Legend: Months 1 — Plan, Actual, % Complete, Actual (beyond plan), % Complete (beyond plan)
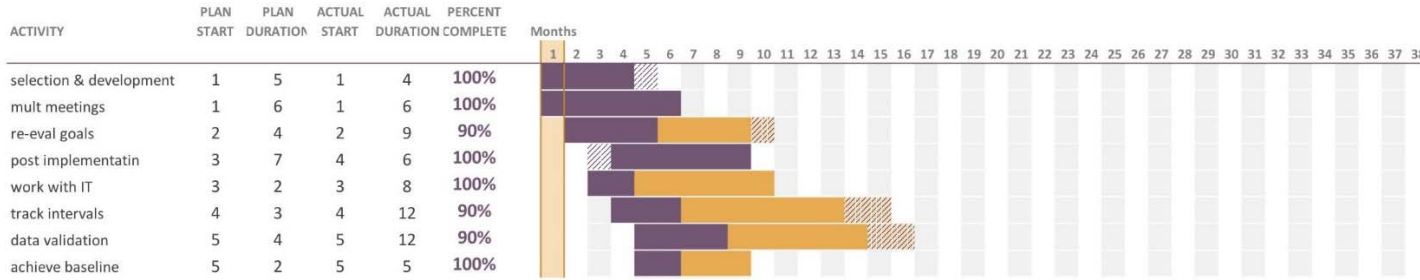
Jail Health Services
Key Performance Indicators
DRAFT

I. **Access to Medical Services** - JHS will track the following medical access measure percentages.

   1. **face-to-face triage** of Medical Care Requests (MCRs) will be completed within 1-2 business days;
   2. **urgent referral** to a physician will be seen within 1 calendar day;
   3. **routine referral** to a physician will be seen within 14 calendar days;
   4. **chronic care evaluation** (Chronic Care Program) will be completed within the timeframe specified at the last chronic care encounter;
   5. **high priority specialty referrals** will be seen within 14 calendar days;
   6. **routine specialty referrals** will be seen within 90 calendar days;
   7. patients returned to jail from SFGH will be seen by a primary care provider within 1-2 calendar days.

Objective: By December 31, 2015, 85% or more of patients who require care receive timely access to clinicians and diagnostic services.
Target: 85% (set by Plata litigation) compliance
Review: Monthly
Data Source: Jail Information Manager (JIM) medical scheduling and tracking system

II. **Polypharmacy, Diagnostic Monitoring and Medication Administration**- JHS will track 29 measures of patients on medications meeting high risk criteria to ensure they are receiving appropriate monitoring. For initial dashboard, JHS will track:

   1. Prescriptions per patient per month.
   2. Clinician review of patients prescribed 10 or more medications.

Objective: By December 31, 2015, 95% or more patients prescribed 10 or more medications will have their medication regimens reviewed per requirements.
Target: Prescriptions per patient per month is included for monitoring purposes and has no specified benchmark; clinician review of patients with 10 or more medications will have benchmark of 95% compliance.
Review: Monthly
Data Source: JIM and will need to check pharmacy database

III. Response to Medical Care Request - JHS will track multiple measures around Medical Care Request (MCR) response time and manner of response time. We will test new MCR form in February, 2015 that educates patient regarding wait periods for different levels of medical care.

Objective: By June 30, 2015, 95% of patients will have received a timely response to their Medical Care Request and the patient will be able to identify the wait period for the specific MCR.
Target: 95% compliance
Review: Monthly
Data Source: JIM

IV. Grievance Rate – Access to Care currently largest target of Grievances. We believe this is secondary to lack of information to patient regarding wait time to see Clinician for routine Level II Priority visit and lack of MCR feedback to patient in a timely manner.

Objective: By June 30, 2015, a modified MCR with patient education and feedback loop will decrease Grievance rate related to Access to Care by 25%.
Target: 25% reduction
Review: Monthly
Data Source: Grievance collection by nurse managers and submitted to CQI on a daily or weekly basis.

V. 30-Day SFGH Readmission – JHS will monitor total number of hospitalizations and the total number of hospital readmissions with no more than 2-30 days between the two episodes of care.

Objective: By December 31, 2015, 5% or less of all hospitalizations will result in a readmission within 2-30 days.
Target: 5% or less; total number of hospitalizations included for monitoring purposes.
Review: Monthly
Data Source: JIM and CHART electronic medical records and data base

VI. Initial High Priority Specialty Referrals Occur Within 14 Calendar Days – All patients referred for initial (as opposed to follow-up Specialty appointments) high priority specialty appointments will be seen within 14 days.

Objective: By December 31. 2015, 85% or more of patients who require initial specialty referral will receive specialty care appointment within 14 days.
Target: 85%
Review: Monthly
Data Source: JIM and SFGH database

Appendix I

Number of ER admits

MONTH	2014	2015
JAN	30	13
FEB	24	20
MAR	30	20
APR	28	22
MAY	32	23
JUNE	60	20

Appendix J (miscellaneous)

Process Map
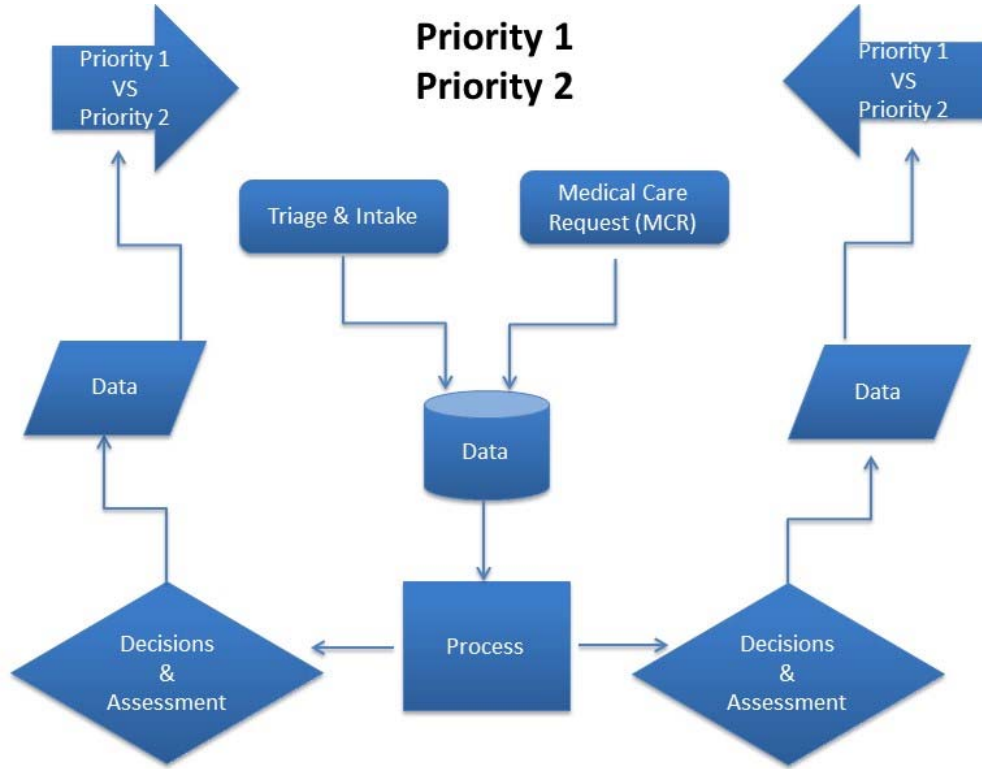
Cost Analysis (approximately)

People (executive committee and IT)	Costs ($920 hour)
IT	$90
Director	$125
Medical doctor	$175
Nurse Manager	$70
Nurse Manager	$70
Nurse Manager	$70
Psych Director	$80
CQI	$80
HIV Director	$70
Pharmacy Director	$90

An approximate count of 150 meetings were required for KPI development. Meeting times ranged from 30 minutes to five hours. Our approximate cost was $138,000.

MISC

Outside IT support	$3,000
Additional hardware and other networking connections (most came from other areas from the department of public health)	$2,000
Additional staff for training	$17,000
Upload and transfer existing orders to new HER (3 day process)	$8,000
Additional staff to ensure proper data validation and trouble shoot for front line staff for the first week of EHR	$5,000
Initial EHR	"cost the city, little to no cost"
Ongoing fees and maintenance	Unknown (still within the first year of production)

Stakeholder Map

Food for Thought/Possible Influences:

Housing instability	Food insecurity	Lack of control	Limited Resource	Mental health needs	Instability of family and/or relationships	Coping ability	Practice healthy lifestyle	Awareness of self (mental and/or physical)
Resource access	Civil engagement	Age specific needs	Accessibility of community services	Distrust with different members of society	Chronic healthcare needs	Acute health care needs	Current Mental status	Current Health status
Age specific needs	Gender specific needs	Disability status	Community challenges	Disappointment about life	Purchasing affordable food	Infrequent of meals	Following rules	Substance abuse

Power (vertical axis, upward arrow)

Influence (horizontal axis, rightward arrow)

Medical staff
Intake
Triage
MCR nurse
Psych staff
Custody staff

NP
&
MD

Taxpayer/society
=
Increase ER and use =more $ needed to run hospital (i.e. public assistance/bonds)

Patients
=
Patients who are unable to focus on their medical needs i.e. the patients who tell us they are constantly on their way to the doctors' right before they got arrested. OR
Pt who are able to care for themselves, or who may have been unable to get their chronic medicine in the last week or less.

Clinician Priority 2 Appointment 14 Days

Legend: ■ Total Clinician Priority 2   ■ Clinician Priority 2 seen 14 days   ■ %

Month	Total Clinician Priority 2	Clinician Priority 2 seen 14 days	%
1/2015	521	467	89.64%
2/2015	447	438	97.99%
3/2015	686	649	94.61%
4/2015	727	705	96.97%
5/2015	709	702	99.01%
6/2015	737	719	97.56%
7/2015	797	786	98.62%

0.00%

Medical Care Request 24

■ Total MCRs ■ Number of MCR's seen in 24 hours ■ %

	1/2015	2/2015	3/2015	4/2015	5/2015	6/2015	7/2015
Total MCRs	2064	1925	2040	1915	1942	1894	1977
Number of MCR's seen in 24 hours	1839	1647	1843	1762	1813	1663	1701
%	89.10%	85.56%	90.34%	92.01%	93.36%	87.80%	86.04%

Medical Care Request 48

Legend:
- % (green)
- Total MCRs seen in 48 hr (red)
- Total MCRs (blue)

Month	Total MCRs (blue)	Total MCRs seen in 48 hr (red)	%
1/2015	2064	1979	95.88%
2/2015	1925	1833	95.22%
3/2015	2040	1967	96.42%
4/2015	1915	1855	96.87%
5/2015	1942	1888	97.22%
6/2015	1894	1786	94.30%
7/2015	1977	1844	93.27%