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Process Improvement Manual: Front and Back Office

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Process Improvement Manual: Front and Back Office

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Abstract

The global aim of this project is to decrease variations and improve efficiency in the tasks assigned to the support staff at an outpatient breast clinic. The breast center has a five-person administrative team who rotate through four positions monthly. The specific aim is by May 1, 2017, 100% of the five employees will have a comprehensive knowledge of their role, and adhere to a standardized way of completing tasks. The CNL Leadership themes used were Educator, Team Leader Manager, and Outcomes Manager. Informative interviews were conducted with the staff to gauge the unique needs of the team. 100% of the staff indicated that a standardized protocol for their job functions and procedures was a needed resource. After the implementation of the manual, the post-survey proved 100% of the employees indicated a thorough knowledge of their job roles. The effectiveness of this manual will be sustained because a member of the staff has volunteered to update the manual on a quarterly basis. A recommendation for future improvements is a new employee on-boarding program; the manual will be a strong tool to get new staff oriented to the microsystem.

Process Improvement Manual: Front and Back Office

Clinical Leadership Theme

This project encompasses the CNL leadership theme of “Care Environment Management.” This project involves the aspects of healthcare systems and organization, team coordination, and quality improvement. The most prevalent CNL roles for this project are the roles of Educator, Team Leader Manager, and Outcomes Manager. The global aim is to decrease variations and improve efficiency in the tasks assigned to the support staff at an outpatient breast clinic.

Statement of Problem

At an outpatient breast center, every day is busy with many scheduled services, such as mammograms, MRI’s, ultrasounds, biopsies, etc. During the microsystem assessment, the patterns and processes of the five-person clerical team were analyzed. Miscommunication, lack of cohesion, and frustrations were all apparent in this team dynamic. After conducting several informative interviews with the staff and supervisor, the issues were variations in task methodology, along with staff not adhering to their job responsibilities. These problems resulted in delays with scheduling, and staff disregarding their assigned job responsibilities to compensate for the unscheduled referrals.

To address these matters, this project will focus on creating a standardized process improvement manual. This manual will list the job tasks of each of the four clerical positions, along with how to complete each task. Along with the manual implementation, an employee training will take place to re-orient current staff to their roles. In the future, this training will also be used to train any new employees hired.

Project Overview

The outpatient breast center is in conjunction with a large, urban hospital located in Northern California. The center is an extension of the radiology department, and is solely dedicated to providing all breast health services. The center provides diagnostic evaluations, breast imaging, and patient education. Weekly services at the breast clinic focus on surgical treatments, evaluations, and consultations with genetic counselors.

The distinguishing services at the breast center are available to patients from the main hospital, along with patients from satellite clinics. These clinics generally serve marginalized, low-income, and at risk individuals. Many patients at the center are women over the age of 45. Due to guidelines set by the American Cancer Society (2016), yearly mammograms are encouraged for women between the ages of 45-54, which is why the center sees an influx of women between this age range (American Cancer Society, 2016). The center also has a high proportion of Hispanic and Asian populations.

The staff consists of an eclectic group of professionals who all work for the same goal. The supervisor of the center is a lead technologist from the radiology department, who solely oversees the functioning of the center. The supervisor also oversees a staff, which consists of x-ray technologists, registered nurses, lab technicians, and clerks. The center also houses a lead physician who oversees a team of radiologists.

The processes at the breast center include administrative tasks, such as answering phones, scheduling appointments for surgical procedures, diagnostic testing, and follow up clinic appointments. Other procedural processes include mammograms, ultrasound imaging, biopsies, and digital tomosynthesis.

The environment at the breast center is inclusive for both staff and patients. Upon entering the building, patients are greeted by the front desk staff who assists them with registration. The setting is quiet and calm, which is maintained throughout their services.

The supervisor is accessible by the staff, and partakes in providing patient care. Staff members approach the supervisor with issues and concerns, and this relationship is reciprocated when the supervisor approaches staff with questions and suggestions. Communication between staff members is inhibited due to delayed tasks, miscommunication, and staff not adhering to job tasks.

The microsystem assessment yielded many consistent trends and patterns in the workflow processes and the overall atmosphere of the outpatient center. One main component observed was the lack of standardization in work processes. Staff members stated that there was a delay in processes, and some work would be duplicated due to a lack of communication. During interviews and workflow observations, staff members were constantly seen working on referrals to schedule procedures. At the time of the assessment, there were 385 referrals which needed to be processed. Normally, the staff works with about 90 referrals, daily. With an increasing number of referrals, staff members were neglecting their assigned job tasks to address the high volume of referrals.

The environment of the center is focused on providing patient centered care, in which they excel. According to patient satisfaction scores distributed by the Radiology Department, the breast center consistently outranks the Radiology department located in the main hospital. Staff members were cooperative with patients, yet there was a lack of cohesion detected amongst staff members. Staff would frequently visit the supervisor to state how unpleasant it was to work with someone, or how a staff member is unwilling to adapt new techniques to improve work flow.

Upon completion of the microsystem assessment, the project was created to focus on the processes of the front and back office staff. The plan of action was outlined to standardize the roles and responsibilities.

Within this microsystem, the project will directly impact the five-person administrative staff who rotate between four positions, monthly. The four positions are: Receptionist, Receptionist's Assistant, Scheduler, and Workroom Assistant. This team consists of lab aides, and clerks. With the input of current staff, a process improvement manual will be created to standardized the procedures of all tasks assigned to the four positions. The project will start with a reassessment of the microsystem, with a specific focus on the staff engagement and work processes. Then, the staff and supervisor will be consulted on what updates need to be made to the current manual. This will be done by conducting several informative interviews with each of the five team members, along with the supervisor.

In addition to this manual, a new employee onboarding program will be created to reorient current employees, and train future employees. This program will be shaped based on input from the newest employee at the breast center. The effect of this change will be gauged by using a Likert survey before and after the implementation of the new manual and onboarding program. The goal is that by May 1, 2017, 100% of the five administrative employees will report a comprehensive knowledge of their role, and adhere to a standardized way of completing all tasks.

Rationale

A Microsystem Assessment Tool (Johnson, 2003) was utilized to help understand the needs of the microsystem. The tool was in the form of a survey, which was given to each of the

five staff members (Appendix C). The survey allowed the employees to comment on the breast center regarding leadership, processes, patient care aspect, and organizational support. The employees submitted their answers anonymously. The results of the survey yielded that four out of five employees believed there were underutilized resources which could improve their work processes. The survey also indicated staff members believed change was implemented in their microsystem without any discipline. The results of the survey are included in Appendix D.

Informative interviews were also conducted with the supervisor, and each of the five team members. In the interviews, the staff was asked the following questions:

- what hinders your ability to complete all the daily assigned tasks for your role;
- how can we improve the current manual to help your workflow;
- what can be done so that there isn't always a back-up of E-Referrals that need to be scheduled;
- what improvements can be made to increase productivity at; and
- what are any of your concerns and thoughts?

The supervisor noted there have been various instances where miscommunication between team members has caused a delay in tasks. The supervisor has seen how different methods to accomplish the same tasks have resulted in delays, and fuels team disconnect. Staff members expressed their frustrations regarding other members deviating from standard procedure. The current staff members have all expressed that having standard methods to complete tasks would be a welcomed change. A new employee explained that training could have been more effective if she was learning how to complete tasks in a standardize way, rather than having different staff members teach her their various methods.

An open-question survey was created to gauge how the team felt about each of the four positions, and what they would improve for each position. This survey is included in Appendix F.

In the Likert survey (Appendix E), which was given pre-implementation and given post-implementation, 100% of the staff indicated that they strongly believe everyone should do all the tasks in a standardize way to prevent delays and errors.

There is a need to for this change because services provided at this outpatient clinic are among the top 25 procedures offered at the hospital (State of California Office of Statewide Health Planning and Development, 2016). Creating a process manual which standardizes tasks is crucial for this high functioning setting.

The benefits to the employer include multiple factors such as reduced waste in employee productivity hours, improvement to the patient flow, and reduction in scheduling errors.

Addressing these components collectively will reduce cost of operation. These factors include the cost of procedures such as mammograms, ultrasounds, MRIs, etc. According to the State of California Office of Statewide Health Planning and Development (2016), a mammogram at the breast center costs \$1,953, an ultrasound costs \$535, and a MRI costs \$7,032. If any of those procedures are conducted in error due to a scheduling delay, it is a great monetary loss to the hospital.

Employee wage and benefits also play a key role in the financial aspect of this project. According to the staff, they waste an average of one hour each day, on scheduling. The staff spends this hour addressing an influx of referrals which do not get scheduled due to variations in scheduling, staff delineating from their assigned responsibilities, and miscommunication. With this process improvement manual, and new employee orientation, the staff will not need to spend

an additional hour on scheduling. Using information from a previous CNL student's project at the breast center, the job codes of each of the employees in the clerical team were obtained (Bebeau, 2016). Using those job codes, the salary for each staff member was determined. According to the San Francisco Department of Human Resources (2017), the average hourly wage for the staff involved with this change is \$28.77 per hour, with an average yearly salary of \$59, 839. With a total of four job positions, the staff wastes four hours a day. This is a fiscal waste of \$2,301.60 a week, with a total of \$29,920.80 wasted each year (Appendix B). This is almost \$30,000 in avoidable waste which the breast center incurs over the course of a year. With this project, the projected cost savings can be put toward obtaining additional equipment for the center, or hiring an additional navigator to provide language services to patients.

Methodology

For this project, Kotter's Theory of Change was used as a guideline (Kotter International, 2017). The steps in this theory are:

- create a sense of urgency;
- build a guiding coalition;
- form a strategic vision and initiatives;
- enlist a volunteer army;
- enable action by removing barrier;
- generate short term wins;
- sustain acceleration; and
- institute change.

A sense of urgency was created by discussing with the supervisor and the staff any needed improvements. After deciding on a process improvement manual, discussions were conducted

with the staff. The focus was on how the current method could be improved to reflect efficiency and strong team collaboration. A strong relationship with the team allowed for staff members and supervisors who were open to suggestions for change.

By observing the daily routines of the clinic, and with input from the staff, the vision to re-create a roles and procedures manual for the five-person clerical team was possible. During the informative interviews, there was a noticeable trend of inconsistencies in job descriptions and completing job tasks. There was also the factor of a senior staff member resistant to adhering to a standardized manual. Action could be enabled despite these barriers because input was received from all the staff members involved in this initiative. Each member was approached individually to understand how they complete a certain task, and the aim was to combine all their ways to form one standard protocol.

Throughout this process, the short-term wins included involving each of the five staff members in the change process. Feedback was received in the form of surveys, which gave an insight to the staff's perspective of needed changes. Sustaining the acceleration included continuously engaging the staff, and keeping them updated on the progress. A draft of the process improvement manual was circulated in the team, and each employee was individually able to express their thoughts and concerns. The change was instituted when the new manual was created, and the employee training program presented. These ideas are presented in the Root Cause Analysis chart in Appendix G.

The concept of lean management was prevalent in the vision behind this project. Lean Methodology is a management strategy which eliminates organizational waste in terms of materials, and workable hours (Institute for Healthcare Improvement, 2005). Using the lean method, there was waste evident in the clerical staff's workflow. The concerning waste in this

microsystem is that of workable hours. After identifying the waste, existing processes were addressed to determine the issue of wasted work hours. The solution involved creating a standardized protocol so that employees do not deviate from their assigned tasks, and decrease variations in completing those tasks.

The first action would be to reassess the roles within the microsystem by meeting with each personnel individually. By doing this, staff is integrating their input and concerns into the solution. According to King and Gerard (2016), the CNL should look for reasons why the staff believe a certain protocol will not work, investigate any barriers which they point out, advocate for the staff or coach them on ways to make the new protocol fit into their microsystem. The project relies on lateral integration because the microsystem has navigators, administrative personnel, radiology technologists, medical assistants, volunteers, etc. Although this manual will focus on the administrative personnel, the outcome impacts each personnel in the microsystem. The element critical to gauging the manual's effectiveness, is a Likert scale which will be made to reflect the goals of the project. The scale will allow the staff to indicate how prepared they felt as new employees after their training, if they believe standardization of tasks will improve productivity, how well they know the tasks of each of their various positions, etc. This scale will allow the use of staff input in developing a new employee onboarding, while also exhibiting the need to have a standardized protocol for all their tasks.

Once the process improvement manual is distributed and changes are presented to the staff, post-implementation analysis will start. The effectiveness of the change will be gauged by re-distributing the same Likert survey which the team took before the implementation. The changes in the responses will indicate if the staff felt the manual and re-training improved their work flow. It will be known if the desired goal is reached by comparing the Likert survey results

of the pre-implementation phase versus the post-implementation phase. At this phase of the project, it is predicted that most of the staff will indicate an improvement in their knowledge of the job roles. Some staff might be resistant to the idea of having to change their way of executing a task for the sake of standardization. With a team of five staff members, having everyone compliant to this change is crucial, because there cannot be an effective change even if one person is still doing a task their way.

Data Source/Literature Review

The literature references for this project was derived using the following PICO statement:

- P: front/back office support staff at a microsystem of an outpatient radiology center;
- I: pilot orientation training and introduction of a process improvement manual that clarifies role and defines work tasks;
- C: current state of work processes, no standardized process manual; and
- O: decrease variations and increase standardization of work tasks/roles in outpatient center

To obtain additional references, the keywords “on-boarding training,” “staff quality improvement,” “new employee training,” “outpatient breast clinic,” “breast clinic manual,” “roles and procedures manual” in the University of San Francisco Fusion database.

The case for having a structured onboarding program is a convincing argument based on the literature. According to Baldwin (2016), “new employees who complete a structured onboarding program were 58% more likely to stay at the organization for more than three years when compared to those who were not” (Baldwin, 2016, p.27). In financial terms, having an onboarding is directly related to 2.5 times the profit growth, and 1.9 the profit margin. For comparison, organizations which utilize a strong onboarding process have a “six times better

growth in profits and 3.9 times the profit margin than those organizations continuing to use a hit-or-miss approach to onboarding” (Baldwin, 2016, p.27).

Apart from being of fiscal benefit, this project also focused on staff engagement and utilizing lateral integration throughout the process of creating and implementing the changes. In their article, Phillips, Hebish, Mann, Ching, and Blackmore (2016) conducted a study focusing on staff and leader engagement, daily improvement, and creating an environment where staff feels psychologically safe and valued. After adapting activities such as daily staff huddles, and weekly leader rounds to elicit staff ideas, the voluntary staff turnover rate in the microsystem decreased from 14.6% in 2011 to 7.5% in 2012, and 2.0% in 2013 (Phillips et. al, 2016). The practices published in the articles were adapted to be used in the breast center.

This project was piloted with the basis of a lean management theory. In their article, Belter et. al (2012), discuss the Lean Management Theory and how it improves the patient care experience at an outpatient breast center. The Lean Transformation Process has five-steps to identify and eliminate waste from a process to improve patient care outcomes in a more efficient and financially sound way. The five steps include evaluating the current situation, identify areas of opportunity, modify existing process, substantiate and enumerate improvements, and implement new work standards (Belter et. al, 2012). During microsystem assessment, the Lean Transformation Process was adapted to the outpatient breast center to identify the waste of employee productivity hours. Using the process, there were modifications made to existing ways to complete tasks to improve work flow and decrease inconsistencies.

To gauge the effectiveness of the new process improvement manual, and the onboarding training program, a Likert survey was created which was distributed before and after the implementations. To create a succinct survey unique to this outpatient breast center and situation,

an article written by the creator of the Likert survey was utilized. Rensis Likert (1932) published an article about constructing an attitude scale which measured an individual's personality toward statements. This primary source was an aid in creating a strong Likert survey which was personalized to the microsystem. The publishing detailed how to create an effective Likert scale by listing the ideal number of statements, word choice, format, etc. (Likert, 1932).

The source of most of the data was based on a microsystem assessment. The Dartmouth Institute Microsystem Academy (2016) published a workbook, specifically for an outpatient clinic, which allows the user to assess the microsystem using the 5 P's (Purpose, Patients, Professionals, Processes, Patterns). Once the focus became on the processes of the clinic, the microsystem was re-assessed using the Microsystem Assessment Tool, published by the Institute for Healthcare Improvement (2016). Informative interviews were also conducted with each of the five staff members who would be directly impacted by the change. These interviews were done throughout the process change to gauge needs of the staff, receive input for proposed changes, etc. Another source of data was the San Francisco Department of Public Health, and the Office of Statewide Health Planning and Development which had metrics for the salary of each of the involved employee, and the operational costs of the services provided at the outpatient breast clinic.

Timeline

The project began in January 2017 with a thorough microsystem assessment of the outpatient breast center. This is when information was also gathered by holding discussions with the employees to identify any potential projects. The project concluded in May 1, 2017. For a complete timeline of this project, refer to Appendix A.

Expected Results

After implementing the process improvement manual and an on-boarding training program, an overall change in team dynamic is expected. Currently the five-staff clerical team face frustrations due inconsistencies. With this project, each of the staff's concern was addressed by either omitting steps, or adding additional steps to the existing manual. Since the team was kept up to date throughout the project, and constantly engaged, they will be more perceptive about adhering to this manual. Even if the onboarding process is not completed by the time this semester ends, it is hoped that the implementation of the new process improvement manual will bear changes. During a group meeting, the changes in the manual will be discussed, along with their rationales. The site will then be revisited after a week to determine how the changes are becoming practiced. It is expected that it will take a minimum of four months for the true impact of the manual to be determined. This is because each staff holds one of the four roles for a month, then rotates to the next position the following month. Since the manual impacts each position, the four months will allow each staff member to experience the change in each of the four positions. It is likely that the newest employee will have an easier time assimilating the new practices into their daily routine, versus a seasoned employee who has developed their habits over several years while working at the breast center.

The successful implementation of this manual will re-instill the importance of staff engagement when it comes to systems outcomes. In their article, Phillips, Hebish, Mahn, Ching, and Blackmore (2016) conducted a project to identify the relationship between staff satisfaction and organizational success. They highlighted that engaging staff in process improvements involves numerous opportunities for the staff to give their input for future changes, and that those

changes should be made with the staff's concerns as focus points (Phillips et. al, 2016). This project's success will highlight those key values because the five-member clerical team had constant input in the mechanisms of this project.

A continuation of this project involves creating a structured new employee on-boarding program. The process improvement manual is a resource for current employees, yet a strong training program is needed for potential future employees at ABC. Poorly trained or misinformed staff can impact an organization's brand, reputation, and customer satisfaction (Baldwin, 2016). Most importantly, a structured training program gives a new employee a safe and comfortable opportunity to become familiar with the organization's protocols, equipment, and a strong member of the team. This project has alluded to the fact that many of the senior staff members have developed a strong knowledge of the breast center's functioning, yet a new employee will have difficulty keeping up with the workload without the same knowledge. This issue can be addressed with a training program that allows the new employee practice time at each of the four job roles (Receptionist, Receptionist's Assistant, Workroom Assistant, and Scheduler). With the addition of this training program, the clerical team will improve their workflow.

Nursing Relevance

A standardized roles and procedures manual is a tool which is utilized in all facets of health care. The role of a CNL student at the breast center revolved on three more specific roles: team manager; educator; and outcomes manager. It is essential to have one synthesized protocol, otherwise it is a gateway to disturb team dynamics, cause frustrations, and hinder productivity. As a nurse educator, this project shows the importance of continuous learning for both leaders and their team. By creating an open channel of communication, the supervisor at the breast center learns about the frustrations that the clerical staff faces, and listens to any solutions which

they present. With the help of the supervisor, the staff was educated on why standardized procedures will benefit the microsystem which illustrated the reasoning why continuous staff engagement is crucial to any outcomes project. The role of team leader was exercised throughout the process of this project. Most importantly, it is crucial to continuously speak of the nature of the project, and for its need in the microsystem. By working in a setting with a large multidisciplinary team, there was a constant advocating for the staff and the need for the process improvement manual to any health care professional who questioned the project's need. The team leader needs to support the staff by gathering constructive input, and working on developing a plan which will incorporate the needs of all the stakeholders. In any given environment, a nurse leader must have initiative to look for improvements and to build a strong case for the need of a solution. An outcomes manager "will synthesize data, information, and knowledge to evaluate and achieve optimal client outcomes" (American Association of College of Nursing, 2007, pg. 13). The process improvement manual was a culmination of numerous data, and resources gathered within the microsystem. This project reinforced the belief that the most critical resource a CNL can have is the staff or the patient whom the process improvement is aimed at. Since this project focused on staff workflow, the priority was to create a manual specific to the needs and functions of the breast center. The success of any project depends on how well it addresses the need for the specific microsystem, and being an outcomes manager has allowed the philosophy to be fulfilled at the outpatient breast clinic.

Evaluation

The global aim of this project was to decrease variations and improve efficiency in the tasks assigned to the support staff at an outpatient breast clinic. The breast center has a five-person administrative team who rotate through four positions, monthly. The specific aim was

that by May 1, 2017, 100% of the five administrative employees will report a thorough knowledge of their role, and adhere to a standardized way of completing all tasks. During the microsystem assessment, 80% of the employees reported they felt resources were being underutilized to enhance current processes, and that changes were implemented without any discipline. Informative interviews were also conducted with the staff to gauge the unique needs of the team, and how current processes could be improved. 100% of the staff indicated that a standardized protocol for their job functions and procedures was a needed resource. A Likert survey given before the manual implementation indicated that only four out of the five employees stated that they felt confident in all four of the positions. Although this may seem like a strong percentage, even when one person lacks an understanding of the job duties, it can cause delays and errors which can impact the other job responsibilities.

After the implementation of the manual, the post-survey yielded that 100% of the employees indicated a thorough knowledge of their job roles and the appropriate steps required to complete each task. As noted before, it will take four months to fully gauge the effectiveness of the process improvement manual. Since staff rotates to each position every month, it will take four months for each of them to experience the changes for each of the positions.

When the new manual was introduced to the staff in a team meeting, it was received well by each member. The rationale behind each change was explained, along with how the input from the staff shaped those changes. This was important to acknowledge, because it will reinforce the idea of how crucial staff engagement is for the manual's success.

Due to a time limitation, a new employee on-boarding program was not created in conjunction with the manual. This is an opportunity for a future student to further address the need for process improvement in an outpatient clinic setting. The manual was written and

compiled with resources so that it can be a strong resource for a new employee entering the administrative team.

Conclusion

A synthesized manual can prevent a disturbance in team dynamics, and workflow. This project reinforced the idea that the most critical resource a CNL can have is the staff or the patient for whom the initiative is aimed at. Since this project focused on staff workflow, the priority was to create a manual specific to the needs and functions of the outpatient breast center. The results of the Likert Survey showed how the implementation of the process improvement increased the staff's knowledge of their job responsibilities.

The effectiveness of this manual will be sustained because a member of the staff has volunteered to update the manual on a quarterly basis. These updates will ensure that the steps to complete each task include any personnel or system changes.

The need for a strong on-boarding training program was evident during the microsystem assessment. The process improvement tool could be an essential tool for new employees completing their training. The manual will ensure that every future employee learns a standardized way to complete each task, so that variances and frustrations could be avoided in the future. A strong on-boarding program will also increase a future employee's decision so continue working at the breast center.

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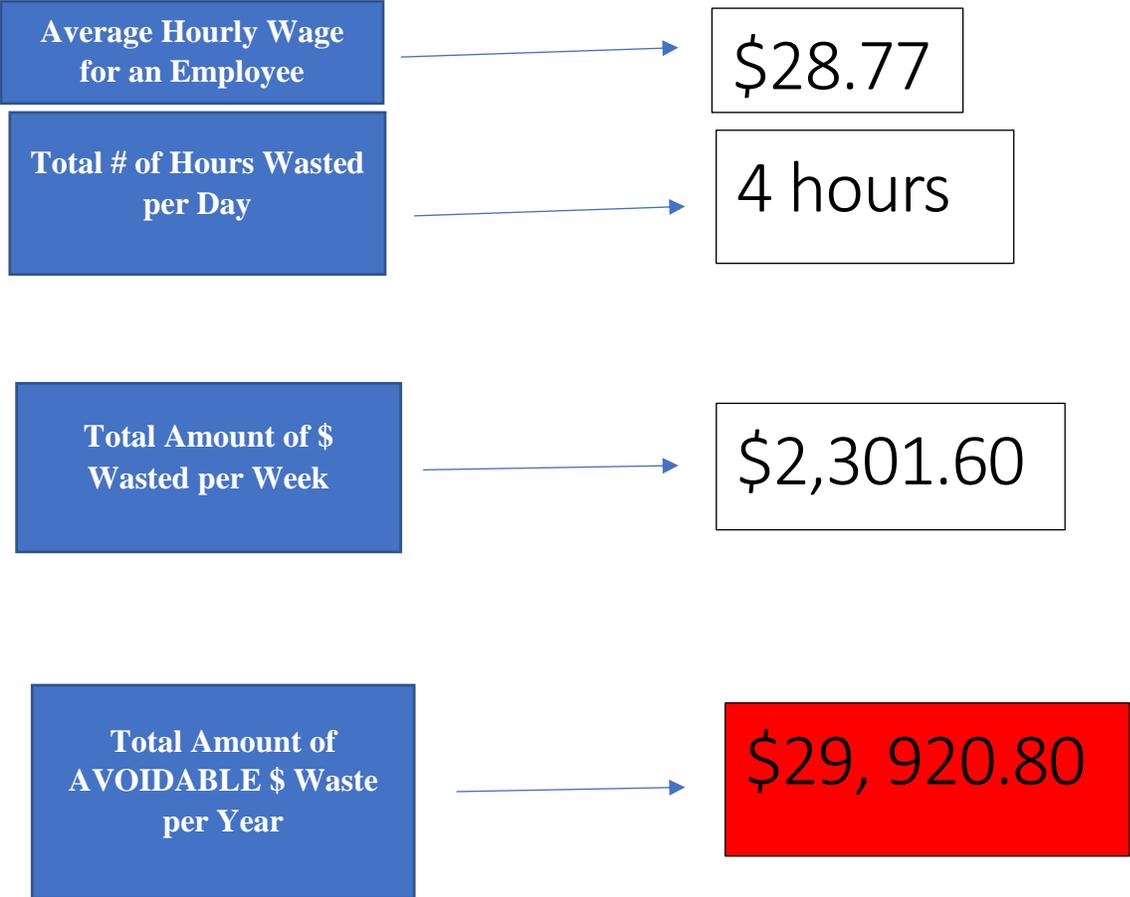
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Appendix A**Timeline**

Task	Start Date	End Date
Microsystem Assessment	January 2017	February 2017
Informative Interviews with Staff	January 2017	March 2017
Weekly Meetings with Supervisor and Clinical Preceptor	January 2017	May 2017
Data Collection	January 2017	March 2017
Literature Search	February 2017	March 2017
Creating Draft of Manual	February 2017	March 2017
Revising Manual Draft with Staff	March 2017	April 2017
Presenting New Process Improvement Manual and Reorientation Training	May 2017	May 2017
Implementing New Manual	May 2017	Continuous
Gathering Results of the New Manual Implementation	May 2017	May 2017

Appendix B

Figure 1
Cost-Analysis



Appendix C

Figure 2
Clinical Microsystem Assessment Tool used for reassessment

CLINICAL MICROSYSTEM ASSESSMENT TOOL

Instructions: Each of the "success" characteristics (e.g., leadership) is followed by a series of three descriptions. For each characteristic, please check the description that best describes your current microsystem and the care it delivers OR use a microsystem you are MOST familiar with.

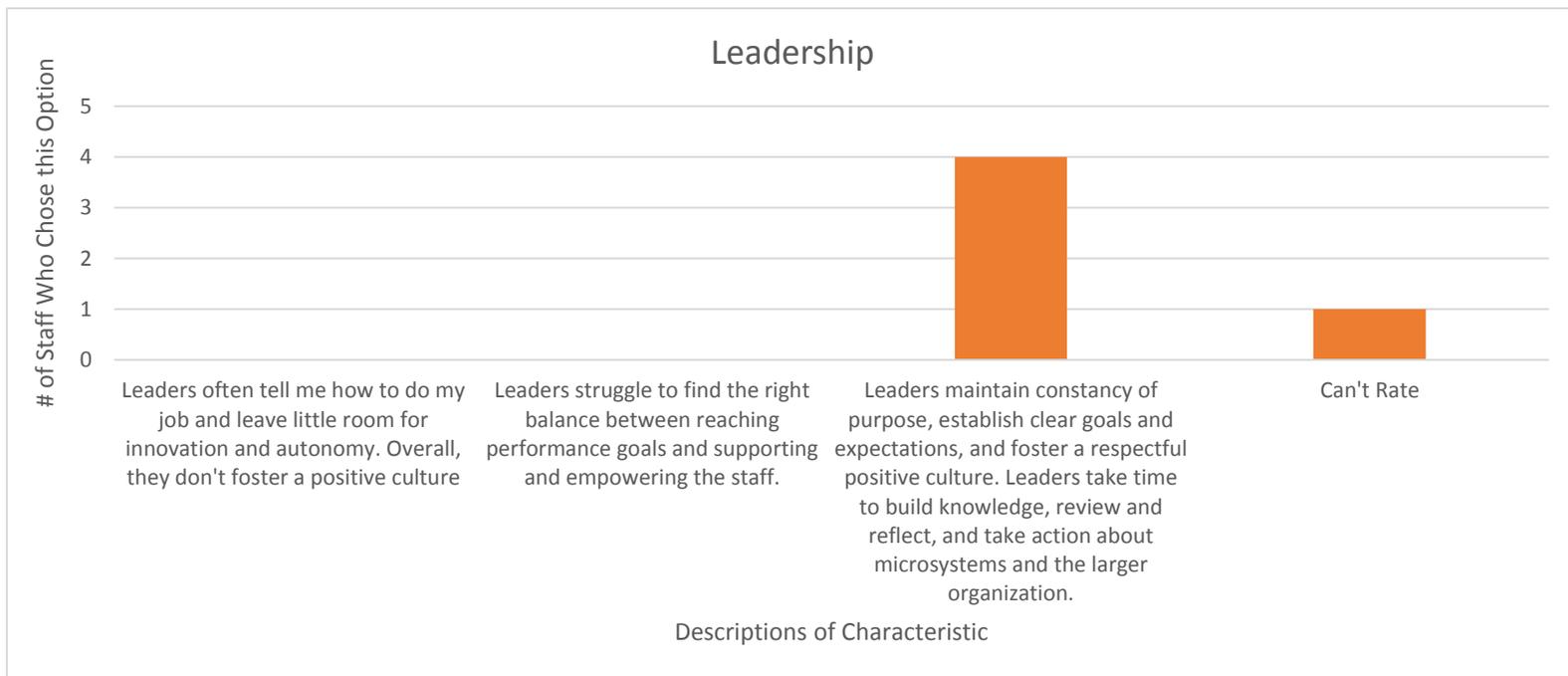
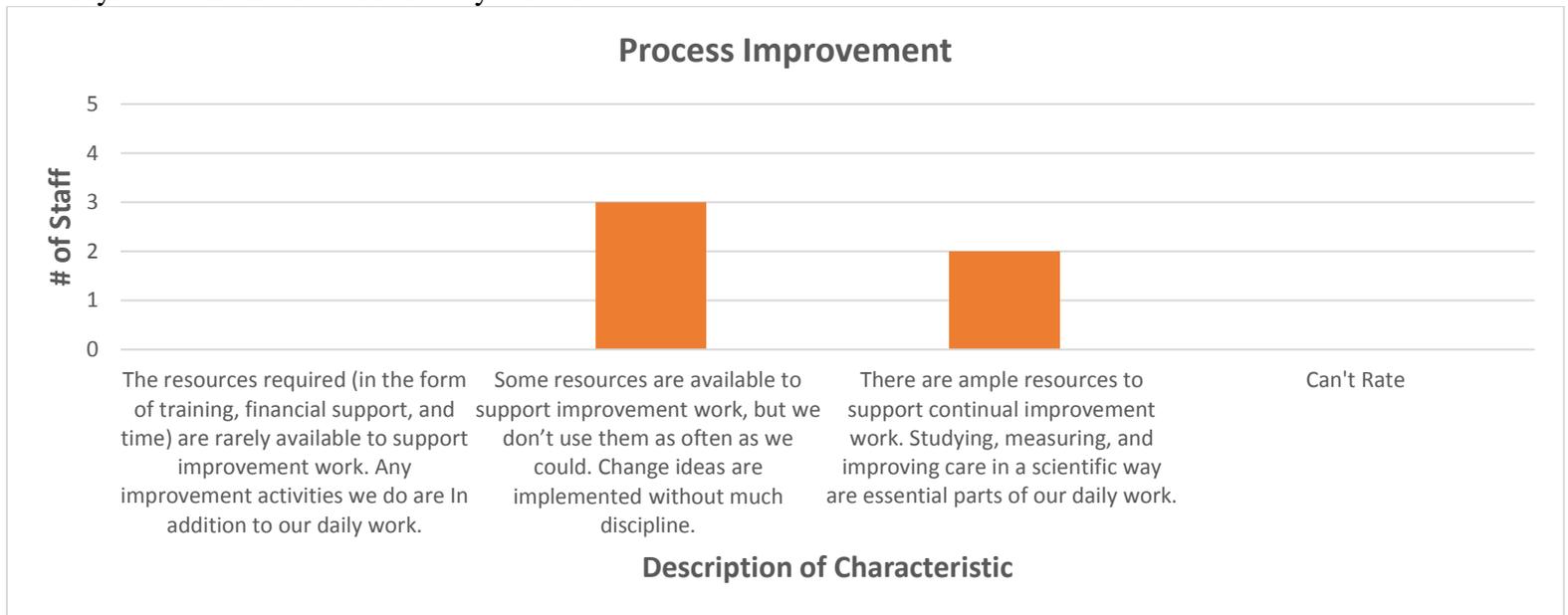
Characteristic and Definition		Descriptions			
Leadership	1. Leadership: The role of leaders is to balance setting and reaching collective goals, and to empower individual autonomy and accountability, through building knowledge, respectful action, reviewing and reflecting.	<input type="checkbox"/> Leaders often tell me how to do my job and leave little room for innovation and autonomy. Overall, they don't foster a positive culture.	<input type="checkbox"/> Leaders struggle to find the right balance between reaching performance goals and supporting and empowering the staff.	<input type="checkbox"/> Leaders maintain constancy of purpose, establish clear goals and expectations, and foster a respectful positive culture. Leaders take time to build knowledge, review and reflect, and take action about microsystems and the larger organization.	<input type="checkbox"/> Can't Rate
	2. Organizational Support: The larger organization looks for ways to support the work of the microsystem and coordinate the hand-offs between microsystems.	<input type="checkbox"/> The larger organization isn't supportive in a way that provides recognition, information, and resources to enhance my work.	<input type="checkbox"/> The larger organization is inconsistent and unpredictable in providing the recognition, information and resources needed to enhance my work.	<input type="checkbox"/> The larger organization provides recognition, information, and resources that enhance my work and makes it easier for me to meet the needs of patients.	<input type="checkbox"/> Can't Rate
Staff	3. Staff Focus: There is selective hiring of the right kind of people. The orientation process is designed to fully integrate new staff into culture and work roles. Expectations of staff are high regarding performance, continuing education, professional growth, and networking.	<input type="checkbox"/> I am not made to feel like a valued member of the microsystem. My orientation was incomplete. My continuing education and professional growth needs are not being met.	<input type="checkbox"/> I feel like I am a valued member of the microsystem, but I don't think the microsystem is doing all that it could to support education and training of staff, workload, and professional growth.	<input type="checkbox"/> I am a valued member of the microsystem and what I say matters. This is evident through staffing, education and training, workload, and professional growth.	<input type="checkbox"/> Can't Rate
	4. Education and Training: All clinical microsystems have responsibility for the ongoing education and training of staff and for aligning daily work roles with training competencies. Academic clinical microsystems have the additional responsibility of training students.	<input type="checkbox"/> Training is accomplished in disciplinary silos, e.g., nurses train nurses, physicians train residents, etc. The educational efforts are not aligned with the flow of patient care, so that education becomes an "add-on" to what we do.	<input type="checkbox"/> We recognize that our training could be different to reflect the needs of our microsystem, but we haven't made many changes yet. Some continuing education is available to everyone.	<input type="checkbox"/> There is a team approach to training, whether we are training staff, nurses or students. Education and patient care are integrated into the flow of work in a way that benefits both from the available resources. Continuing education for all staff is recognized as vital to our continued success.	<input type="checkbox"/> Can't Rate
	5. Interdependence: The interaction of staff is characterized by trust, collaboration, willingness to help each other, appreciation of complementary roles, respect and recognition that all contribute individually to a shared purpose.	<input type="checkbox"/> I work independently and I am responsible for my own part of the work. There is a lack of collaboration and a lack of appreciation for the importance of complementary roles.	<input type="checkbox"/> The care approach is interdisciplinary, but we are not always able to work together as an effective team.	<input type="checkbox"/> Care is provided by a interdisciplinary team characterized by trust, collaboration, appreciation of complementary roles, and a recognition that all contribute individually to a shared purpose.	<input type="checkbox"/> Can't Rate

Appendix C (continued)

Patients	7. Community and Market Focus: The microsystem is a resource for the community; the community is a resource to the microsystem; the microsystem establishes excellent and innovative relationships with the community.		<input type="checkbox"/> We focus on the patients who come to our unit. We haven't implemented any outreach programs in our community. Patients and their families often make their own connections to the community resources they need.	<input type="checkbox"/> We have tried a few outreach programs and have had some success, but it is not the norm for us to go out into the community or actively connect patients to the community resources that are available to them.	<input type="checkbox"/> We are doing everything we can to understand our community. We actively employ resources to help us work with the community. We add to the community and we draw on resources from the community to meet patient needs.	<input type="checkbox"/> Can't Rate	
	Performance	8. Performance Results: Performance focuses on patient outcomes, avoidable costs, streamlining delivery, using data feedback, promoting positive competition, and frank discussions about performance.		<input type="checkbox"/> We don't routinely collect data on the process or outcomes of the care we provide.	<input type="checkbox"/> We often collect data on the outcomes of the care we provide and on some processes of care.	<input type="checkbox"/> Outcomes (clinical, satisfaction, financial, technical, safety) are routinely measured, we feed data back to staff, and we make changes based on data.	<input type="checkbox"/> Can't Rate
		9. Process Improvement: An atmosphere for learning and redesign is supported by the continuous monitoring of care, use of benchmarking, frequent tests of change, and a staff that has been empowered to innovate.		<input type="checkbox"/> The resources required (in the form of training, financial support, and time) are rarely available to support improvement work. Any improvement activities we do are in addition to our daily work.	<input type="checkbox"/> Some resources are available to support improvement work, but we don't use them as often as we could. Change ideas are implemented without much discipline.	<input type="checkbox"/> There are ample resources to support continual improvement work. Studying, measuring and improving care in a scientific way are essential parts of our daily work.	<input type="checkbox"/> Can't Rate
Information and Information Technology	10. Information and Information Technology: Information is THE connector - staff to patients, staff to staff, needs with actions to meet needs. Technology facilitates effective communication and multiple formal and informal channels are used to keep everyone informed all the time, listen to everyone's ideas, and ensure that everyone is connected on important topics. <i>Given the complexity of information and the use of technology in the microsystem, assess your microsystem on the following three characteristics: (1) integration of information with patients, (2) integration of information with providers and staff, and (3) integration of information with technology.</i>	A. Integration of Information with Patients	<input type="checkbox"/> Patients have access to some standard information that is available to all patients.	<input type="checkbox"/> Patients have access to standard information that is available to all patients. We've started to think about how to improve the information they are given to better meet their needs.	<input type="checkbox"/> Patients have a variety of ways to get the information they need and it can be customized to meet their individual learning styles. We routinely ask patients for feedback about how to improve the information we give them.	<input type="checkbox"/> Can't Rate	
		B. Integration of Information with Providers and Staff	<input type="checkbox"/> I am always tracking down the information I need to do my work.	<input type="checkbox"/> Most of the time I have the information I need, but sometimes essential information is missing and I have to track it down.	<input type="checkbox"/> The information I need to do my work is available when I need it.	<input type="checkbox"/> Can't Rate	
		C. Integration of Information with Technology	<input type="checkbox"/> The technology I need to facilitate and enhance my work is either not available to me or it is available but not effective. The technology we currently have does not make my job easier.	<input type="checkbox"/> I have access to technology that will enhance my work, but it is not easy to use and seems to be cumbersome and time consuming.	<input type="checkbox"/> Technology facilitates a smooth linkage between information and patient care by providing timely, effective access to a rich information environment. The information environment has been designed to support the work of the clinical unit.	<input type="checkbox"/> Can't Rate	

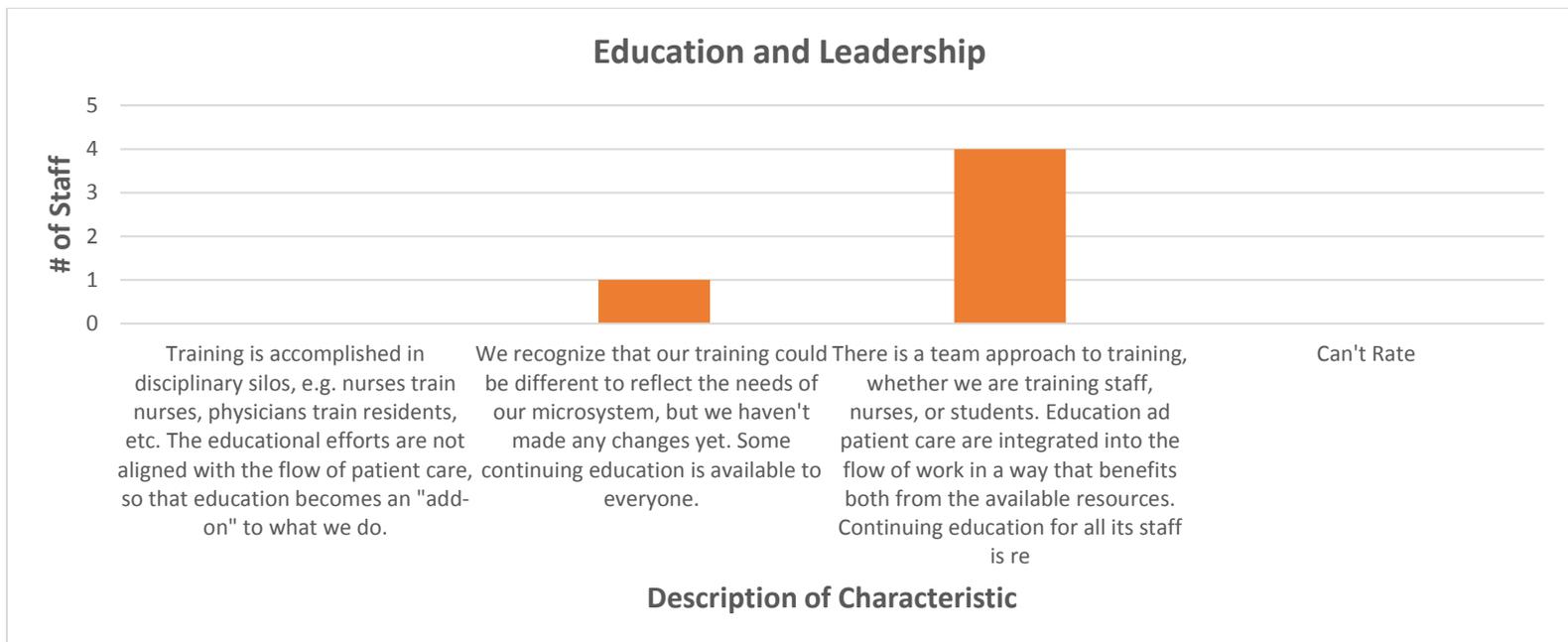
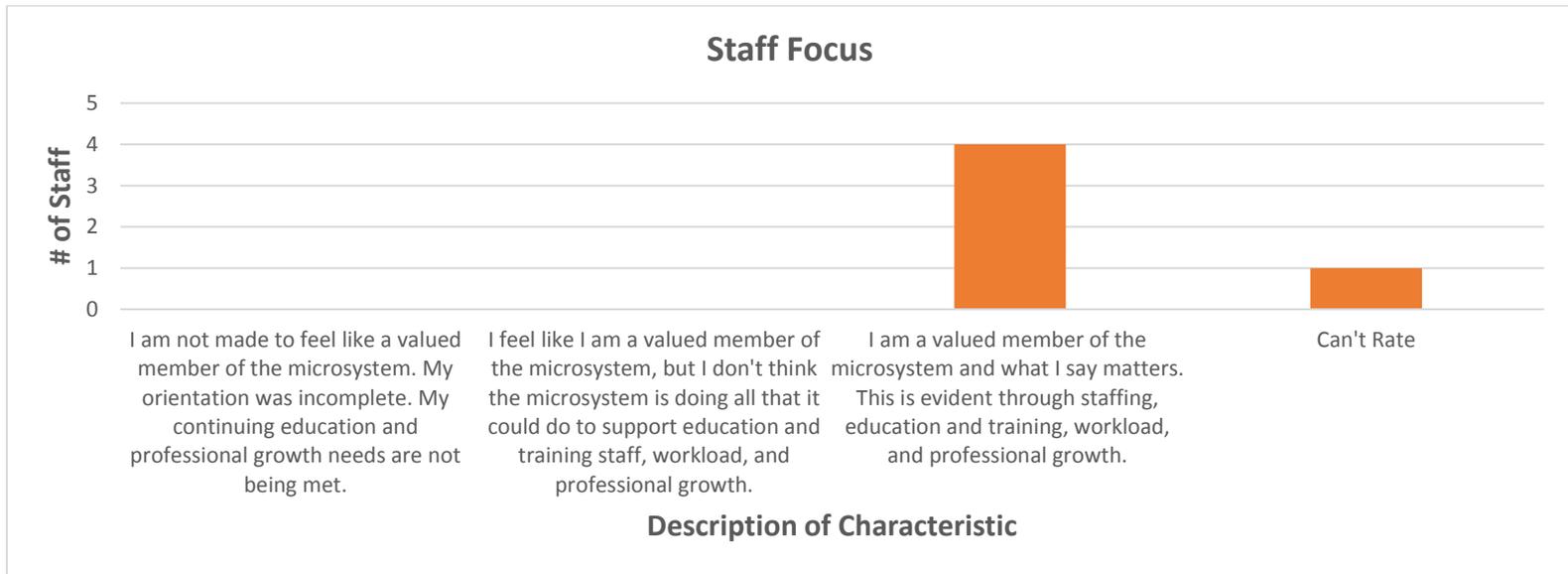
Appendix D

Figure 3
Microsystem Assessment Tool survey results



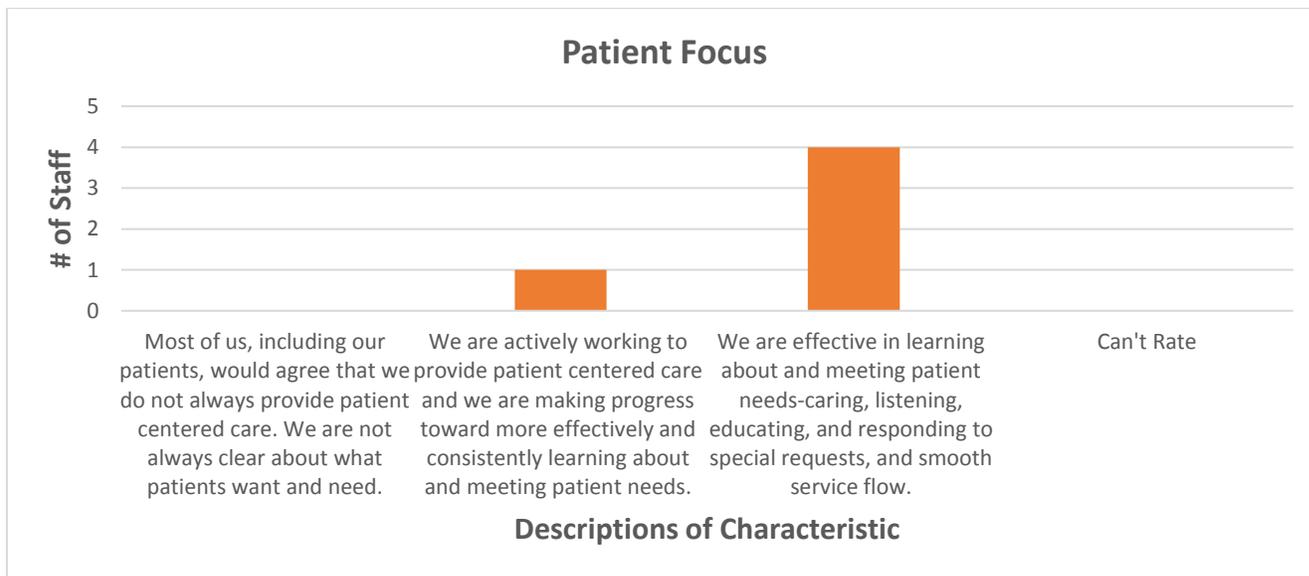
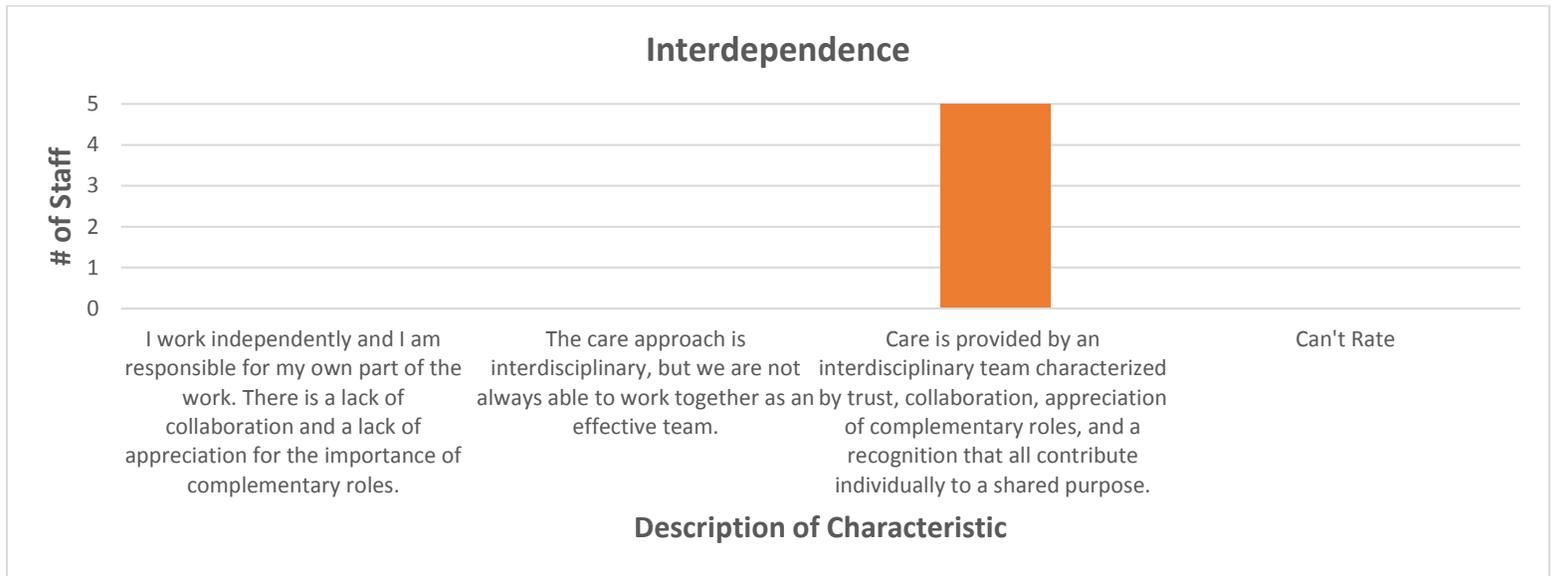
Appendix D

Figure 3
Microsystem Assessment Tool survey results



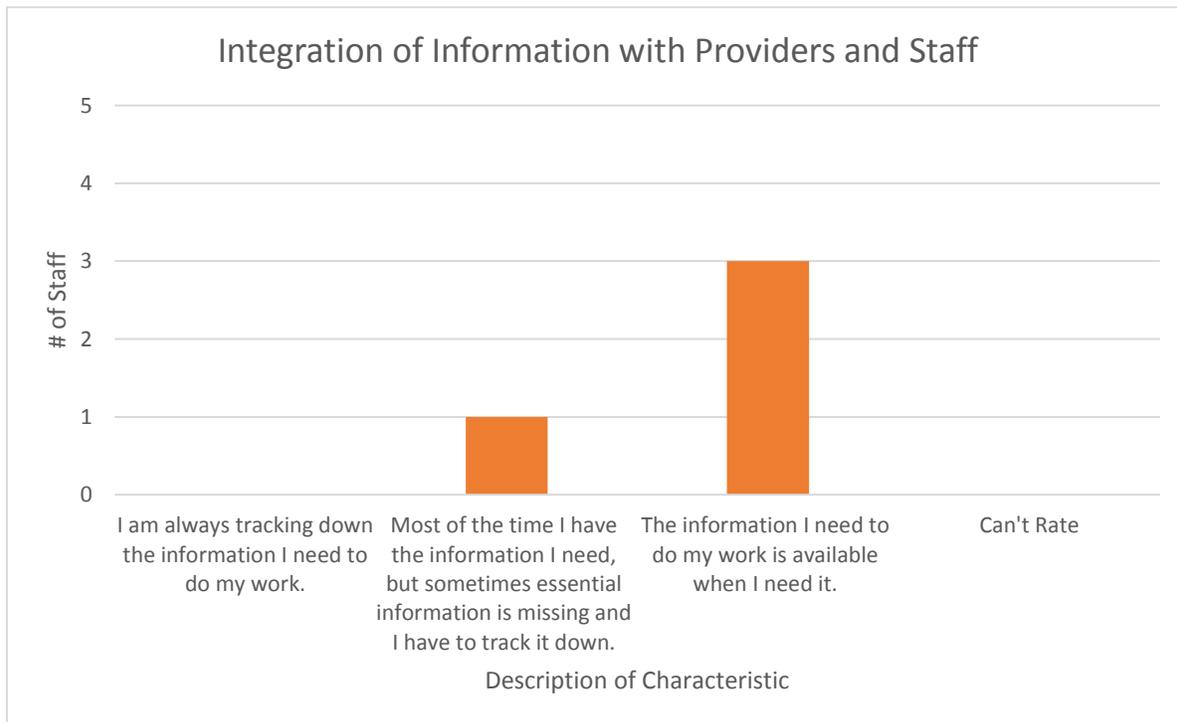
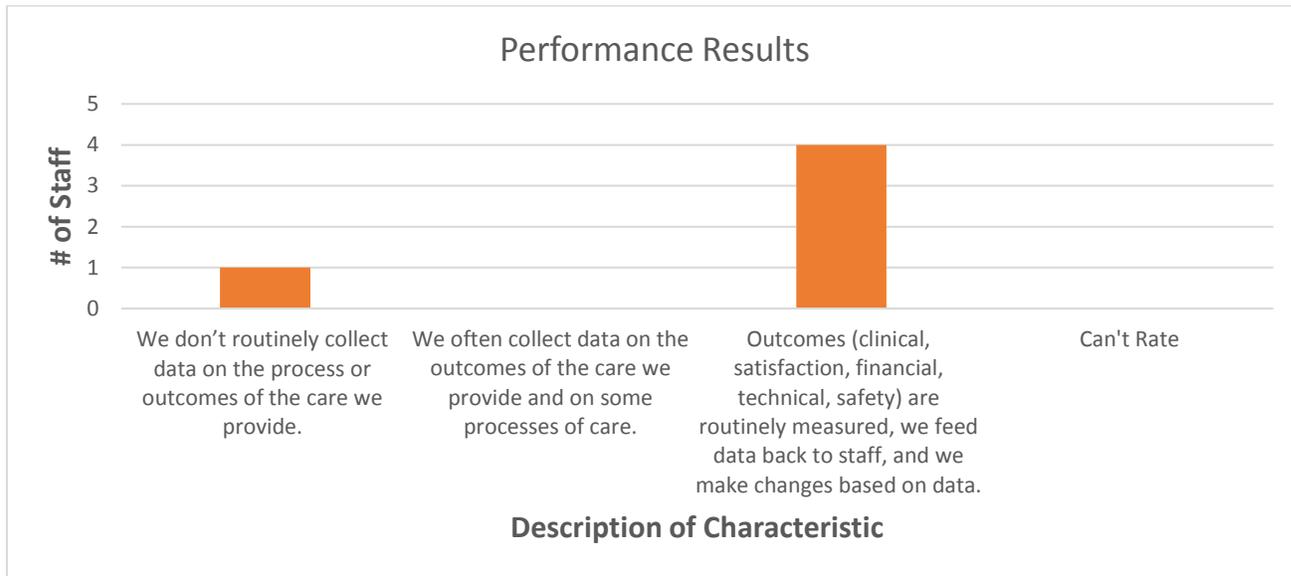
Appendix D

Figure 3
Microsystem Assessment Tool survey results



Appendix D

Figure 3
 Microsystem Assessment Tool survey results



Appendix E

Figure 4
Likert Survey

	<p>1. I am confident in doing all the assigned tasks for the "Scheduler" position.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>2. I am confident in doing all the assigned tasks for the "Workroom Clerk" position.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>3. I am confident in doing all the assigned tasks for the "Front Desk Clerk" position.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>4. I am confident in doing all the assigned tasks for the "Second Desk Clerk" position.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>5. Everyone should do all the tasks in a standardize way to prevent delays and errors.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>6. I am satisfied with the amount of training I received to do my job.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>7. Communication within the team can be improved.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	
	<p>8. The daily huddles have helped improve our team work flow.</p> <p><input type="radio"/> Completely Disagree</p> <p><input type="radio"/> Disagree</p> <p><input type="radio"/> Agree</p> <p><input type="radio"/> Completely Agree</p>	

Appendix F

Figure 5
Open-Answer survey

Which is your favorite position out of the 4: Scheduler, Workroom Clerk, Front Desk Clerk, Second Desk Clerk?

What is the most positive aspect of being a Scheduler?

What is the most positive aspect of being a Workroom Clerk?

What is the most positive aspect of being a Front Desk Clerk?

What is the most positive aspect of being a Second Desk Clerk?

What would you like to improve about the Scheduler position?

What would you like to improve about the Workroom Clerk position?

What would you like to improve about the Front Desk clerk position?

What would you like to improve about the Second Desk Clerk position?

Appendix G

Figure 6
Root Cause Analysis Diagram

