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Padhy, Rishikesh

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QUALITY IMPROVEMENT PROJECT UCR HEALTH: MYCHART ACTIVATION

By

Rishikesh Padhy

A project submitted for Graduation with University Honors

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University Honors

University of California, Riverside

Approved

Dr. Andres Gonzalez
Department of Neurology, University of California, Riverside: School of Medicine

Dr. Richard Cardullo, Howard H Hays Jr. Chair
University Honors

ABSTRACT

Quality measures are an integral part of the modern healthcare system. They outline the various processes that determine what a practice is doing well and where there are gaps in the system. Healthcare practices across the nation use the data provided from these measures to determine where they can optimize opportunities while addressing their weaknesses. UCR Health stands as a pillar in the Inland Empire healthcare system. As an entity that caters to such a large and diverse population, UCR Health is committed to provide the best quality of care to their patients. The purpose of this project is to review UCR Health quality improvement measures scores, identify specific measures, create quality improvement initiatives, and implement new processes to improve the score of this measure and as a consequence the quality of care provided by UCR Health enterprise . Observations and data collection was performed in over 30 patients, it was determined that the patients had an overall good experience with the EMR. Through extensive analysis of the data, it was determined that overall patient satisfaction can be further improved by a more in-depth tutorial of how to use MyChart to best of a patient's ability. The ultimate goal of the study is that by implementing these new improvements, a pathway is created to provide better care for the patients in the inland empire.

ACKNOWLDEGEMENTS

I would like to the dedicate this project to my grandparents. Auja, Aai, and Maa – thank you for your unconditional support and confidence in my abilities even when I did not believe in myself. Although you are not with us, your values and lessons will forever be a part of who I am as a physician and a person.

Dr. Gonzalez – Thank you so much for the experience of learning from you and providing me such a new perspective on medicine. Motivational Monday truly is a highlight of my week and allows to me to view life in an entirely new light. Your advice and leadership style are skills that I hope to integrate to as a physician in the Inland Empire.

Linda and Helen – I cannot thank both of you enough for the amount of patience and support you have given me. This project was a task I have never done before. From planning to executing, both of you were there with me and I am forever grateful for it.

Finally, to my family and friends – I would not have been able to complete this project without your help. Your constant support and ability to keep me grounded was crucial to my success and will never be forgotten.

INTRODUCTION

As a healthcare entity, it is imperative to provide the best possible care to the community and its members. As a newer member of the Inland Empire healthcare community, University of California, Riverside (UCR) Health is constantly finding their own ways to improve the quality of care given to their patients. Modern medicine no longer involves only the physician-patient interaction, but rather it has expanded to understand issues of patient safety, risk, population health, and quality among others. In regards to quality, several organization has established specific reports that provide a snapshot as to how physicians and/or medical centers are performing in regards to these a variety of quality measures. . In certain circumstances better quality measure not only translate into better care, but at time comes with incentive that ultimately favor best practices. . One of this processes is part of the Affordable Care ActUCR Health quality team works arduously to improve their measures through a variety of improvement projects.

The emphasis of this project was related to MyChart activation rate. MyChart is the patient portal that connect to the organization Electronic Medical Record (EHR) system. Patient portals (like MyChart) are of great importance in providing access and maintaining an open physician-patient communication. The goal of this project was two-fold: (1) Understand MyChart form the patient's point of view, and (2) improve the MyChart activation rates. The study was carried out by interviewing patients at Silver Oaks Women clinic while observing various aspects of clinic operations.

BACKGROUND

Ignaz Semmelweis was the first person to determine that frequent washing of your hands will lead to a lower mortality rate (Marjoua & Bozic, 2012). This practice of washing your hands frequently was not introduced until the middle 19th century, a practice that is so common now that it would be deemed negligent if not performed today. It was not until the early 1900's where the outcome of patients was thoroughly recorded and broken down into more specific demographics (Chun & Bafford, 2014). Fast forward to 2021, patient outcomes and medical innovation are at the forefront of the criteria for government funding and the pursuit of quality healthcare is at an all-time high.

The process of evaluating Quality Measures of UCR Health occurs during the first quarter (January-March) of the year. These 3 months are used to look at the data regarding the performance of UCR health during the previous year. This process allows for a detailed look into improvement opportunities for UCR Health. Another valuable part of the process is providing enough resources to what is already working well (*QPP Overview - QPP*, n.d.). For example, a patient population that has an increased rate of hypertension (high blood pressure) would lower the score of that Quality Measure and raises a point of improvement during the evaluation. The importance of this evaluation has increased since the introduction of Merit-based Incentive Payment System (MIPS) (Manchikanti, 2017).

The focus of this project was to determine opportunities for improvement in a particular Quality Measure and develop an intervention. This would then increase efficiency of UCR Health while also increasing quality of care to the patients. The chosen Quality Measure for this study was *MyChart Activation.*

UCR Health is a relatively new healthcare provider in the Inland Empire. UC Riverside has been in the field of medicine since 1974 as a part of a joint program with UCLA. Starting in 2013, UCR split away from UCLA and became their own medical school. This was the birth of UCR Health (*History of the UCR School of Medicine*, n.d.). Since it is new, it is important to build credibility amongst the community. During the first few years, the credibility came from the affiliation with UCLA but as UCR Health became more independent, they needed another way to build this credibility. The new way of credibility now comes from the implementation of Quality Measures and MIPS.

Becoming an accredited healthcare provider is a very in depth and lengthy process. It requires a lot of background checks and administrative work. Although UCR Health has split away from UCLA in terms of medical school, UCR Health still relies on other entities on getting their accreditation of physicians. UC Irvine and UC San Diego still play a heavy role with UCR Health and their administrative processes. This has helped UCR Health in establishing a name for themselves in the healthcare provider community. In order to continue to provide the best healthcare possible for their patients, UCR health continues to find way to improve their quality (MIPS) scores.

Quality Measures were a part of the Affordable Care Act (ACA) that was passed in 2010 as a way to evaluate and keep track of the quality of care given to patients (D'Amore et al., 2018). ACA also established the Center of Medicare and Medicaid Services (CMS) ((Bekelis et al., 2015). This group established the criteria which healthcare providers abide by. As mentioned earlier, Quality Measures is a way to quantify and see where improvements can be made within the system. Starting in 2017, Quality Measures are also now a way to determine how much

funding that the healthcare provider receives from the government. Quality Measures are now the basis of MIPS.

MIPS was first introduced in 2014 but was not fully implemented until 2017. Starting in 2017, healthcare providers have to submit their Quality Measure data in order to receive their allocated government funding (*How Do We Determine MIPS Eligibility? - QPP*, n.d.). Healthcare providers much reach a certain threshold in points in order to avoid getting penalized. They can also reach a higher threshold in order to gain more funding as a "reward" for quality care provided ("2020 MIPS: Summary of Cost Measures," 2019). The scoring of MIPS also changes every year in order to create a more optimized system. In 2017, the emphasis was purely on quality of care, which accounted for 60 % of the points given while cost effectiveness made up 0% of the points. However, over the next 4 years the emphasis on quality would lower and the emphasis in cost effectiveness increased. In 2020, the emphasis of the 2 criteria were equal at 30 % each ("2020 MIPS: Summary of Cost Measures," 2019). This is to ensure that changes made to the delivery of healthcare remain within budget and improve quality of care.

UCR Health has consistently been above the threshold, which allows them to get some of the incentive while staying out of the financial penalties that occur to those organization that fall below the predetermined threshold. The Inland Empire is an underserved community which makes it harder for the patient population to gain the necessary resources for improvement. Diabetes, hypertension, and obesity are 3 causes of death that Riverside County is above the national rate in (Napier & Curlee, 2018). Lack of resources and knowledge are two reasons why this rate is so high and why this project and UCR Health want to focus on reducing this rate. Since the Inland Empire is underserved, it is more difficult to get the necessary treatment to the patients. With an increase in access to information, patients are able to access their treatment

plan online, renew prescriptions and much more through their patient portal. Ease of access to these resources lowers the strain on physicians as they do not have to "waste" a visit in person or online to handle these relatively menial duties. According to Benjamin Purper, the Inland Empire suffers from one of the worst physician shortages in the entire country. There are approximately 39 physicians for every 100,000 people. This number is much smaller than the recommended amount of at least 70 physicians per 100,000 people. Any time saved to serve more people is essential and MyChart helps with this (Purper, n.d.).

Annual reports for UCR Health also gave very important insight on the importance of the utilization of MyChart. It was found that there is a very distinct correlation between the utilization and activation of MyChart and the outcome of the patient and their diagnosis. This increase in access to patient information by patients gives the patient an increased participation in their own healthcare. An increase in the online access to information to the patients also helps with the traffic at the call center in the clinic. With less calls going to the front desk, the front desk staff is less burdened in fielding phone calls on basic questions that can be answered using MyChart.

METHODS

When coming up with this project, it was very crucial to find an Quality Measure in need of improvement. This allows for there to be growth in the Quality Measure/ MIPS scores and be able to determine whether the intervention was successful after conducting it.

Members of the Inland Empire are inflicted by a lot of healthcare disparities. This leads to a high rate of diseases that are deemed as preventable. Initially, the project was supposed to be focused on high blood pressure, diabetes, or overall nutrition/obesity. This would be extremely beneficial to the current patient population of UCR Health. Once that path was determined, it was decided to go through an analysis of annual health reports through Tableau. There was a lot of data that was available for review. It became difficult to determine which topic to focus all the effort towards. It did not seem feasible to work on all three topics as there is a time element when it comes to this project. There were many meetings where more topics were discussed but none seemed to click. After meeting with the executive leadership of UCR Health, a new topic of interest came to light. This is when the team decided that MyChart was a great topic for this project.

Initially, there was some hesitancy when it came to choosing MyChart. It was a relatively new system that had not been accessed by many patients. Despite the recently implemented technology, the executive leadership seemed determined to make this the emphasis of the topic. Once the topic was chosen, it was time to research MyChart. MyChart is an Electronic Medical Record keeping system that is used by the medical staff to keep medical records. Initially, it was used strictly by staff to upload a lot of administrative documents such as insurance, identification, referrals, and other essentials to patient care success. This used to be strictly for

the medical staff but was now being implemented to use for patients. With this change, there was going to be more transparency with patients.

In order to gain more information about the impact of MyChart, A UCR Health clinic had to be chosen. Due to constraints of this project, only one site could be chosen. This process required using Tableau to compare and contrast patient populations and their MyChart activation and usage rates. There were 3 sites that were of interest: Citrus Towers Multispecialty Clinic, Silver Oaks Women's Health Clinic, and UCR Health Neurology. It was determined that Women's Health Clinic was going to be the site of emphasis. This is because of the activation rate and usage of the Women's Health Clinic was very high in comparison to the other two clinics.

A very large difference in between activation rates of one clinic compared to the other two clinics posed a variety of questions. The main question was what exactly Silver Oaks is doing to have such a large activation rate compared to the other clinics under the same healthcare entity. It was determined that clinic observations were necessary in order to determine what difference in processes are present and if they can be replicated in the other clinics.

In December of 2021, observations for Silver Oaks were done over a 2 day period. Each day was comprised of sitting in the back of the front desk room and talking to the staff in the back. The front desk comprised of 2 receptionists. One of the receptionists focused on the documents that patients are bringing to their appointments and the other receptionist focused on handling check ins while walking patients through the forms that needed filling out. The receptionists noted that since the implementation of MyChart, the traffic of calls have gone down significantly which makes their job much easier. They also noted that once MyChart was initially launched, they found that many people would try to confirm their appointments or submission of

documents over the phone. This essentially negated the purpose of MyChart but that trend only lasted for a very short period of time. Once observations were done, it was time to create a set of questions to ask patients.

The process of creating a question list is fairly tedious and intricate, an aspect of the project that was not anticipated to be like this. In order to gather data that was unbiased, the language of the questions must be direct and not have any vernacular that led towards a certain answer or way of thought. This process took a lot of trial and error to create questions that led to comprehensive answers while maintain the integrity of the experiment. The following list of questions were asked to the patients:

1. ***Are you signed up for MyChart?***
    a. ***If yes, how often do you use MyChart? (How many times were you referred to MyChart before activating)***
        i. ***What is your most often used feature of MyChart***
    b. ***If not, is there any hesitancy regarding signing up?***
2. ***On a scale of 1-5, how easy is the process of signing up for MyChart?***
    a. ***Were there any resources you wish you had while signing up***
3. ***How has your experience with MyChart been?***
    a. ***If positive, what appeals to you about MyChart***
    b. ***If negative, what could be improved for MyChart***
4. ***On a scale of 1-5, how comfortable are you with downloading/utilizing apps?***
5. ***Did you have any hesitancy while signing up for MyChart?***
6. ***Any other comments regarding your MyChart experience that you want me to be aware of***

Now that the questions were finalized, it was time to go into Silver Oaks and talk to patients one on one and gather information for this project. Prior to going into the clinic, it was essential to gain permission for the clinic's coordinator so normal operations are minimally disturbed, if at all. To ensure that the staff and patients were not troubled by this questioning, the questioning was done in the waiting room of Silver Oaks. This allowed for the patient to answer questions prior to being seen by their physician and after they had checked in with the front desk staff. This method was chosen instead of questioning patients after they got escorted to the back of the clinic to maintain privacy at a vulnerable time for the patient.

Another measure that was taken to make patients feel more comfortable and open to participating into the experiment was to not take any Health Protected Information. This included name, date of birth, race, and age. This also allowed the experiment to be conducted without a submission for Institutional Review Board (IRB) approval. Without having to submit for approval, it allowed for the experiment to run on the terms of team as this experiment was on a time crunch. This also allowed for flexibility for the experiment. With an IRB it is necessary to not deviate from the plan that was previously approved by the board. Due to the nature of patients and the availability of questioning the patients. It was very crucial to take advantage of all possible time for questioning while constantly assessing whether the information that was being gathered is useful to UCR Health and leads to a positive change in MyChart activation. The information gathering period lasted from February 3, 2022 to February 21, 2022. There was a point of emphasis to gather information

on certain days of the week to ensure there was no variability in the patient population that was at the clinic.

OBSERVATIONS

Observations played a crucial part of the experiment. This set a precedent for what to expect from the clinic from a workflow perspective. Checking in at the clinic was standard that did not deviate from other clinics. Patients went through a temperature check prior to entering the clinic and talking to the front desk staff. The following process varied depending on the patient type. If the patient was a returning patient, they were simply checked in. If they were a new patient, they were greeted with a packet of documents to fill out. However, this has changed significantly due to MyChart. According to the front desk staff, the onboarding documents are available for submission through MyChart. In order to submit this document, the patient must have an active MyChart account. This change in the workflow allows the patient to start their experience with UCR Health with the use of MyChart. Having MyChart introduced so early on makes the patient much more comfortable using the program. This significantly cuts down on the work done by the front and back staff. Instead of having to scan and then upload the documents, the patient can take the initiative for their healthcare and ensure that documents will be recorded.

Covid-19 played a very crucial part in MyChart activation for Silver Oaks. Prevention of spreading the virus was crucial to getting through the pandemic as safely as possible. Silver Oaks made the decision to go with telemedicine as their main form of meeting with patients. Privacy in healthcare is extremely crucial and to maintain proper cybersecurity and overall proper management of telemedicine, UCR Health required patients to log into their appointments through MyChart versus other video conference apps such as Zoom or Google Meets. Silver Oak's commitment to having online appointments led to secondary effects which integrated MyChart into the lives of patients.

There were quite a few trends that were observed by the back-room staff that were deemed notable. They noted that MyChart activation was typically resisted by mainly elderly population. This was contradictory to the information that was found in the data in tableau. Tableau showed that patients around the late 20's and early 30's showed a higher inactivation rate of MyChart. The back staff were surprised when presented with that information. A key part of MyChart activation during in person visits is asking the patient multiple times throughout the visit if they have been offered the MyChart activation link. The front desk is the first point of contact while the back staff acts as a safety net for this process. The back staff noted that the activation link tended to be glossed over by patients that were older. This was usually due to not being comfortable with technology but also not accessing their email until they went home. However, the back staff also noted that there were quite a few patients that activate MyChart prior to making it to the back. Immediate sign up indicates an appeal to activating MyChart for patients. Having made these observations provided optimism towards the interview portion of the experiment.

DATA

There were 30 patients that were interviewed over a span of 18 days with 7 total visits in that period.

1. **2/3/2022**
    1. Not Signed up for Mychart, there was an age gap, primary care taker are daughters. Not presented with the option
2. **2/3/2022**
    1. New Patient who activated on site
3. **2/3/2022**
    1. Activated on first visit
    2. 4 ease of sign up
    3. Uses as needed basis
    4. No concerns and very easy to use
4. **2/3/2022**
    1. Not signed up
        1. Physician out of network. No from the area

2/3/2022

. Activated First visit

a. MyChart is glitchy, username and password needs to be reset often

b. 5 ease of sign up

c. Possibly joining Riverside Medical and UCR Health records

2/3/2022

. Did not agree to Interview

2/3/2022

. Did not agree to interview

2/4/2022

. Activated, had to ask about MyChart versus being approached

a. MyChart tends to disrupt sons medical records

b. 2 ease of sign up

c. The interface can be confusing and can be improved

2/4/2022

. Activated on initial visit

a. 4 ease of sign up

b. Uses MyChart for prescription refill

c. No Concerns about MyChart

2/4/2022

. DId not activate MyChart

1. LAnguage barrier preventing proper usage

2/4/2022

. Did not agree to interview

2/4/2022

. Did not agree to interview

2/6/2022

. Activated on first visit

a. 5 ease of sign up

b. Most used after visit notes and as needed

c. No concerns very easy to use

2/6/2022

. Activated Weeks after initial visit

a. Used sparingly

1. Mainly for appointments

b. 5 ease of sign up

c. No concerns

2/6/2022

. Did not agree to Interview

2/6/2022

. New Patient (not signed up yet)

2/7/2022

. New Patient (signed up on site)

2/7/2022

. Activated after initial visit

a. Uses after eerie appointment

1. After visit notes

b. 4 ease of sign up

c. No Concerns

2/7/2022

. Did not agree to Interview

2/15/2022

. Did not agree to Interview

2/15/2022

. New Patient (Did not activate on site)

2/15/2022

. Did not sign up for MyChart

a. Seemed unnecessary

b. Did not attempt to sign up

2/15/2022

. New patient (Signed up on site)

2/15/2022

. Activate after initial visit

a. Uses it about once a month

1. Prescription, notes, and medical records

b. 3 ease of sign up

c. No concerns

2/15/2022

. Did not agree to Interview

2/17/2022

. New patient (Did not activate on site, willing to)

2/17/2022

. Did not sign up

a. 1 ease of difficulty

1. Frustrated with sign up process

2/21/2022

. Did not agree to interview

2/21/2022

. New Patient (did not activate on site)

2/21/2022

. Activated after Covid

1. Necessary for telehealth

a. 4 Ease of sign up

b. Telehealth and prescription most used

c. Can be more visually appealing/ less cluttered

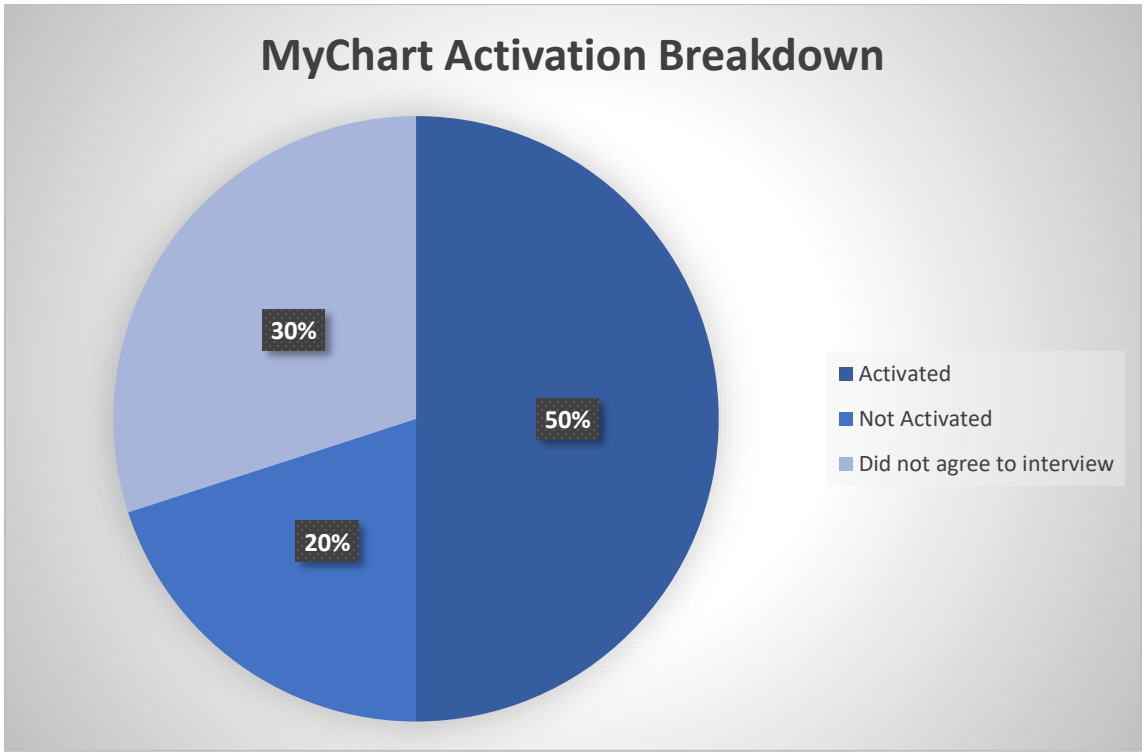

Figure 1:

The chart above displays the breakdown of MyChart activation among the 30 patients interviewed. Exactly half of the patients have activated with the potential to be more as 9 patients refused to be a part of the study. It is important to recognize that this is only to indicate activation rather than experiences with MyChart.

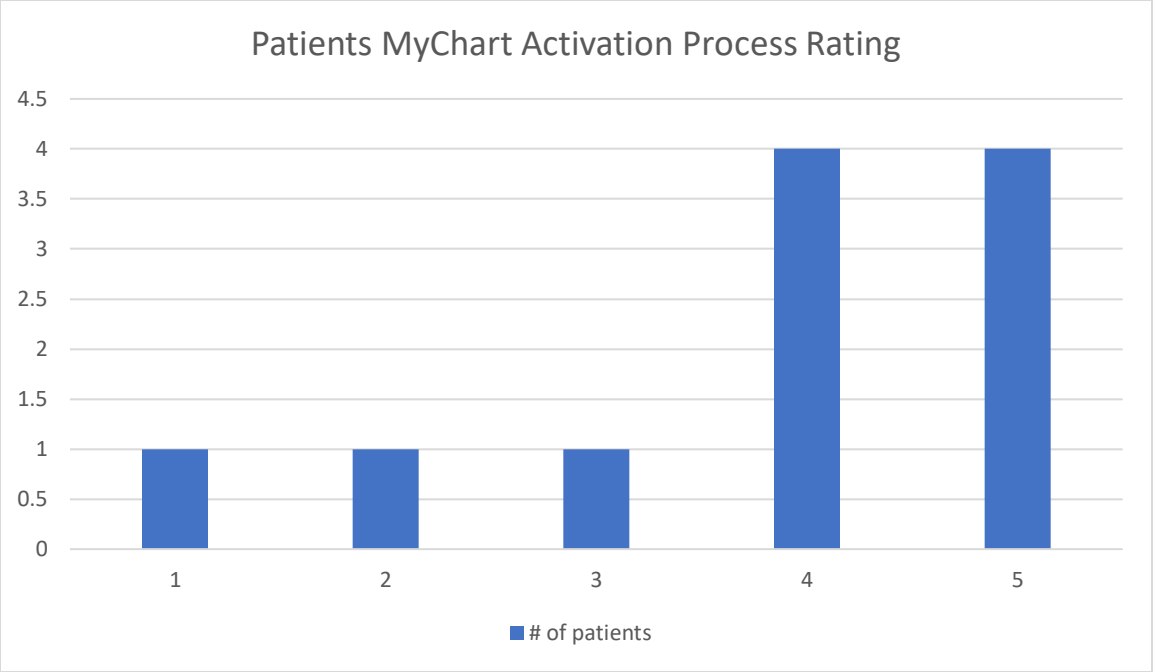

Figure 2:

The figure above shows the way patients rated their experience of MyChart on a scale of 1-5, with 1 being the worst experience and 5 being easiest sign-up process. A majority of the patients had a very good experience when it came to signing up for MyChart. It is important to note that the number of people answering this question does not equal to the number of people who have activated MyChart. 4 patients that agreed to interview signed up for MyChart onsite during their initial visit to the clinic.

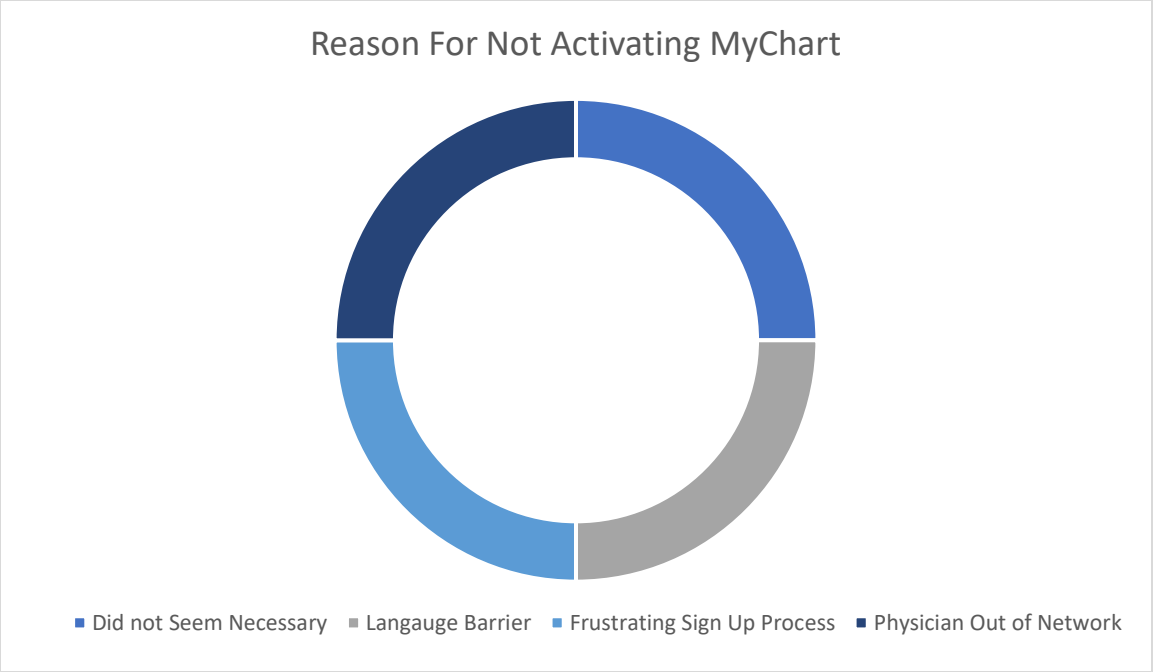

Figure 3:

The figure above outlines the main reasons why patients did not activate MyChart. Although all reasons are important, there is not much that can be done when it comes to the network of UCR Health physicians. However, the other 3 reasons can be negated from implementation of certain interventions. Sign Up aides can ease the frustration from the sign-up process. The lack of knowledge given to the patient regarding the usefulness of MyChart can be reversed by having information readily available to patients in varying mediums. The language barrier can be helped to a certain degree, but this requires cooperation from the MyChart software developers themselves.

CONCLUSION

MyChart is an extremely useful tool that can be used for the success of patients. Due to the nature healthcare and the sensitive information that is required to provide optimal services, new technology is often met with a certain resistance. MyChart in UCR Health clinics is no different. However, through this experiment it was concluded that MyChart has been met with relatively open arms. It can also be seen that there is still a lot of work that needs to be done to have MyChart activation and usage be the status quo amongst patients across all UCR Health and not just the Women's Clinic.

The nature of this project was time sensitive, so certain parts of the project that were meant to be completed were combined into other phases or delayed. One of those parts was some sort of intervention that would help patients understand the importance of MyChart. Currently, there are only aides that are very general and do not provide any insight on the various tools that can be used in MyChart. Empowering patients with this knowledge would push them toward activating MyChart but also utilizing it to maximize their benefits.

Further steps of this experiment must include a study of the operations of all clinics in the UCR Health network. This will provide proper assessment of how the clinics operate and where MyChart activation can be promoted. As mentioned earlier, activation is only half of the project. Once activated, it is crucial to make sure that patients continue the various tools offered by MyChart to ensure maximum benefit. There are many ways that the next phase of this experiment can go. A tool that would seem to attract a lot of patients would be the ability to schedule appointments online. Although that this is not feasible at the moment, it is an aspect of MyChart that UCR Health should consider enticing their patients with.

Overall this project provided great understanding on clinic operations of UCR Health and provided extremely important insights of patient's access and barriers to their own electronic health record, medical care, and ultimately the quality of care they receive.

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