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Telephone Usage at Mercy Hospital's Primary Care Practices

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Telephone Usage at Mercy Hospital's Primary Care Practices

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ABSTRACT

Background: Mercy Hospital, located in Portland, Maine, has a growing number of primary care practices in Falmouth, Gorham, Standish, West Falmouth, Windham, Yarmouth, Portland, and South Portland. Along with primary care practices, Mercy has a number of specialty care practices. I interned at Mercy Hospital for my field experience during graduate school and worked on a project that looked into centralized services. One of the services this project considered was the telephones. Before considering centralizing phones for all of Mercy Hospital practices, a review of how the phones currently work needed to be considered first. This capstone focuses on Mercy's primary care practices, reviews how their phone process currently works, reasons for patients calling, and then researching best practices for the telephones.

Methods and Results: This capstone assessed literature on phone inefficiencies, reasons for phone calls, ways to reduce phone calls, concerns telephones at the practices, and methods that could be used. Most importantly, quantitative data and qualitative data were collected from the primary care practices. It was found that the main reasons for patients calling are for prescription refills and appointments and there are inconsistencies in how the telephones are used at each practice.

Conclusion: The patient portal is a key tool that should be promoted more to patients to help reduce the number of calls. In order for this to happen there needs to be more buy in from all staff at the practice. Moving the phones away from the front desk would help create more efficient telephone usage by having more timely calls. Overall there needs to be more consistency in how the telephones are used at each primary care practice.

INTRODUCTION

Primary care practices address a majority of patients' health care needs and were developed to serve as a medical home. Primary care practices include family physicians, general internists, general pediatricians, nurse practitioners, and physician assistants (Bodenheimer & Grumbach, 2007, p.3). The Institute of Medicine defines primary care as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Bodenheimer & Grumbach, 2007). Primary care's vision is embodied in the four pillars holding up the primary care home: first contact of care, continuity over time, comprehensiveness, and coordination. Through a patient's eyes, the vision promises "if I get sick, I can see my primary care physician soon; I have been seeing her for many years; she takes care of most of my medical problems; and if I need other doctors, hospitals, pharmacies, or other care outside her offices, she organizes it" (Bodenheimer & Grumbach, 2007, p.3).

Telephonic communication is an important consideration when it comes to the six domains of quality care (safety, efficiency, efficacy, equity, patient-centeredness, and timeliness) (The Six Domains of Health Care Quality, 2015) due to the fact that the telephone is the most common mechanism by which patients move through a practice (Woodcock, 2009). The telephone is often a patient's first point of contact with the health care system (LaVela, Gering, Schectman, Locatelli, Weaver, & Davies, 2013). Before a patient comes in for an appointment they will most likely call. Thomas Bodenheimer and Kevin Grumbach state that in adult primary care, 25% of patient contacts are made from the telephone and in pediatrics, this proportion is higher (Bodenheimer & Grumbach, 2007). Even after their appointment, patients use the telephone to communicate often. Most of the time patients are calling to clarify their medication dosage or care of instructions. This is not unexpected since most patients leave the doctor's office with only what they have absorbed during the exam (Woodcock, 2009). The patient wants a practice to deliver timely and accurate information without having to call and wait through the telephone system, leave a voicemail message, and deal with the inconvenience of phone tag (Woodcock, 2009).

In an examination, by LaVela et al., of primary care delivery across several countries, it was reported that primary care providers in the United States are among the least likely to offer

after-hour care options (LaVela et al., 2013). Telephone triage and consultation systems have become an integral component of health care systems throughout the world. However, efforts are needed to overcome barriers for effective telephone care delivery (e.g. long time-to-answer, complex pathways/transfers, and lack of call resolution) to meet primary health care needs (LaVela et al., 2013). Patients perceive fair/poor quality of care when their calls involve transfers, needed information not received, and calls not answered in a timely manner. Telephone systems and call resolution processes in primary care have a direct impact on a patient's outcome, such as quality of care, and these inefficiencies may result in delays in care received (LaVela et al., 2013).

By working as an administrative float at Mercy Medical Associates (MMA) practices, I see first hand the impact telephone communication can have with a patient. If a patient feels they are put on hold for too long they will call back in frustration and will let you know. The telephones at Mercy Hospital's primary care practices are extremely busy. There needs to be research on figuring out the most efficient way in which they can manage the high call volume. Currently at Mercy, each practice has its own direct phone line that patient's call, which can contribute to a lot of patient call in. The role of the front desk is to check in/out the patients as well as answer the phones. The daily call volume for each primary care practice varies. It can range from one practice receiving an average of 384 calls per day to another practice receiving 83 calls per day (Mercy Hospital, 2014). Most practices are dealing around the mid 200's for an average daily call volume. Exploring the telephones at the primary care practices can help MMA practices figure out the most efficient way in which they can manage their call volume.

I worked on a project for centralizing services for the MMA practices during my field experience at Mercy Hospital, the summer of 2014. This project looked into centralizing phones, referrals, scheduling, financial assistance, and patient registration. After talking to Kim Gardner, the Director of Primary Care, we thought it would be best if this capstone focused on the busy telephones at the primary care practices.

METHODS

INITIAL INTEREST

Initial interest for this project was developed during my field experience at Mercy Hospital in the summer of 2014. One of the summer projects I worked on was with Judi Hawkes,

the VP of Patient Practices. Together, we worked on the idea of centralized services for MMA practices. We looked into centralizing services for phones, referrals, scheduling, financial assistance, and registration. I became interested through the research I was doing and the business plan I was helping with for this project. Once the summer ended, I discussed with Judi the idea of continuing to work on this project for my capstone and she referred me to Kim Gardner, the Director of Primary Care, to help me. The development of this capstone received help from staff at Mercy Hospital as well as coursework from my Graduate classes. Classes that helped with this capstone are:

- Quality Improvement: apply quality and performance improvement concepts and articulate professional opportunities and settings for quality improvement
- Health Information Management: apply meaningful use and understand system compatibility in the health care setting
- Health Systems Organization and Management: understand systems thinking, organizational change, and system flow
- Social and Behavioral Health: ability to research and synthesize literature

IHI QUALITY DOMAINS

The six quality domains from the Institute for Healthcare Improvement (IHI) was used as the focus of this project. The six domains are: safety, efficiency, efficacy, equity, patient-centered, and timeliness. Each of these quality domains are in important for a medical practice to consider when it comes to providing quality care to patients. The FOCUS-PDCA model was used to help form structure for this project. FOCUS-PDCA is a model for improving a process and the model name is an acronym that describes the basic components of the improvement process. The steps are:

- F**ind a process to improve
- O**rganize an effort to work on improvement
- C**larify current knowledge of the process
- U**nderstand process variation and capability
- S**elect a strategy for continued improvement

The PDCA part stands for Plan, Do, Check, and Act. The PDCA cycle is a way to continuously check the progress in each step of the FOCUS process (FOCUS-PDCA, 2015)

LITERATURE REVIEW

A literature review was conducted to identify telephone inefficiencies at primary care practices, reason for patient call in, how to help reduce the number of incoming calls, issue and concerns that go into the telephones, and looking at different telephone methods. Grey and professional literature was reviewed via textbooks and articles provided by the Director of Primary Care at Mercy Hospital. Some telephone methods were found using websites that were located by using google searches. Key words in these searches included, "Automated Attendants," "Patient Portals," and "Best practice telephone methods."

QUANTITATIVE DATA COLLECTION AND ANALYSIS

Quantitative data was used to 1) examine the number of inbound, outbound, and internal phone calls each primary care practice receives, 2) gather information on how many calls are received by the primary care practices per hour, and 3) provide the volume for each type phone call that comes into the practice (i.e. prescription refills, schedule appointment). This data was collected through reports run by the primary care practice managers. The Director of Primary Care at Mercy Hospital then collected this information. A quantitative data analysis was performed and included a descriptive analysis of the volume and reason for incoming phone calls. An application to the USM Office of Research Integrity was completed and subsequently, USM's Institutional Review Board (IRB) approved the quantitative data collection and analysis. The data collection did not occur until the approval was obtained.

QUALITATIVE DATA COLLECTION AND ANALYSIS

Key Informant Interviews

Qualitative interviews were conducted with Mercy Hospital's primary care practice managers. Informed consent was obtained from all of the study participants. The consent form and the interview questions were approved by the University of Southern Maine's IRB before any portion of the interviews were conducted. The information that was collected from the interviews was compared and analyzed against what each practice manager said. A total of three primary care managers from Mercy were interviewed. The interview questions can be found in the Appendices. The interviews were informal and conversational, while remaining focused on the topics of each interview question. All of the managers interviewed had knowledge on Mercy's telephone system and their front office flow with the telephones.

Calling Practices

Qualitative information was gathered by phone calling the primary care practices and documenting their answering service. This qualitative data explored how each practice goes about their phone system. Approximately two phone calls were made to each practice to account for consistencies and inconsistencies. The table used to record information can be found in the Appendices.

DEFINITIONS

The following terms were defined to ensure consistent interpretation of information.

- Auto Attendants: a system that answers and routes calls after prompting the caller (Woodcock, 2009)
- Call Center: offices that are used for the purpose of receiving and transmitting a large volume of requests by telephone (What is a call center)
- Express Care: also known as urgent care, is the provision of immediate medical service offering outpatient care for the treatment of acute and chronic illness and injury (American Academy of Urgent Care Medicine)
- Focus Framework: a model for improving a process and the model name is an acronym that describes the basic components of the improvement process (FOCUS-PDCA, 2015)
- HIPAA: The Health Insurance Portability and Accountability Act. Protects the privacy of individual identifiable health information (U.S. Department of Health & Human Services)
- Medical Assistants: work alongside physicians, mainly in outpatient or ambulatory care facilities, such as medical offices and clinics (American Association of Medical Assistants)
- Patient Portals: serve administrative functions, such as scheduling appointment, getting lab results, sending patient reminders, providing clinical summaries, refilling prescriptions, and so on (How to Optimize, 2013)
- Primary Care Practices: the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health needs, developing a sustained partnership with patients, and practicing in the context of family and community (Bodenheimer & Grumbach, 2007).

- Receptionists: perform administrative tasks, such as answering phones, receiving visitors, and providing general information about their organization to the public and customers (Bureau of Labor Statistics)
- Refill: Next bottle of pills has already been approved and needs to be filled by pharmacists (Woodcock, 2009)
- Renewal: Once refills are used up and patient needs new prescription (Woodcock, 2009)
- Telephone Triage: Nurses help patients over the phone, answering their health questions and determining what kind of care they need (Kumar, 2011)

RESULTS

LITERATURE FINDINGS

Phone Inefficiencies

The telephone usually functions well when it comes to brief exchanges with patients (Bodenheimer & Grumbach, 2007). For the most part, telephone care happens on an impromptu basis and in response to immediate patient care issues, such as: new symptom concerns, medication refills, informing patient of abnormal results (Bodenheimer & Grumbach, 2007). Elizabeth Woodcock describes the inconvenience of phone tag, which can be very inefficient for the patient, as well as the practice. An example of this would be when the receptionist transfers the patient to the scheduler, the scheduler cannot determine if the patient is sick enough to deserve one of the practice's few slots for acute appointments, they are then transferred to the nurse, the nurse puts the patient on hold to consult with the physician, and then finally the patient is transferred back to the scheduler (Woodcock, 2009). The accumulated time for this could be up to 30 minutes. The amount of value-added time to the practice is approximately three minutes, and to the patient, none (Woodcock, 2009).

Elizabeth Woodcock (2009) also tracked phone calls in family practices and found as many as 30% of the calls received were from repeat callers. In some cases, this meant the receptionist or phone triage nurse had to field the same inquiry twice, look for the same chart twice, and engage medical staff twice (Backer, 2002). It is important to emphasize to callers that the call will be returned by the end of the day, unless it is urgent (Backer, 2002).

Reason for Phone Calls

Most encounters with physicians include being prescribed medication – an initial prescription, a change in medication, or a prescription refill. The calls from patients about routine prescription matters contribute significantly to most practices' in-bound call volume (Woodcock, 2009). The telephone is a common renewal protocol that practices use when it comes to patients wanting to refill their prescriptions. Many patients are oblivious to the difference between “renewal” and “refill” (Woodcock, 2009). They will just contact the practice to obtain their pills whenever they run out. Patients should only be calling the practice for renewals, not refills, since a refill automatically means the next bottle of pills has already been approved and just needs to be filled by the pharmacist (Woodcock, 2009).

Many questions coming in have to do with billing and referrals. Patients will often have questions as to “why they were billed such a high amount,” “I thought my insurance covered this,” and “why am I being billed.” Referrals can account for long delays and wait times between primary and specialty care practices. Patients are often informed they are being referred, however they will have little or no influence on the process or knowledge on the expected wait (Murray, 2002). This can lead to an increase in patient telephone calls and when the patient feels as though the wait becomes unbearable, they will resort to calling their primary care office to help themselves be seen sooner (Murray, 2002).

Appointments are another reason for incoming calls to a practice. A call about an appointment could vary from a patient wanting to schedule, cancel, move, or confirm their appointment. They could also be calling to schedule more than one appointment as well (Woodcock, 2009). Scheduling patients can lead to long phone calls, since many times more questions could arise. There can also be the issue of staff answering the phones and then must leave their work station to hunt down medical staff for permission to schedule certain appointments. By leaving the work station, patients are left on hold and incoming lines could be tied up (Woodcock, 2009).

Ways to Reduce Phone Calls

Reduce unnecessary repeat calls by setting a policy in a practice that regards a timeframe for returning calls to patients, referring physicians, and other callers. It is recommended that no more than two hours to return a call due to courteous to the patient waiting for your call (Woodcock, 2009). If the patients question cannot be resolved within the two hours, then call

them back about the status of your response. This helps prevent patients from calling back, again and again, asking the same question. Repeat calls can tie up staff time unnecessarily and foster caller frustration and anger (Woodcock, 2009).

Appointments are another contributing factor as to why patients are calling. With appointments, it is important to train triage nurses on how to schedule. This way they can avoid sending the caller back to the receptionists and not have to worry about losing the patient in a transfer. Also, schedule appointments with patients within a reasonable time frame and while they are checking out. This can help prevent them from calling back later to schedule another appointment.

Reminders can also reduce telephone demand. Sending out reminders to patient's four to five days in advance for their appointment or calling two days in advance can help reduce patient call in (Woodcock, 2009). Even though it might be a small additional cost it will likely be offset by a great savings in the amount of time that staff spends on handling incoming call from patients who cannot recall the exact time or day of their appointment. Many practices use automated telephone reminder calls to patients. These systems work well and can be integrated into most practice management systems (Woodcock, 2009).

Calls from patients about prescriptions contribute significantly to most of the inbound calls at practices. When it comes to refills, there has to be consideration as to if the patient is receiving what they need. There are several ways to reduce call volume for prescriptions. One-way is to set telephone renewal protocols (Woodcock, 2009). A few different protocols that have been implemented by medical practices include:

- Providing patients with a small supply based upon physician direction and given appointment to address renewal;
- Patients are asked to contact pharmacy to request a written order identifying all details of the medication to be sent to the physician who would be able to approve the order;
- Patients are directed to practice's web portal to generate electronic request; or
- Patients are asked to schedule appointment as soon as possible, during which they can talk with the physician face-to-face for renewal request (Woodcock, 2009).

There is also the option of dedicating a phone line to prescription renewals or integrating the process into a web portal. The phone lines could have live operators responding, however many practices opt to use voicemail (Woodcock, 2009). This can lead to lots of messages at the

end of the day saying, “Hi, this is Jane Smith, and I need my blue pills refilled.” This can lead to a game of phone tag as the nurse tries to figure out who Jane Smith is and gather more information on the “blue pills” (Woodcock, 2009). The web portal is more efficient because patients can be directed through the request and it is legible and documented. Other ways to handle prescription calls is to: transmit prescriptions to pharmacies electronically, write legibly whenever faxing prescription or delivering manually, instruct the patient to call pharmacy instead of practice for routine refills, renew prescriptions during patient encounters, carefully schedule follow-up visits in conjunction with prescription periods, and establish efficient renewal protocol such as creating written guidelines for telephone renewals and documenting all medication renewals (Woodcock, 2009). There is also the suggestion that perhaps there should be a different policy so that patients are receiving 18-months worth of refills, or for hard substances, 28-day refills. The 28-day refill could help eliminate more work and makes sure that refills are not due on the weekends.

Billing and referrals are another reason for patients to call in to a practice. Receptionists do not have always have the knowledge of billing and will either transfer the call or give the patient a different number to call. By giving billing and referrals their own department and/or telephone number it could help reduce calls (Woodcock, 2009). Print the numbers on the billing statements so that patients can call them directly with any questions or there is the option to set up an email account to improve access to billing staff. Also, establishing bill payments online for patients to keep them informed of their balances and to submit payments (Woodcock, 2009).

Considerations/Concerns

The role of the front desk staff is to check in and check out patients as well as answer the phones. This can lead to the issue of confidentiality while talking on the phones, which needs to be monitored and not breached within the context of phone management. The Health Insurance Portability and Accountability Act (HIPAA) does not specifically address the role of telephones in the medical practice (Woodcock, 2009). There is consideration to use strategies such as answering the telephone away from locations where patients could easily overhear private information or have sliding windows to help create a sound barrier (Woodcock, 2009).

Telephone Methods

One method to consider are auto attendants. Auto attendants are a system that answers and routes calls after prompting the caller. An example of an automated response would be

“Hello, you have reach Anytown Medical Associates. If you know your parties extension, please dial it now. Please press 1 for appointments, 2 for the nurse, 3 for prescriptions, and 4 for billing and referrals. Dial 0 or hold for operator” (Woodcock, 2009, p.106). In the article *Automated Attendant vs. Live Answering* by Stan Rosenzweig, he states that big businesses use auto attendants because they are efficient and they are accepted by the world (Rosenzweig, 2005). The key to having successful auto attendants is to: 1) be quick and easy for the caller, no more than three choices and 2) give the impression that you actually are helping, not causing pain (Rosenzweig, 2005). One issue with auto attendants is that they are impersonal and many people could still be transferred to the wrong departments.

Patient portals are another method to use with the telephone system. The National Learning Consortium explains how patient portals serve administrative functions, such as scheduling appointment, getting lab results, sending patient reminders, providing clinical summaries, refilling prescriptions, and so on (How to Optimize Patient Portals for Patient Engagement and Meet Meaningful Use Requirements, 2013). Portals can be used to successfully serve a wide range of patients, including those who are older, have lower incomes, and are chronically ill. The portal must be user friendly, support patient-centered outcomes, convey information, communicate with patients, and support self-care and decision-making. The issue with portals is that just because a practice has it available, it does not ensure that patients will use it (How to Optimize Patient Portals for Patient Engagement and Meet Meaningful Use Requirements, 2013). The whole staff really needs to be involved in promoting the patient portal. Patients are more likely to adopt and use a patient portal if their providers recommend and support the portal use (How to Optimize Patient Portals for Patient Engagement and Meet Meaningful Use Requirements, 2013).

Call centers are another possibility to consider in helping with the high number of calls that come into the primary care practices at Mercy Hospital. Centralized call centers are offices that are used for the purpose of receiving and transmitting a large volume of requests by telephone (What is a Call Center, 2006). The goal of them to the improve operations and reduce costs while providing a standardized, uniform service for customers, or in this case patients. Since there are a high number of inbound calls to the primary care practices, a call center would be able filter and handle the calls, taking a heavy call load off receptionists, and even the practice (What is a Call Center, 2006). Many call centers have nurses on hand to deal with clinical calls.

The downside to call centers is that operators usually work from a script or patients have to deal with automated queuing systems (What is a Call Center, 2006).

QUANTITATIVE FINDINGS

Inbound, Outbound, and Internal Calls

The numbers of inbound, outbound, and internal phone calls were tracked for all of Mercy Hospital's primary care practices. This information was collected from October 20, 2014 – October 31, 2014. Table 1 lists the total number of inbound, outbound, and internal phone calls by each practice, along with how they count for total volume. The average number of inbound calls was 49%, outbound 35%, and internal 16%. Most of the practices inbound calls were around 50%, with the highest at 60% and the lowest at 35%. Gorham Family Practice had the lowest percentage of inbound calls and the only practice with more outbound calls than inbound. Portland Internal Medicine (PIM) had the highest amount of inbound calls, 60% and also had the most overall calls.

Inbound, Outbound, Internal Call Data							
Practice	Inbound	% of total calls	Outbound	% of total calls	Internal	% of total calls	Total Calls
PIM	3,923	60%	2,131	33%	479	7%	6,533
South Portland	838	54%	499	32%	214	14%	1,551
Standish	1,329	50%	1,052	40%	251	10%	2,632
Gorham	1,848	35%	2,077	39%	1,417	27%	5,342
Windham	2,165	44%	1,664	34%	1,120	23%	4,949
West Falmouth	2,968	54%	1,928	35%	604	11%	5,500
Falmouth Internal	2,329	51%	1,710	38%	500	11%	4,539
ForeRiver Family	2,473	52%	1,438	31%	802	17%	4,713
Yarmouth	2,365	43%	1,821	33%	1,303	24%	5,489

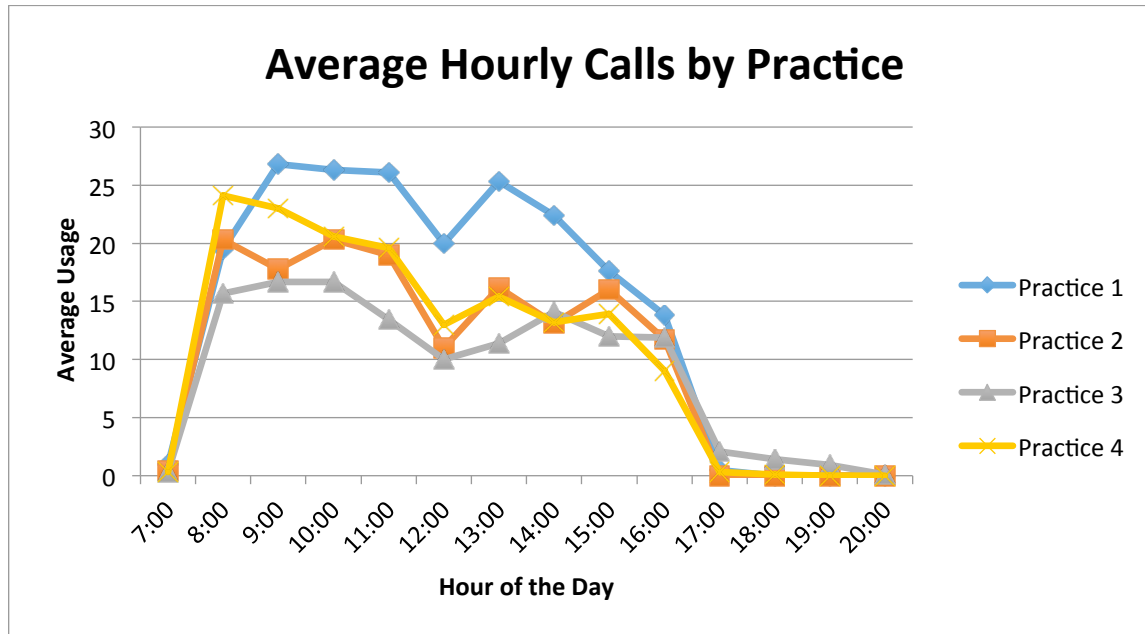
Table 1. Inbound, Outbound, Internal Call Data

(Numbers are all from the same time frame from all of Mercy Hospital's Primary Care Practices)

Calls Per Hour

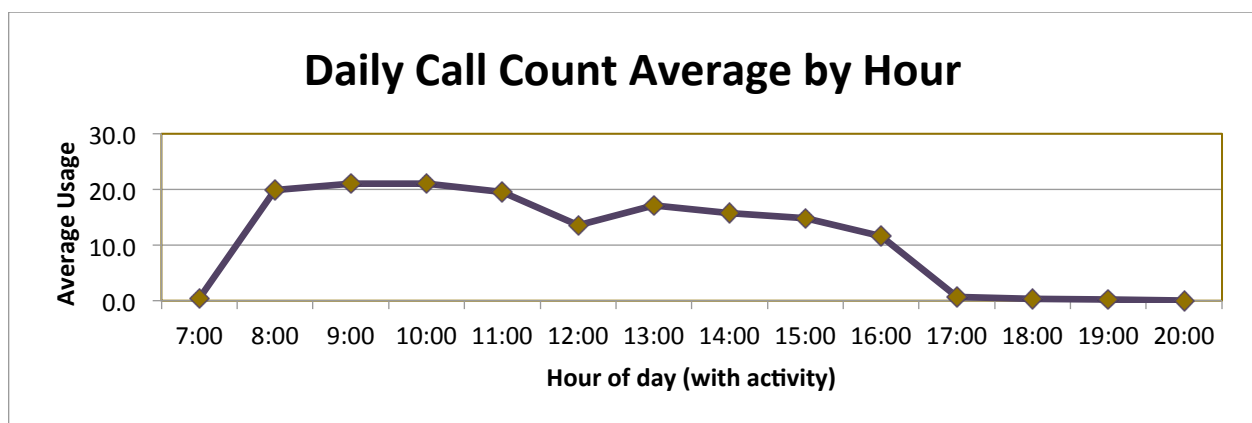
Hourly call information was collected and retrieved from four primary care practices. Managers pulled a report that looked at the number of phone calls that came into their practice for two weeks. All of this information was collected from February 2, 2015 – February 14, 2015. Graph 1 shows the average hourly calls from four practices and shows how each practice has the same trend when it comes to calls per hour. Graph 2 shows the average daily count from the four

practices combined. Both graphs provided information that high call in times in the mornings happen around 9:00 am and in the afternoon around 1:00 pm. They also show a significant dip in calls around 12:00 pm. Most phone calls occur in the morning and then slowly taper off as the day goes on.



Graph 1. Average Hourly Calls by Practice.

(Information gathered from four practice managers from Mercy Hospital's Primary Care Practices. Uses military time, 13:00 = 1:00 pm)

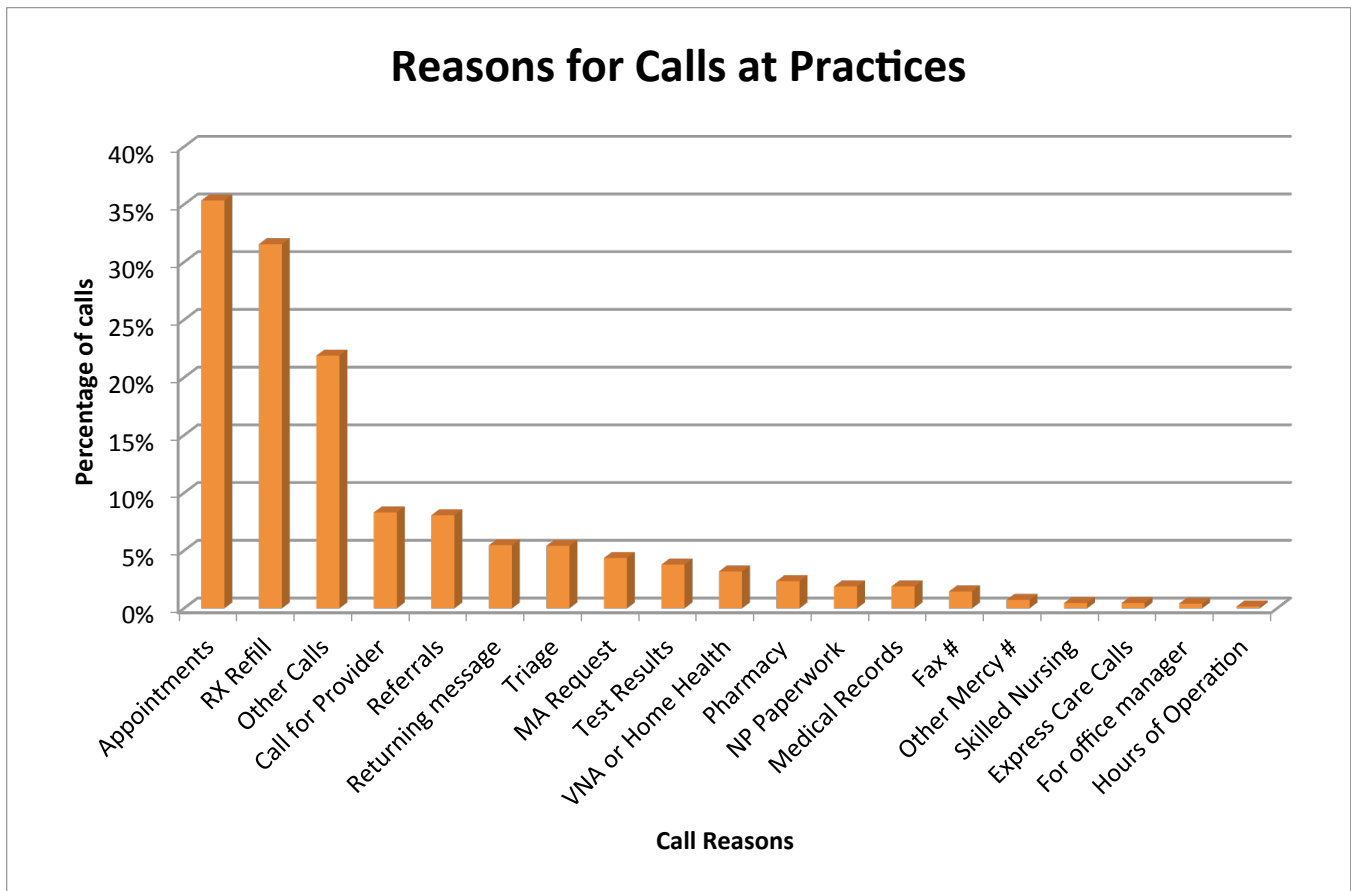


Graph 2. Daily Call Count Average by Hour

(Average number of phone calls per hour of the four primary care practices)

Phone Call Reasons

Information was provided from four primary care offices on the reason for calls coming into the practice. Receptionists at each of the practices tracked reasons patients were calling and then handed results over to the practice managers. Figure 1 shows the percentage of how much each phone call accounted for total number of calls coming in. The total number of calls that came into the four practices was 3,696. Combined, appointments (confirm, cancel, schedule, etc.) and prescription refills accounted for the highest percentage of call in by patients, 67%. Other calls account for 22%, followed by referrals and calling for provider 8%, and triage 5%. Other call reasons are for things such as wrong number, x-rays, update information, transportation, etc.



Graph 3. Reason for Calls at Four Practices

(Information was collected over two weeks by four primary care practices. Not all information was gathered over the same two weeks)

QUALITATIVE FINDINGS

Key Informant Interviews

Three out of the eight primary care practice managers were interviewed. Even though only three managers were interviewed, each of their practices represent different patient demographics. One practice was very rural Maine (practice A), one was more urban Maine (practice B), and the other was a mix and also had an express care site attached to the practice (practice C). Two of the practices (A and C) sees infants to adults, where as one practice only sees adult patients, mostly 65 and over (B).

Each telephone system at the practice operates differently. Practice A will have one of their Medical Assistants (MA's) on the phone all day since they are not assigned to a specific doctor. This practice also has a veteran staff, which makes dealing with phone calls more helpful since they know a lot about the practice and how it operates. This practice also uses the application Lync to communicate with the MA who is on the phone. This application allows the front-end staff to chat with the MA on the computer to let them know who is calling, why, and what line they are on. This process eliminates the transfer of phone calls, since MA's have access to the same lines. The phone are answered live from 8:00 am – 5:00 pm and then sent to an answering service after that.

Practice B has their phones on from 8:00 am – 5:00 pm, Monday – Friday. There are staffing adjustments made during lunch hours to make sure someone is always there to answer the phones. The goal of this practice is to make sure to answer a phone call within two rings. Not only are patients calling into this practice, but also caseworkers, pharmacies, hospitals, and VNA services. This is due to the older population that this practice sees. Practice B wants to have a protocol on how to answer and transfer phone calls so that each time it is the same when a patient calls.

Practice C has both primary care and express care at its office and because of this, has an automated attendant when the patient calls in. The patient has two options; they can either press one for primary care or two for express care. After that they will get a live answer from one of the receptionists. The phones at this practice rings five times until it goes to voicemail. From there, patients are instructed to leave a message and informed that the office will call them back.

The three practice managers do not like the current phone system. They stated that it is hard to get reports or any type of statistic. There is also no option for patients to know the status

of their call. There is no next call information (4th in line) or option to go right to voicemail to leave a message. There is also no way for the managers to know who is taking the calls (e.i. no way to track what employees answer the phones the most). The current phone system makes it hard to meet demand during the peak call times and the practices do not always have the resources to answer the phones at high call times. One thing the managers do like however is that they provide a personal voice to the phones by answering them live (i.e. no automated attendant).

When asked what would be their ideal way to use the phones, all practice managers stated that it would be ideal not have the phones at the front desk for customer service reasons. This allows receptionist to focus on the patients who are at the window. Practice A manager would find it ideal to have an automatic call distribution to tell patients how long phone call will be and what number they are in line for call to be answered. Practice A manager also suggested to dedicate phone staff that are away from the desk and to use Lync more often.

All three managers offered some ideas as to how reduce the number of incoming calls to their practices. First, calls may be reduced through an increase in the use of the practices patient portal. These portals are a resource tool for patients and can be used as a way for patients to communicate with the practice. A second idea is to encourage staff to use Lync more often, since it can cut down on transferring patients to and from staff in the office. Another strategy suggested was processes to make sure patients are checking out with staff before they leave. This way they do not have to call the practice back about their lab orders, schedule appointments, or deal with referrals. And finally, a better reminder system to ask about medication refills could be implemented.

Calling Primary Care Practices

This student researcher called each practice to gain perspective on the patient experience. Each practice was called twice, once on March 24, 2015 between 12:40 PM and 1:00 PM and once on March 30, 2015 between 9:00 am and 9:20 AM. Each time and day was picked specifically to see if there was any variation between high call in times and low call in times. Monday mornings are usually the busiest and around lunchtime is usually the slowest for the phones. Each practice was only called once each day.

Each practice answered the phones differently and a few even had phone trees. Primary care practices that had express care sites with them had the option for patients to press either one or two to connect to either express care or primary care. The practices that have this option are

not consistent with each other. Two practices had press 1 for express and 2 for primary, while another practice had just the opposite: 1 for primary and 2 for express. Two practices had a phone tree or automated attendant set up. Each phone tree offered different options. One practice had press: 1 for provider calling, 3 for prescription refills, 4 for medical records, 5 for address and fax, and 9 for all other calls. The other practice had press: 1 for provider calling, 3 for appointments, 5 for address and fax, and 9 for all other calls.

When calling on Tuesday, March 24, 2015, five of the eight practices answered within 10 seconds of calling them, and only once asked the caller to hold. The hold time at this practice was 1 minute 40 seconds. Two of the eight practices did not answer and it went to their voicemail settings and one practice that did not answer it went to their answering service. On Monday, March 30, 2015, seven of the eight practices answered within 12 seconds of calling and none asked to be put on hold. One practice had a busy signal twice when trying to call. When the practice was called again 15 minutes later, the phone was answered and was asked to hold. The hold time for this practice was 2 minutes and 30 seconds. Many receptionists answered stating the practice name and their name, while some just answered stating the practice name.

LIMITATIONS

One of the limitations that affected this study was not having time to interview with other employees at the primary care practices. Front end staff deal with the phones the most often and their input is important when it comes to the final decision on how the telephone system at the practices work. Input from doctors and other medical staff would have also been important since they are dealing with medical questions that are called in. A focus group of patients would also be of significant use for this project. They are the ones who are calling into the primary care office and their voice should be heard to make sure that we are providing them with the best care on the phone. Another limitation is the lack of research into telephones at medical offices. Most guidance and best practices are available in grey literature and does not cover all considerations with telephone communication.

There were limitations when trying to collect information from all of Mercy's primary care practices. Call reasons and hourly call data was only provided from four of Mercy's Primary care practices. Along with that, only three managers responded and were able to meet for the key informant interviews. Due to this, recommendations and how the practices operate will be based

off findings only provided. Also, information provided was not always taken at the same time period. For call reasons, two practices provided information from the same two weeks, January 5, 2015 – January 12, 2015. One practice provided information for one week, February 2, 2015 – February 6, 2015, and one practice provided information from November 10, 2014 – November 20, 2015. Hourly call data were taken from the same time frame as well inbound, outbound, and internal phone calls.

Lastly, calling the practices only happened for two days and once each day. Even though data was collected on this, it may not provide adequate representation of what it would be like to call the office on a regular basis. To have better information on this, call logs would need to happen for more than a week and multiple times through out the day. Due to time constrictions of this capstone, data collection was limited.

DISCUSSION

The primary goal of this paper was to gather information on telephone usage at Mercy Hospital's primary care practices, ascertain the purpose for patient calls, and to consider efficient ways to reduce the call volume. From the findings, the high call times happen in the mornings, drop around lunchtime, pick back up a little after 1:00 pm, and then slowly decline through out the day. At high call times, practices are receiving about 20 calls within the hour. It was surprising to find from calling the practices that more receptionists answered during the highest call time then during the lowest. This could be due to staff rotating during lunch breaks, causing less staff available to answer the phones. The number of inbound phone calls coming into the practices account for about 50% of their call volume and a majority of these call are about prescription refills.

Before any new systems or big changes happen to the phones at the primary care sights, there first needs to be more consistency across all of the practices. The primary care offices that have express care sites attached to them are not consistent in options they give patients when they call in. Each practice should have the same options; either one for primary and two for express or vice versa. If a patient was calling in to know the wait time between express care sites, they should know they can press the same number for each one and not have to listen to the auto attendant to tell them which one to pick. Also, a few practices use auto attendants for a telephone method while all the others have live answering. The auto attendants give four choices that the

patients can choose from, allowing it to be quick and easy for the caller. However, the two practices that have this, do not offer all the same options and patients can still press the wrong number for where they want to go. This could either be due to patients being confused on what to press or they are not listening closely to their options. Even after going through an auto attendant, patients can still be placed on hold once a receptionist answers, causing them to be on the phone call even longer.

Both managers and the literature mentioned call centers as a potential option, however, there are additional costs to consider, such as staffing, software, physical plant, and materials. This paper did not examine these options. From the findings in the literature, data, and interviews, the patient portal could be more of a selling point for the practices. As a new patient going to one of their primary care sites, I personally was not asked to sign up for it. There needs to be more consistent promotion of the portal by all Mercy staff. The portal can be used as a way for patients to schedule their appointments, send prescription refill requests, send messages to providers, and see test or lab results. Practices could be sending more consistent messages to their patients, such as advising patients to use the portal to schedule appointments and communicate with providers. By having providers communicate with patients about using the online portal to request refills, it could help reduce the number of incoming prescription calls. They could emphasize how it is more accurate since they can be directed through the request and do not have to worry about being put on hold or remembering what their medication is called. Not all patients are going to sign up for the portal, however with more emphasis and buy-in from staff and providers, it is more likely that patients will want to use this tool.

Also, there could be consideration for making a more robust patient portal by setting up business rules so that patients can select and schedule their own appointments, with the provider they want, right online. The business rules could be if a patients selects an appointment for a physical or well child check, they can only pick and view from 40 minute slots, all other appointments will be 20 minute slots. If interpreter services are needed an alert can show up for the receptionists to schedule that and the rule will only allow the patient to schedule a 40-minute appointment. Having a more robust system like this can be beneficial for patients that are picky about what days or times they can be seen.

Moving the phones away from the front end is another option for practices to consider. During high call times, more staff could be placed back with the phones to answer them. Many

receptionists have the responsibility of scanning, checking in/checking out, referrals, and answering the phones. By answering phones and scanning at the check in or check out, it could lead to privacy issues, as mentioned in the literature findings. Moving the phones away from the front and having a few staff answering them could lead to more timely answers and address critical privacy issues. Along with moving the phones away it is also important to emphasize to patients that if they get someone's answering machine, then they should leave a message and their call will be returned. As mentioned earlier in the paper, it is standard protocol to call a patient back within two hours. Many times patients will call right back stating, "it went to a voicemail and I really want to talk to someone." It is important for patients to know what the call back protocol is to help reduce the number of repeat callers at the primary care offices.

As someone who works rotating through the practices at Mercy, I see first hand how busy the phones can be. There is nothing more frustrating than trying to check in a patient and have the phone ringing around you or telling a patient to wait while on the phone. This paper provides information on why patients are calling and a few things to help reduce the number of the calls. The FOCUS-PDCA model was used as the framework for this paper. The process to improve was the phones at the primary care practices; an organized effort was made by working on this project as a capstone document; research was done to clarify the current knowledge of the process and understand any process variations; and selling the patient portal, moving the phones to the back, and consistent automated attendant options were strategies for continued improvement. The next recommended steps should include conducting focus groups with Mercy Hospital's patient population. Patients are the majority of the incoming calls to the practices and their voice should be heard when it comes to telephone communication. Another step should be key informant interviews with clinical staff and receptionists. Clinical staff and receptionists are constantly receiving calls and also calling patients. Since a majority of the time receptionists are on the telephone, their ideas and concerns should be heard. Once more information is gathered the PDCA cycle should be used to continuously check the progress in each step of the FOCUS process that was used.

CONCLUSION

The topic of researching the telephones at Mercy Hospital came to me during my summer field experience and after meeting with Kim Gardner. The telephone system was chosen for this

capstone because of the high number of patient calls received and inconsistency among all the primary care practices. Literature was reviewed and quantitative and qualitative data was collected from the practices to provide reasons for the calls as well as solutions. From the data collected, it was found that appointments and scheduling were the main reasons patients were calling. Inconsistencies were confirmed from the data as well. In order for the primary care practices to be more efficient on the telephones, all the practices need to be more similar. Processes to reduce the number of calls coming into the practices include more emphasis on the patient portal and moving the phones away from the front desk. Also, making sure practices that have the automated attendants use the same options could help lead to more consistencies. The barriers in decreasing the amount of calls coming into the primary care practices needs to be addressed. Every time a patient calls in to the practice, it is considered a defect (Gardner, Kim) and a better understanding of why these defects are happening, can help lead to more efficient telephone usage. The most important barriers to address are prescription refills and appointments. To help address these barriers there could be a change in policy with the prescription refills and having a more robust patient portal to help with scheduling appointments. The results and capstone document will be shared with Mercy Hospital's administration and the director of primary care.

REFERENCES

- Backer, Leigh Ann. (June 2002). Strategies for Better Patient Flow and Cycle Time. *Family Practice Management*. 45-50.
- Bodenheimer, Thomas, Grumbach, Kevin. (2007). *Improving Primary Care: Strategies and Tools for a Better Practice*. The McGraw-Hill Companies, Inc.
- FOCUS-PDCA*. (2015). Six Sigma. Retrieved from: <http://www.isixsigma.com/dictionary/focuspdca/>
- Gardner, Kim. Director of Primary Care at Mercy Hospital
- Health Information Privacy*. (2015). U.S. Department of Health & Human Services. Retrieved from: <http://www.hhs.gov/ocr/privacy/>
- How to Optimize Patient Portals for Patient Engagement and Meet Meaningful Use Requirements. (May 2013). National Learning Consortium. Retrieved from: http://www.healthit.gov/sites/default/files/nlc_how_to_optimizepatientportals_for_patientengagement.pdf
- Kumar, Sajeesh, Snooks, Helen. (2011). *Telenursing*. Springer. Retrieved from: http://books.google.com/books?id=Jfa966cDg6wC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- LaVela, S.L., Gering, J., Schectman, G., Locatelli, S.M., Weaver, F.M., & Davies, M. (2013). *Improving the quality of telephone-delivered health care: a national quality improvement transformation initiative*. *Family Practice*, 30(5), 533-540.
- Murray, Mark MD, MPA. (March 2002). Reducing Waits and Delays in the Referral Process. *Family Practice Management*, 9(3): 39-42. Retrieved from: <http://www.aafp.org/fpm/2002/0300/p39.html>
- Receptionists*. (2015). Bureau of Labor Statistics. Retrieved from: <http://www.bls.gov/ooh/office-and-administrative-support/receptionists.htm>
- Rosenzweig, Stan (Oct. 2005). *Automated attendant vs. live answering*. *Westchester County Business Journal*, 45.

The Six Domains of Health Care Quality. (2015). Agency for Healthcare Research and Quality.

Retrieved from: <https://cahps.ahrq.gov/consumerreporting/talkingquality/create/sixdomains.html>

What is a Call Center? (2006). Paths to Union Renewal. Broadview Press. Retrieved from:

<http://www.slideshare.net/Shelly38/a-call-center-is-a-centralized-office-used-for-the-purpose-of>

What is a Medical Assistant. (2015). American Association of Medical Assistants. Retrieved

from: http://www.aama-ntl.org/medical-assisting/what-is-a-medical-assistant#.VRl0BpPF_3o

What is Urgent Care. (2015). American Academy of Urgent Care Medicine. Retrieved from:

<http://aaucm.org/about/urgentcare/default.aspx>

Woodcock, Elizabeth W. (2009). *Mastering Patient Flow: Using Lean Thinking to*

Improve Your Practice Operations (3rd ed.). Englewood, CO: Medical Group Management Association

APPENDIX A

INTERVIEW QUESTIONS FOR PARTICIPATING PRIMARY CARE PRACTICE MANAGERS

Interview Questions

Efficient Telephone Usage at Mercy Hospital's Primary Car Practices

1. How does the current telephone system at your practice work?
2. What kind of phone calls do you find the most common at your practice?
3. What kind of demographics do you serve at your practice?
4. Do you like your current telephone system? Why or why not?
5. What would be your ideal way to use the phones at your practice?
6. Do you have any ideas on how you would cut down on the amount of calls that come into your practice?

APPENDIX B

CALLING PRIMARY CARE PRACTICES TEMPLATE

Practice	Phone Number	Date	Time	Seconds until answer	Hold time	Comments	Date 2	Time	Seconds until answer	Hold time	Comments
Falmouth Internal Medicine	207-400-8570	3/24/15	12:41 PM				3/30/15	8:58 AM			
Fore River Family Practice	207-553-6700	3/24/15	12:44 PM				3/30/15	9:16 AM			
Gorham Crossing	207-535-1400	3/24/15	12:46 PM				3/30/15	8:59 AM			
Portland Internal Medicine	207-771-1717	3/24/15	12:48 PM				3/30/15	9:02 AM			
Standish Family Practice	207-642-4434	3/24/15	12:51 PM				3/30/15	9:04 AM			
Mercy Primary South	207-535-1880	3/24/15	12:53 PM				3/30/15	9:08 AM			
West Falmouth Primary	207-535-1340	3/24/15	12:58 PM				3/30/15	9:10 AM			
Windham Family Practice	207-400-8600	3/24/15	1:02 PM				3/30/15	9:13 AM			
Yarmouth Primary	207-535-1200	3/24/15	1:05 PM				3/30/15	9:15 AM			