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### Triage Process in Primary Care Clinics

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## **Triage Process in Primary Care Clinics**

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### **Abstract**

Skillfully applied triage techniques can make the difference between rapid, appropriate, cost effective care and poor outcomes at increased cost. While triage has been well documented in emergency departments, military, and natural disasters, it is far less well-understood in the primary care setting. Appropriate, accurate triage and disposition in primary care can improve patient outcomes and reduce unnecessary emergency department visits. This may have an impact on emergency department over-crowding. This exploratory, qualitative, descriptive study examines the triage process of six primary care clinics in Tennessee and Alabama. Interviews with participants were conducted between September and November 2020. Donabedian's SPO Model was used to organize questions that were posed and the themes which emerged from the data. A total of six caregiver interviews were included. There was no single triage process followed among the staff of the various clinics. Each clinic operated differently and had unique factors contributing to each of their triage processes. The themes that emerged to describe the triage process in primary care were grouped into categories labeled, Structure, Process, or Outcome which are part of the SPO Model. There was a theme that emerged which was labeled, External Factors to include components of the triage process that did not fit into one of the three preexisting categories. The ten themes were personnel, physical location, equipment, patient, training, patient evaluation, decision-making, communication, disposition, and external factors. These themes resulted from data collected across all interviews and describe the important components of triage in these clinics, as a whole. This qualitative study can be used as a foundation to build further research on triage processes in primary care clinics.

**Keywords:** primary care triage, triage, triage processes in primary care, triaging urgent patients.

## **Introduction and Background**

Primary care clinics provide services to both urgent and non-urgent patients, and the ability to effectively triage those patients may improve patient outcomes. The act of triage is an action that takes on many definitions and has been used in several different settings. These settings range from wars and natural disasters, to emergency departments (EDs) and medical clinics (Shiel, 2018). For the purpose of this project, triage was defined as, sorting or assigning priority order to patients according to the urgency of their symptoms or need for immediate medical treatment (Merriam Webster, 2020; Shiel, 2018).

“Urgent” and “non-urgent” are two terms used to describe patients’ medical symptoms and need for care. Due to the lack of current or more recent studies, seminal studies were used to provide description and information for this project. For years, providers have agreed that more than half of ED visits were related to non-urgent matters (Backman et al., 2008; Northington et al., 2005). Frequent non-urgent complaints seen in the primary care setting consist of respiratory issues, infections, allergies, musculoskeletal problems, urinary, and genital infections (Backman et al., 2008; St. Lukes, n.d.). The most common chief complaints in the ED setting that were categorized as non-urgent issues include musculoskeletal system problems, trauma, and digestive problems (Backman et al., 2008). Some examples of an urgent patient situation are vomiting and diarrhea with a fever, orthopedic injury or trauma, and minor burns (St. Lukes, n.d.). Urgent care is often mistaken for emergent care, which is defined as having more extensive and serious patient symptoms such as, loss of consciousness, stroke, chest pain, head injury, and seizures (St. Lukes, n.d.). Although the definitions of urgent and non-urgent patients are not always clearly defined, triage and assessment of each patient situation may aid in determining the patient’s acuity.

In light of current statistics that highlight an increased use of EDs by patients, primary care clinics have the ability to play a part in the community by appropriately triaging patients and helping to decrease the number of people using the ED for non-urgent care (Rui et al., 2016). Approximately 145 million people in the United States (US) visited an ED in 2016 (Rui et al., 2016). Of those, seven million used the ED for follow-up medical care (Rui et al., 2016). These numbers reflect the need for those in primary care clinics to provide effective triage and medical care for those who need non-urgent care and for those whose urgent care is within the ability of the clinic staff and resources.

Primary care clinics operate with staff, protocols, referral points, and equipment that vary from clinic to clinic, which dictate the level of care the staff can provide (American Academy of Family Physicians, 2020). It is also important to note that primary care is designed and most commonly used for health promotion, disease prevention, diagnosis, and treatment of acute and chronic conditions (American Academy of Family Physicians, 2020). Due to the vast array of tasks that primary care providers are responsible for, being able to appropriately triage patients to determine urgent versus non-urgent status is critical in prevention of acute medical situations. A triage expert with Vanderbilt urgent care clinics, stated that the three most important aspects of being able to effectively triage patients in an urgent care or primary care clinic setting is “to have experience with patient care, know what questions to ask, and have a good knowledge base and education level” (B. Wagner, personal communication, September 25, 2020). The literature did not reveal any standardized triage protocols or procedures used by primary care clinics in the United States for determining the urgency status of specific patient situations. Triage processes in primary care clinics may vary and be specific to the clinic staff; however, due to the lack of literature, this process is unknown and creates the need for this qualitative research.

### **Problem Statement**

Primary care clinics need a triage system or process by which they identify and care for patients experiencing symptoms that may require urgent medical care, and those who need typical primary care that can be handled by the clinic. Part of the triage process that needs to be explored for clarity is the decision-making process used to determine whether or not a patient is “urgent” and if the clinic staff can handle that urgent situation or not. The lack of literature describing triage systems in primary care clinics suggests the need for more research. To advance the knowledge and understanding of triage, research may be used to examine primary care clinic personnel’s ability to triage urgent and non-urgent patients, as well as, assist in understanding the roles and skill level of the staff members and equipment availability of each primary care office. This problem should be examined due to the lack of literature pertaining specifically to triage in the primary care setting in the US and overcrowding of EDs across the country (Rui et al., 2016). Despite the abundance of literature focusing on triage practice and protocols in the ED setting, telehealth settings, and in other countries, a gap remains in the literature for primary care triage in the United States.

### **Purpose**

The purpose of this exploratory, qualitative project was to learn more about triage processes from primary care nurses and medical assistants about triage processes their clinics use for determining urgency of patient symptoms, how decisions are made regarding care and disposition, and the resources used during the process. Due to the lack of literature and the subsequent lack of understanding about the process of triage in primary care clinics, a qualitative approach was selected. Qualitative research is best suited for studies regarding something about which little is known, and is a very good fit for process-oriented questions (Corbin & Strauss,

2015). Corbin and Strauss (2015) explain that qualitative research provides a way for individuals to explain or express their thoughts, usually through interviews, and provide a means to illuminate and analyze a situation. The raw data consist of the words of participants, which was used to derive meaning from narrative analysis.

Three assertions were made for this qualitative project. The first is that there are no clear, specific triage protocols in place in primary care clinics noted in the literature. The second assertion is, ineffective triage techniques may be used due to the lack of consistently applied processes. A third assertion is, knowledge about how triage processes occur in primary care clinics may be helpful in enlightening this process for all involved. The information gathered from this project may contribute to the knowledge of triage practices and begin to fill the gap in literature for triage in primary care in the United States.

### **Research Question**

This scholarly project is an exploratory, qualitative, descriptive study with a focus on exploring the triage processes in primary care clinics. This study gathered information regarding the triage processes in primary care clinics with the following research question, “How do primary care clinic staff triage patients experiencing symptoms that may require urgent medical care?”

### **Review of Evidence**

Documented emergency care and triage began in the early 1800s during the French Wars and is continually evolving (Shah, 2006). Historically, triage has been defined as being used in times of war, natural disasters, and in emergency settings (Shiel, 2018). The act of triage can be expanded for use in primary care clinics (Shiel, 2018). Triage personnel are trained to do an initial assessment, physical examination, initial diagnostic studies, documentation, and finally,



disposition of patients (Ajani, 2012). Primary care clinics can use triage processes to identify and provide care to urgent and non-urgent patients. There is very little literature regarding the use of triage in primary care clinics related to decisions about urgent care. However, there are compelling reasons for why this gap needs to be filled. These reasons include the extensive use of follow-up care in the ED that could be appropriately managed in a primary care clinic setting, the ability of primary care professionals with the means and skillset to triage and provide care to urgent and non-urgent patients, and the appropriate referral of patients who require a higher level of care (Ajani, 2012; Rui, et al., 2016).

### **Emergency Department Overcrowding**

Overcrowding of patients in EDs across the country has become a major problem in health care. As previously stated, an estimated 145 million people visited an ED in 2016, with seven million using it for follow-up care, contributing to the problem of overcrowding (Rui et al., 2016). Since the term, “overcrowding” can have several interpretations, four physicians developed the following definitions for clarity: “All available beds in the ED are full greater than six hours per day, admitted patients are placed in ED hallways because there are no inpatient beds available for more than six hours a day, or the number of hours the ED is closed because of saturation or on diversion to ambulance traffic” (Derlet et al., 2001, p. 154).

The use of primary care services may decrease ED visits, wait times, and costs to the patient (Pourat et al., 2015). One study revealed that 42% of the population from Orange County, California, who met the requirements of a healthcare initiative and were provided with healthcare coverage, were more likely to adhere to a policy implemented by the Affordable Care Act to routinely be seen by a primary care provider (Pourat et al., 2015). This led to a decrease in emergency room visits, hospitalizations, and health care related costs (Pourat et al., 2015). While

improving the triage processes in primary care may not resolve ED overcrowding, it may lead to more patients acquiring care at primary care offices for faster and more appropriate medical services, which will require primary care staff to be trained and equipped to triage patients appropriately.

### *Delays in Diagnosis*

A delay in making medical diagnoses is one consequence of overcrowding in EDs (Derlet et al., 2001; Williams II & Hertelendy, 2014). Derlet et al. (2001), found that 37% of patients reported a form of delay in the medical team communicating their diagnosis or delivering treatment during their time spent in an ED. Due to the delay in care, 33% of the ED directors reported poor patient outcomes (Derlet et al., 2001). One study found that overcrowding with non-urgent geriatric patients resulted in a delay in care for critical patients being transported to the ED (Williams II & Hertelendy, 2014). If non-urgent patients being seen in the ED can be minimized, then more resources may be available to treat critical or urgent patients (Williams II & Hertelendy, 2014). Under-triaging can result in increased mortality and morbidity rates, missed injuries, decreased functional outcomes and delayed treatment (van Rein et al., 2017). This is not to say that every patient outcome, whether negative or positive, that occurs in the ED is directly related to triage decisions from primary care clinics. Primary care clinics have the capability and skillset to triage and care for urgent and non-urgent patient situations, and with the increasing use of EDs by patients with non-urgent medical issues, primary care providers may help to alleviate the burden by appropriately triaging patients to deliver care and referrals. The ability to appropriately triage and provide care for urgent and non-urgent patients may result in better patient outcomes and in turn, reduce ED visits and control the medical costs for patients.

## **Wait Times**

The influx of people across the nation using EDs creates long wait times (Derlet et al, 2001; Leora et al., 2009; Williams II & Hertelendy, 2014). The Center for Disease Control (CDC) estimated 750,000 patients waited over six hours to be seen by an emergency room provider due to overcrowding (Rui et al., 2016). In a study of 364 hospitals in the US fewer than half of the hospitals consistently admitted their ED patients within six hours (Leora et al., 2009). Patients could be waiting for extended amounts of time to be seen in an ED, while non-urgent patients who could be cared for in a primary care setting add to the overcrowding and worsen wait times in EDs (Derlet et al, 2001; Williams II & Hertelendy, 2014). The results of three studies suggested that the average wait time for EDs is between 4.3 and 6 hours (Leora et al., 2009; Rui et al., 2016; Wilkin et al., 2012). The reasons for wait times are multifactorial and not all readily correctable. Factors contributing to wait times also include patient acuity, volume of patients waiting to be seen, hospital bed shortage, staff shortage, radiology delays, and a variety of other reasons (Derlet et al., 2001; Williams II & Hertelendy, 2014).

Overcrowding of patients in the ED is not a new problem. A study from 2001 showed that 77% of ED directors reported long wait times due to large volumes of patients who needed medical care (Derlet et al., 2001). While overcrowding, delays in care, and extended wait times continue, many people are going without medical care at all because they do not have the time to wait in the ED. Researchers in one study interviewed patients and found that even after waiting for several hours to receive care, they had to leave for various reasons such as picking up children from school or going to work and they were often unable to return to the ED for care (Wilkin et al., 2012). Primary care clinic staff may help fill this gap in medical care for non-urgent medical problems.

### **Primary Care Use**

The use of primary care services can aid in reducing the number of visits to the ED or hospitalizations (Pourat et al., 2015). Using triage skills in primary care to identify patients as urgent or non-urgent is a critical step to providing appropriate care. One study found that patients reported the use of an ED over a primary care clinic if they viewed their symptoms as urgent, as they believed the ED would be able to provide immediate assessment and care (Northington et al., 2005). There are factors preventing primary care clinics from being as appealing to patients. Among these are the lack of 24 hour, 7-day a week coverage, required co-pays for care, limited means of transportation to appointments, and medical costs (Lines et al., 2019; Wilkin et al., 2012). Understanding the triage process in primary care is vital to improving appropriate patient care, and not just for reducing ED over-use.

### ***Barriers***

Barriers to the utilization of primary care clinics when compared to EDs include the ability to pay for the care or co-pay, required paperwork, and transportation (Wilkin et al., 2012). Multiple studies found that providers in countries with appropriate primary care that include urgent assessment are associated with a decrease in ED utilization (Lines et al., 2019; Wilkin et al., 2012). Other barriers reported by patients are the prohibitive costs of laboratory tests, specialty referrals, and appointments that are not covered by insurance (Wilkin et al., 2012). One study found that “participants suggested that interactions with intake employees could be uncomfortable, in part because personal matters such as employment and finances were often discussed impersonally, and in public areas” (Wilkin et al., 2012, p. 165).

Besides the cost of medical care and perceived attitudes of primary care staff, a third barrier was the issue of transportation. Patients expressed difficulty making it to their

appointments when taking public transportation, along with frustration of having to leave several hours prior to the appointment because of the bus schedule (Wilkin et al., 2012). These variables influence the decisions of patients to choose an ED over primary care clinics for medical services and add to ED's patient load. Although, there are many barriers that patients have expressed in choosing to seek care at primary care clinics, there are also factors that act as facilitators.

### ***Facilitators***

Some of the facilitators that have been found for patients who seek care from primary care clinics is a reduction in ED visits, fewer hospitalizations, and decreased medical costs (Pourat et al., 2015). One study found that patients who used primary care showed a 20% reduction in ED visits and hospitalizations compared to those who did not use routine services from a primary care provider (Pourat et al., 2015). The same study found a \$3,002 to \$9,700 per day reduction in hospital costs when patients adhere to the care recommended by a primary care provider (Pourat et al., 2015). Although this study has shown a significant amount of savings, patients continue to express complaints about medical costs and opt to use the ED for non-urgent care because they can do so without insurance or a co-pay (Pourat et al., 2015; Wilkin et al., 2012).

With effective and appropriate triage of patients, medical care and disposition or referrals for patients with urgent medical needs in the primary care setting may help to reduce ED overcrowding, long wait times and promote primary care utilization by patients (Derlet et al., 2001; Leora et al., 2009; Pourat et al., 2015; Wilkin et al., 2012). Still, little is known about triage processes in primary care clinics and how clinic staff decides who is considered urgent versus non-urgent, and what level of care will be provided for the specific patient situations.

### **Theoretical Model**

The Donabedian Structure, Process and Outcome (SPO) Model was used as the theoretical framework of this study (Figure 1). The Donabedian SPO Model provides a structure with constructs within which to consider the parts of the current project. Theoretical models may or may not be used to frame qualitative projects, due to the exploratory nature of qualitative research. However, this project does not aim to discover theory, but rather to explore the process of triage in primary care; therefore, using the SPO Model to frame the project for clarity is beneficial. The primary focus for this project was the process of how triage is performed in primary care clinics. The Donabedian SPO Model highlights the need for an understanding of the pertinent structures and processes when evaluating a healthcare outcome (Donabedian, 1966). The SPO Model has been used to implement triage processes in a community hospital and will be modified to apply to primary care triage (Abdelwahab et al., 2017).

The two main categories that were explored and discussed with the caregivers in each clinic were the “Structures” and “Processes” that relate to the act of triaging their patients. The third category, “outcome” could be used for future research with projects that may implement an intervention of triage in primary care clinics. Due to the qualitative nature of this study, reflexive analysis of interview questions and responses was used for further follow-up questions in subsequent interviews. The clinic staff may have their own way of handling urgent patient situations, and the purpose of using the Donabedian SPO Model was to guide the interview questions to explore the triage processes in each clinic, and possibly provide a framework for establishing thematic structure.

### **Structure**

The participants in this study were asked to expound upon the structures they may have at

their disposal during triage situations. The “Structure” may include the setting, equipment, and personnel used to evaluate the state of health of an individual (Donabedian, 1966). Since this study is not evaluating any specific outcome, the Structure category of the model was used to provide a framework of questions to ask during the interviews when gathering information. The items that may explain the structure of the primary care clinics may include: supplies and equipment, human resources, patient acuity/load and urgent/emergent flow or layout (Abdelwahab et al., 2017; Donabedian, 1966). The purpose of obtaining this information from each care team member was to enhance the understanding of what structures are considered necessary and useful in triaging patients. This may lead to study findings of similarities or differences in what is considered essential during triage among clinic staff. For example, one clinic may use an electrocardiogram (EKG) on a patient with chest complaints, and another clinic may send all patients with chest or heart complaints to the emergency room without conducting an EKG first.

### **Process**

The next part of the model, “Process” may include medical documentation, staff education/training, triage processes, and staff relationships (Abdelwahab et al., 2017; Donabedian, 1966). The inclusion criteria to participate in this study requires the participant be a medical assistant (MA), licensed practical nurse (LPN), or a registered nurse (RN). These three types of caregiving staff require different levels of education, which provide different levels of ability and expertise. Two of the demographic questions sought to uncover information about the professional’s title, and whether or not they received any training regarding triage procedures during job orientation. Follow-up questions from the responses to some of the demographic questions were used during the interview to allow more detail to emerge.

The triage process component of the model's "Process" section has three areas of interest: front office staff, caregiver staff, and providers. This component of the SPO Model was used to design the interview question and create opportunity for follow-up questions to explore the interactions, communication, and processes that takes place between the office staff during triage of an urgent patient situation. The final component of the "Process" section is staff relationships. Although, this was not directly asked in an interview question, it is an assumption made by the principal investigator that the relationships among staff members may play a role in the effectiveness of triaging patients. Research has suggested that as colleagues work together, the understanding that develops among them may improve operational efficiency and accelerate critical decision making (Busby, 2009).

### **Outcome**

Finally, the Outcomes portion of this model may lead to triage/patient disposition, improved outcomes, and reduced costs (Abdelwahab et al., 2017). This section of the model could be used and examined in future projects on triage in primary care. Since this project did not implement any intervention, outcomes were not measured. However, the potential outcomes or experienced outcomes from effective or ineffective triage that were described by the participants were included in the data collection. The outcome of this project is a greater understanding about the triage process in primary care clinics.

### **Project Design**

This project was designed as an exploratory, qualitative, descriptive study. The design of the study incorporated interview questions about triage processes and the responses from primary care nurses and MAs. This is a topic about which little is known; therefore, qualitative research may provide new information including the collection of broad data to capture emerging



meaning that is grounded in the experience of the participants. The responses collected from the interviews with primary care office caregivers revealed emerging data in regards to triage processes in primary care clinics and provided rich descriptions of the processes. Inquiry problems that include the word “how” are best answered by qualitative research (Corbin & Strauss, 2015). These are clearly process-oriented questions and this data was best obtained from the words of the participants. To address any bias of the principal investigator, a bracketing interview was held with the project advisor and results are included in the study’s limitations. This qualitative scholarly project was granted approval from Belmont University’s institutional review board.

### **Clinical Setting**

This qualitative project specifically aimed to explore the triage processes in primary care clinics. The principal investigator recruited a total of six clinics that participated, five in Tennessee and one in Alabama. One member of the caregiver staff from each clinic was interviewed. Recruitment of primary care clinics took place between February, 2020 and November, 2020. These clinics were recruited through personal and professional connections by the principal investigator and faculty advisor. Clinic staff were advised during the recruitment process that they were under no obligation to participate, and could opt out at any point in time if desired.

### **Project Population**

One member of the caregiver team at each primary care clinic was interviewed to provide information for this study. The inclusion criteria required the caregiver to be an active RN, LPN, or MA currently working in the participating primary care clinics for a minimum of six months. Exclusion criteria included health care staff without a nursing license or not recognized as a MA.

A consent form was obtained from each participant prior to the interview, explaining the nature of the study and anonymity of all the responses recorded during the interviews (Appendix A). These caregiver team members were chosen for this study because of their basic skillset, education level, and ability to work between the “front of office” with receptionists, and “back of office” with the providers. Their unique position offers an overarching view of the flow of the office and triage of the patients.

Participants were chosen based on a recommendation from the provider of each clinic in contact with the principal investigator and the willingness of the participant to join the study. An incentive was offered to each participant in appreciation for their commitment of time, and consisted of a free lunch of their choosing. The principal investigator and participants communicated via email and telephone to schedule dates for the interviews and sign the consent and audio recording forms (Appendices A & B). The interviews were subsequently conducted via Zoom technology as required by the IRB related to COVID-19 restrictions.

### **Data Collection**

To collect information on triage processes in primary care clinics, interviews were conducted with a caregiver staff member from each clinic. The interviews consisted of questions that specifically targeted details about the triage process of the clinic (Appendix C). These interview questions were carefully crafted by both the principal investigator and faculty advisor, who has qualitative experience. The interview questions were open-ended, as they allowed for the participant to explain and respond in any way they deemed necessary, in regards to triage in primary care. The participants were made aware that the data would be aggregated and that no individual information would be identifiable or discoverable to employers. In addition to the qualitative data, demographic data was collected. The demographic survey consisted of ten

questions that described the participants' education level, years of experience in nursing, age, gender, and training on triage procedures. These questions were carefully formed to accurately depict the participants' demographics in this specific field of study (Appendix D).

The format of the main interview question began with one broad statement, asking for as much detail as the participant could provide regarding the process of triage within their office from the first contact with the patient, to their disposition. Follow-up questions were used when necessary to gather more detailed or related information. These follow-up questions were derived through the reflexive, and on-going data analysis process. The interview questions and demographic survey were piloted by colleagues from the doctoral nursing program at Belmont University and faculty advisor prior to the first interview. This was conducted to ensure the questions asked could potentially provide an adequate amount of data.

The interviews were audio recorded via the online Zoom platform. A Zoom link was sent to the email address provided by each participant. The participant used the Zoom link to access their scheduled interview. The participant was instructed that they may leave their camera on, or turn it off before the recording began. The principal investigator was solely responsible for transcribing each interview. Pseudonyms replaced participants' names in the transcripts, and the names are known only to the principal investigator. This information is secured on a password-protected flash drive, and locked in the principal investigator's personal residence. The raw data was coded to identify themes from each clinic.

Interviews were held from September, 2020 through November, 2020. Data transcription began after the first interview in September, 2020, and continued until all interviews were completely transcribed by November, 2020. Since this study is qualitative, the ideal method is to sample until data saturation is complete. However, given the time constraints, data saturation was

not a realistic outcome. Data saturation occurs when themes and data are being repeated several times between each interview transcription and no new data are appearing. The data collected from these interviews may be transferable to other primary care clinics implementing triage processes.

### **Data Analysis**

Data was coded using the methods of Corbin and Strauss (Corbin & Strauss, 2015). Coding involves applying one or more words that conceptually describe the meaning of that datum (Corbin & Strauss, 2015). Analysis and coding of the transcripts occurred between the interviews, to allow for reflexive analysis. Line-by-line and incident-to-incident coding was used to identify and name pieces of data (Corbin & Strauss, 2015). Line-by-line coding refers to reading each line of the transcript and applying appropriate codes (Corbin & Strauss, 2015; Charmaz, 2014). Incident-to-incident coding differs from line-by-line because each line may not be coded, and instead each “incident” or situation is coded (Corbin & Strauss, 2015; Charmaz, 2014). Incident-to-incident coding is also used to compare and contrast similar circumstances shared by different participants. Both line-by-line and incident-to-incident coding is needed to fully and accurately code transcripts while remaining true to the data derived from the participants. Focused coding was a method used to sort and sift the codes according to frequency and relevance until a thematic structure was created (Charmaz, 2014). Sorting like data and meanings was used to arrive at major themes which can be depicted or displayed in a table or figure as well as narratively. In-vivo coding was used to include quotes from the participants. In-vivo codes are direct quotes from the participants that could not be formed into a code without taking away from what the participant was trying to depict. Qualitative data, which includes the entirety of the transcribed interviews is voluminous, and therefore may provide rich data.

The participant's demographic data was analyzed using simple, descriptive statistics. Averages from the demographic data was organized into a table. This provided a deeper understanding of the responses given by participants from the interviews.

## **Results**

### **Participant Demographics**

There was a total of seven participants who signed consent forms and interviewed. One participant's interview was excluded because they did not meet the inclusion criteria. A total of six interviews were included in the study for transcription and thematic development. Demographic data was collected on the six caregivers (Table 1). There was representation from each of the three professions: Certified Clinical MA (n=1), LPN (n=4), RN (n=1). The mean age of the participants was 39 years. The mean number of years that the participants had spent working in their respective fields was nine years, with six years being the average number of years they had worked at their current primary care clinics. Each of the six caregivers stated they had some form of training on triage procedures during their job orientation. Two of the caregivers stated the clinic had set triage protocols in place to follow in the case of an urgent patient situation. Three of the primary care clinics have 1-4 caregivers present during each shift, one clinic has 5-9, and two clinics have more than 10 caregivers. Of the six caregivers, two said they have a designated triage nurse present during each shift.

### **Qualitative Results**

This study produced rich qualitative data that was used to develop the emerging themes regarding triage in primary care clinics. Since the Donabedian SPO Model was used as a frame of reference for understanding the issue at hand, the major tenets of the theory were used as major headings under which emerging themes, properties, and dimensions were placed (Figure

2). The categories, Structure, Process, and Outcome from the Donabedian Model were used to organize the themes. Each separate box under the corresponding category is considered a theme, with properties and dimensions to clarify or further describe a theme (Figure 2). These three categories are not considered data as it was derived from the pre-existing model. The actual qualitative data is depicted in the blue boxes under each category (Figure 2). It is important to note that the categories of Structure and Process were the focal point of this study, and coexist to depict the unique triage processes carried out by the caregivers of each primary care clinic.

There were nine total themes identified from the raw data. Following the detailed thematic figure, is a simplified thematic figure that was developed to represent only the categories and corresponding themes (Figure 3). The Structure category has five themes: personnel, physical location, equipment, patient, training. The Process category has four themes: patient evaluation, communication, decision-making, training. The Outcome category has one theme: disposition. Training was found to be a common theme between both “Structure” and “Process.” Portions of data that reflected a focus of triage training seemed to be related to Structure. Other pieces of data seemed to be addressing issues of training more related to Process. Therefore, this property appears as part of both themes.

Factors that had an indirect or partial impact on the triage processes of each primary care clinic were listed under external factors. Although these were not included in any of the pre-determined categories, they were deemed necessary to the overall triage process. The study results represent the final combined thematic structure that emerged from data received from each of the six caregivers.

**Structure*****Theme 1: Personnel***

The personnel at the primary care clinics was an important theme voiced by each caregiver in regards to the Structure of triaging urgent patients. Staff that were consistently at the clinic or had experience with patient care were factors that the caregivers described as beneficial to triaging patients. One participant stated they were the clinic's designated triage nurse and said, "It is not easy, it is very stressful, it's a lot of responsibility" when describing their role. Another dimension of the personnel theme was having a comparative quality of elevated care at the clinic. This means that there are staff members who work at both the primary care clinic and the facility that is used as a higher-level of care to whom they may refer patients. The caregivers all felt strongly that external factors of effective triage among the staff were an understanding of their colleagues and having collegial support. One participant explained that "...being a good team player...knowing your nurses [and] feeling comfortable with the people that are around you" is a part of the process that impacts how they triage patients.

***Theme 2: Physical Location***

The next theme under Structure is physical location. This was a theme created to describe the importance of the location of elevated care and the proximity of staff in the clinic. Proximity of staff means the actual physical location of the caregiver's colleagues within the clinic. The response from the staff was described as being that which allows the caregiver to have quick access to help when triaging and caring for urgent patients. Some urgent patient situations may require a higher-level of care. Elevated care was a component used to depict a facility where the patient could be transferred and receive a higher level of care than what could be offered in the primary care clinic.

***Theme 3: Equipment***

Another theme that makes up the Structure is equipment. Equipment was seen as a major part of the triage process. The properties that emerged were available medical equipment, portable equipment, and well-equipped. Each of the caregivers expressed the notion that having the necessary equipment is vital to being able to effectively triage an urgent patient. Available medical equipment refers to the actual equipment used to assess and evaluate medical conditions. For example, several caregivers said they used manual blood pressure cuffs and oxygen saturation monitors when determining an urgent patient's vital signs.

Some of the equipment mentioned among the caregivers that could be used during triage was portable equipment such as a dinamap, which can measure the vital signs and display them synchronously on one screen for quick assessment. One caregiver said the clinic had a "partial crash cart" that contained emergency medications, but was unable to specify the other materials in the cart. Another caregiver stated their clinic had "emergency bags" but was not sure exactly where they were located within the clinic or what was in them. One caregiver explained that their clinic was well-equipped to handle the needs of their rural community and the accidents that are frequently seen among that population of patients.

***Theme 4: Patient***

The final theme making up the Structure category is patient, with the properties of familiarity and relationships. Patient familiarity is established once a patient has been seen and the caregiver forms a memory of the patient's "normal" appearance and health status. By having this knowledge, the caregiver is able to quickly identify when the patient walks in the door if there is something wrong with the patient that may need immediate medical attention. This phenomenon can be seen in the primary care setting where patients routinely visit, as opposed to



an emergency department where patients may not regularly acquire care. The caregivers reported that being familiar with their patients made the triage process more efficient. Patient relationships is the second property of this theme, and refers to the professional relationships formed between the patient and the clinic staff. One LPN said, "...being nice and open with patients is the most important thing...". This relationship is important in building trust with the patient and creating a safe environment for the patients to be able to get the care that is needed.

### ***Theme 5: Training***

Training was an essential part of both the Structure and Process of triage. One caregiver explained that the only training on triage that they received were the "basics of nursing" that was taught in nursing school. Several of the caregivers described their training on triage procedures as "on the job" training, which were portrayed in many different forms. One caregiver explained that they had a formal PowerPoint presentation that detailed each staff member's role during an urgent situation. Another caregiver described the "watching, then doing" method, where the experienced caregiver would show the caregiver in training how to do a task, and then ask the caregiver to repeat the task to show their understanding. This method also offered proper oversight, which was clarified by one caregiver as making sure the caregiver in training was doing the task correctly before allowing them to be on their own. Another caregiver discussed the benefit of training with a couple of different people to have multiple viewpoints of what their job entailed. Training on triage procedures varied caregiver to caregiver, with many different methods of learning and teaching.

### **Process**

#### ***Theme 6: Patient Evaluation***

Patient Evaluation was a significant theme for the Process of triage in primary care

clinics. The evaluation of a patient began with the check-in process. From the time the patient entered the door, some form of evaluation had begun. The second property of patient evaluation was archived or facility retrieved documents. These documents, or patient records help to initially obtain the patient's past medical history before physically assessing the patient. One caregiver explained the assessment of a patient can begin when they call the clinic and give a subjective report of their symptoms.

Once the patient walks through the clinic doors, caregivers discussed the process of immediately beginning a visual inspection of the patient. The caregivers explained that after visual inspection and getting the urgent patient back to a room, they would take a quick history to determine any new or past medical history that was not in the initial patient record documents. Several of the caregivers noted the importance of having an accurate and detailed medical history to determine the patient's urgency status when triaging them. The nurse or MA and the provider will do an initial objective evaluation, which consists of the physical exam to determine the patient's acuity and medical needs. One LPN explained that being efficient with their time was extremely important during the triage process. Most providers have fifteen-minute appointment times, and the first seven minutes is usually spent with the nurse triaging and taking vital signs. Therefore, the participant explained the need to get as much history and information from the patient to report back to the provider, "that way they're not flying blind." Once the provider does their initial objective evaluation, early identification of the problem and triage differentials can be formed to begin treatment and disposition for the urgent patient.

### ***Theme 7: Communication***

Communication was the most recurring code found during transcription that was identified under the Process category. This theme incorporates all modes of communication

described by each caregiver. The first property of communication is the phone conversation that takes place if the patient calls the clinic before arriving in person. One caregiver said, “truly it starts from the moment that phone call comes in”, when describing the steps taken to begin triaging an urgent patient.

Once the patient is physically in the clinic, staff to staff communication occurs either by phone or verbal conversation. One caregiver explained that when an urgent patient walks in the door, the front office staff member calls her desk phone, and if she does not answer they will physically come find them to give a verbal report of the patient. Once the patient is in a room and has been initially assessed by a caregiver, the provider is updated. One caregiver explained that they take notes by hand when getting a history of the presenting illness and give those notes to the provider so they are able to get a quicker assessment of the patient, without asking the same questions twice. Another caregiver described their method of debriefing the provider with a verbal report of the patient’s problems.

One LPN explained that communication may change during busier times of the day. For example, if one caregiver is usually called to the waiting room for urgent patients, but they are busy with another patient, then the front office staff member will call any available caregiver to the waiting room to assist the patient. Communication was not always a clearly defined process among the primary care clinics. Some of the clinics have more nursing staff than others, and this created a challenge when determining exactly how the communication process happens when an urgent patient visits the clinic.

### ***Theme 8: Decision-Making***

Decision-Making was a theme under Process that was reported by each of the caregivers, and involved each staff member of the clinic. Non-medical personnel were described as those

who worked in the front office handling the check-in process and phone calls. These staff members were involved in initial judgement of patient urgency, and were reported by the caregivers as the first person to establish that the patient needs immediate attention. These staff members are not medically trained. However, caregivers explained that the front office staff who had experience in the clinic, had an important role in the triage process. The staff members are the initial point of contact with the patients most of the time, and have the responsibility of notifying a caregiver of an urgent situation.

The next property, nursing judgment, refers to the caregiver's ability to use their clinical knowledge to determine patient's acuity level, and determine whether or not the patient can receive the care they need at the clinic. One LPN who is the clinic's designated triage nurse, explained that there are some patients who may walk in with urgent symptoms that cannot be handled within the clinic, and she will immediately send them to the ED with the provider's consent. The caregiver acknowledged that the decision to treat or refer to another facility is ultimately the provider's decision.

The property of higher-level providers refers to the physician, whether is it is medical doctor, nurse practitioner, or physician's assistant. Once the caregiver does the initial assessment and determines that a patient is considered urgent, they would physically retrieve a higher-level provider to evaluate the patient and begin treatment. If the provider deemed that the patient could not get the care they needed within the clinic, they would make the decision to transfer them to an elevated care facility. This could be an ED or specialty office.

One caregiver explained that not every patient who comes to the primary care clinic is considered urgent, and they will wait in the waiting room until the nurse or MA calls them to a patient room. However, when an urgent patient comes to the clinic the caregiver said that they

will get them immediately back to a patient room and interrupt a higher-level provider to come assess the urgent patient. This decision to interrupt the provider is critical, because the patient cannot always wait until the provider is available. Although, the caregivers try to avoid interrupting the providers when they are with other patients, in urgent situations they clarified that priority of the urgent patient will take precedent.

## **Outcome**

### ***Theme 9: Disposition***

Although this study was not measuring outcomes of triage processes in primary care, one outcome reported by the caregivers that seemed to fit in this category, was the disposition of the urgent patient. This involves whether the provider decided to start treatment in the clinic, or refer to another facility. One caregiver explained that, "...if we can't fix em' here, we send them somewhere where they can be fixed." This was in a rural primary care clinic that had limited resources in the office, and would refer urgent patients to an elevated care facility if they could not treat the patient in the clinic. One LPN explained that they had a patient who was sent to them from a rural ED near them with a BP of 230/130. The patient refused to go to another ED for care, thus the nurse and provider administered a blood pressure lowering medication and monitored the patient until they were stable enough to go home. This urgent patient situation was triaged effectively and the patient ended up stabilizing quickly, however, the clinic staff did not feel that the patient was going to seek any elevated care and was not safe to drive home.

When referring a patient to the ED, transport takes place in several different forms. One caregiver stated that if the patient is not considered emergent, but still needs to be seen in an ED, then she will ask them to call a family member or friend to transport them there. If they are considered emergent, and need immediate care, the caregiver explained that they would call an

ambulance to transport them to the ED.

### **External Factors**

External factors which emerged from the data included aspects that had an indirect impact on the triage processes of each primary care clinic. These factors did not fit neatly into one of the other categories. The most recurring and significant external factors were collegial support and understanding colleagues. The caregivers explained that the triage process is more efficient and effective when working alongside of coworkers that they understand or have worked with for an extended period of time. Several of the caregivers stated that having the support of their colleagues, especially when handling an urgent patient situation was a critical part to providing urgent care. Another factor that had a large impact on triage processes was the importance of interprofessional collaboration. One caregiver stated, "...she [the nurse] can come to the provider and speak openly without being ridiculed...". This was seen as a key factor, because the caregiver felt that the work environment was safe, and she could advocate for the patients by having open conversation with the provider, without having been belittled.

Another external factor was the impact that new Covid-19 protocols have on the triage processes. One caregiver stated that if someone called with symptoms of Covid-19, they would have to provide care in the parking lot as to keep that patient from actually entering the waiting room. Another caregiver explained that they had a nurse at the front door who would screen patients as they walked in, and if they had any symptoms of Covid-19, they were sent to another facility for care. These changes affected the way triage was handled, and each primary care clinic had their own way of screening and testing for potential Covid-infected patients. If the patients were considered urgent, they would be sent to the ED for further evaluation.

One external factor was knowing the boundaries of the specific role within their primary care office. One caregiver explained, "...I'd rather be open and say, "I don't know, but we're going to find out together." One MA stated, "So, I guess my role would be just to call for help, and make sure that the patient is not by themselves." These caregivers demonstrated the importance of knowing when to ask for help, which is a critical step when appropriately triaging and caring for an urgent patient.

### **Discussion**

The knowledge gained from this exploratory, descriptive, qualitative study has begun to fill the gap in literature for triage processes in primary care in the US. The problem being explored was how triage was performed in primary care clinics. Although this study does not specifically determine one set triage process that can be used in every primary care clinic, it does provide in-depth descriptions from participants that have laid a foundation of understanding for future endeavors. The Donabedian SPO Model guided the interviews and organization for the study results to provide a clear understanding of the different approaches to triage.

### **Structure**

The themes that made up the Structure of triage in the six primary care clinics were personnel, physical location, equipment, patient, and training. These themes emerged from the participants interviews, and were seen as major factors in the overall process of triaging urgent patients. With experienced caregivers working together in a primary care clinic, triage is performed in a more efficient manner. Along with experience, knowing the personnel and the available resources around the clinic at any given time can result in a quicker assessment and care provided to an urgent patient. An issue that one could take away from the findings was that by caregivers not knowing exactly where emergency medical equipment is located, or what

equipment is kept in the office, patient care could be delayed. This could result in poor outcomes during an urgent patient situation.

The caregivers discussed that one of the benefits to primary care is continuity of care, and being familiar with the patients. Having experienced these patients multiple times, and thus coming to know their normal findings in the form of historical information, physical exam characteristics, and normal affect, allowed the staff to recognize when a patient is experiencing an urgent medical situation. This is a phenomenon seen in primary care, and an advantage over seeking care in an ED. Because EDs frequently experience patient overflow and have more staff that rotate shifts, the continuity of care and patient familiarity is lacking when compared to primary care. The last theme under Structure is training. This was placed under both Structure and Process. On the job training was seen as the primary method to train the caregivers. Though, this can be an effective training method during some clinical situations, it does not always provide the caregiver with the specific details they need to know when triaging an urgent patient.

### **Process**

The triage process was conducted in several different ways between each of the primary care clinics. The themes that emerged for Process were patient evaluation, decision-making, communication, and training. The overall assumption that was made from the six caregivers was that there was not one clear set of steps or protocols that were followed during triage of an urgent patient situation. There were multiple factors that played into triaging. One core phenomenon that emerged was communication. There was verbal and written communication that was described differently by each caregiver. Although, the method of communication varied between clinics, each caregiver agreed that clear communication was crucial during triage procedures.



With respect to training as a process, caregivers explained that having multiple viewpoints and proper oversight were facilitators to learning the triage process. One caregiver said that to, “watch their flow” when training helped to understand the process. Upon further questioning of triage training with the caregivers, it was apparent that there were not specific training protocols for triage. It seemed that the skills learned for triaging an urgent patient were gained through experience in primary care and urgent or emergent care.

Patient evaluation was a large theme described in regards to triage processes in primary care. This theme included documentation, and the importance of medical records. It also represented the actual assessment of the urgent patient upon arrival to the clinic. This theme had many similarities among the caregiver’s descriptions. They each included the importance of having accurate initial vital signs, assessment of patient symptoms, and efficiency of the triage process as a whole. The ability to initially assess the patient and come up with diagnostic differentials lead to the next theme of, decision-making. This theme included the nurses’ judgement about whether the patient needed to be seen in the clinic or referred to a higher-level facility. The judgement of whether or not to refer the patient was shared with the higher-level provider, with the final decision ultimately up to the provider.

It was evident from the interviews that each clinic operated with their own processes that were specific to their staff. Though there were several triage processes discussed with the caregivers, there was not a clear process that was the same between any of the clinics. The lack of literature of triage processes in primary care may be due to the fact that there are no standardized guidelines that are followed by each clinic. However, it may be beneficial for primary care clinics to compare triage methods and stay current on the latest practices.

**Outcome**

The purpose of this project was not to implement an intervention or measure outcomes. However, participants described outcomes experienced through use of triage processes. These included themes of disposition and referral. Disposition was developed to describe the treatment options that were used during an urgent patient situation. Some patients could be treated in the primary care clinic and others would need to be referred to another facility depending on the care needs of the patient. Referral was a theme used to depict the decision to send a patient to another facility. Referral encompasses the mode of transportation of the patient, patient refusal to go to another facility, and the referral of a patient from an ED to a primary care clinic.

**External Factors**

The theme of external factors had several properties that had an impact on the triage processes in the primary care clinics. Although these properties did not fit neatly into one of the three existing categories, they were deemed necessary to the overall process by the caregivers. Two of the main external factors that were discussed by the caregivers was collegial support and understanding colleagues. These factors were determined to affect the efficiency and quality of triage and care to urgent patients. By having help and knowing what can be expected from the other staff members, the caregivers explained that triage and care was managed in a smooth and timely manner. The caregivers expressed that the trust between nurse and provider was important during the triage process, because it allowed judgement of urgency and treatment options to be quickly determined. Along with support of colleagues and trust, the caregivers explained that showing appreciation for the office staff created a positive work environment.

Knowing professional boundaries and the importance of interprofessional collaboration were seen as two external factors to triage in primary care. Understanding what the caregiver

could do within their scope of practice allowed them to triage effectively and know when to ask for assistance. If the care that was required was outside of their scope of practice, then a higher-level provider would be needed to continue the care. The presence of a family member or friend was another external factor that affected triaging urgent patients. The caregivers noted that having another means of transportation for a referral was beneficial, along with the support that they provide to the patient. On the other hand, provision of care could be obstructed by family members. One caregiver described a situation in which the patient was in an abusive relationship, and the caregiver had to use the resources within the office because the spouse would not allow the patient to go to the ED. These factors can inhibit or promote care depending on the relationship and trust between the patient and their family or friends.

The last two external factors are inconsistent patient reporting and Covid alters pattern. The patient may alter the details of the report they gave to the caregiver as compared to the one they gave to the higher-level provider. These inconsistencies were viewed as barriers to care when discussed with the caregivers. They explained that time and resources can be wasted when patients are not consistent with their stories. The last external factor is in regards to the Covid-19 pandemic. This virus has caused each clinic to alter the way that patients are seen in the clinic. Many of the clinics have screening policies in place when the patient enters the clinic, and some patients are sent to other facilities if they have symptoms consistent with Covid-19. This affects the triage process in many ways, and creates a delay in care for some patient situations.

### **Implications for Practice**

The process of triage in primary care in the US is one in which very little is known. There is a gap in the literature for this specific topic. This qualitative study may be used as a foundation upon which future research can build upon. Future research is needed to develop a more in-depth

understanding of how triage processes work in primary care. This study provides insight from six caregivers that allows the reader to have a more meaningful understanding of those triage processes, due to these results having been grounded in actual data. However, more qualitative and quantitative research should be done on triage processes with the ambition to improve upon current practices.

## **Strengths and Limitations**

### ***Strengths***

This qualitative study used the caregiver's experiences and descriptions of triage to begin to fill the gap in literature on triage processes in primary care clinics. By using a qualitative approach, an in-depth and rich quality of data emerged allowing for a foundation in which to build future research. There were three professions represented in the study, which allowed for different perspectives to be included in the data. The sample size included six participants between five different cities in two states adding to the diversity of the primary care clinic locations and patient populations.

### ***Limitations***

Although this study did produce rich, qualitative data for triage processes in primary care, there were several limitations. Time constraints limited the possible number of interviews which could be conducted. Although the six participant's interviews created a significant amount of data, this can be perceived as a small sample size and it may or may not be transferable to other similar clinical situations. The small sample size is only an issue because the limited time-frame created a barrier to achieving a state of data saturation. The principal investigator was the only transcriptionist and did not have a third party review the transcripts for errors. This could create bias when coding the transcripts for themes.

The caregivers who participated in the interviews were current employees of the primary care clinics. This could create a response bias if they believed their answers would be shared with their employer. Although the principal investigator explained the confidentiality of the caregiver and clinic's name, there could still be hesitation for the caregiver to elaborate on negative aspects if they were concerned about being reprimanded.

Lastly, a convenience sample was utilized. The caregivers were recruited through personal and professional relationships with the clinic provider, principal investigator, and university faculty. The caregivers were not required to participate and were made aware that they could choose not to interview or stop the interview at any time. However, this could create bias if the caregiver felt pressured to participate by a person of authority.

### **Conclusion**

This study has begun to fill the gap in literature on the triage processes in primary care clinics. This was a small-scale study, and future research is needed to build upon the limited amount of existing literature. The caregivers expressed the main themes that make up the triage processes in their clinics. These themes were vital in understanding the basic properties that create the Structure, Process, Outcomes, and external factors of triage in primary care. The caregivers in this study described several processes that are used to triage urgent patients. However, there were no specific protocols in place that the caregivers could clearly articulate. There needs to be more research in this field to improve upon triage processes in primary care in the US.

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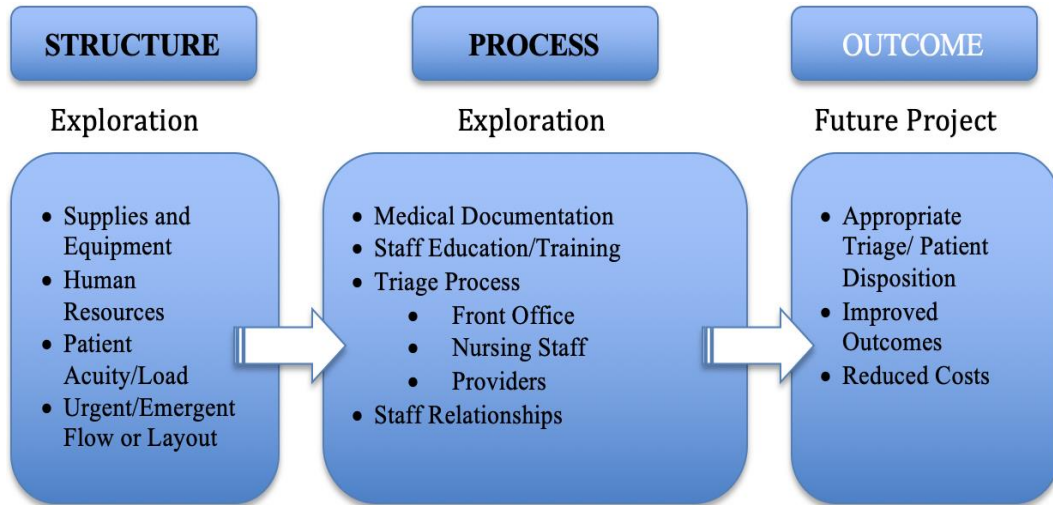
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Figure 1.



Donabedian SPO Triage Model: Adapted from Adelwahab et al., 2017.

Figure 2.

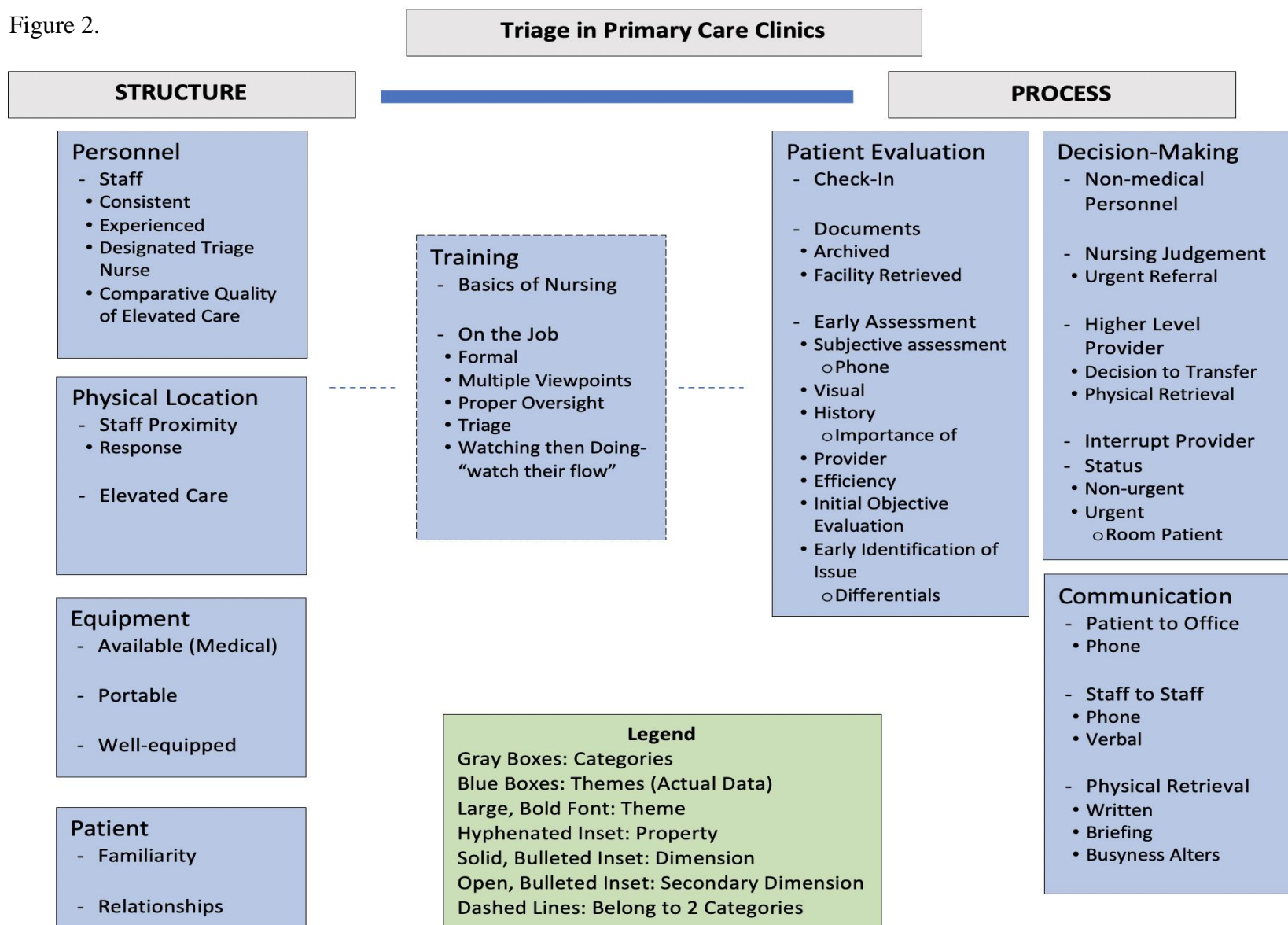


Figure 2.

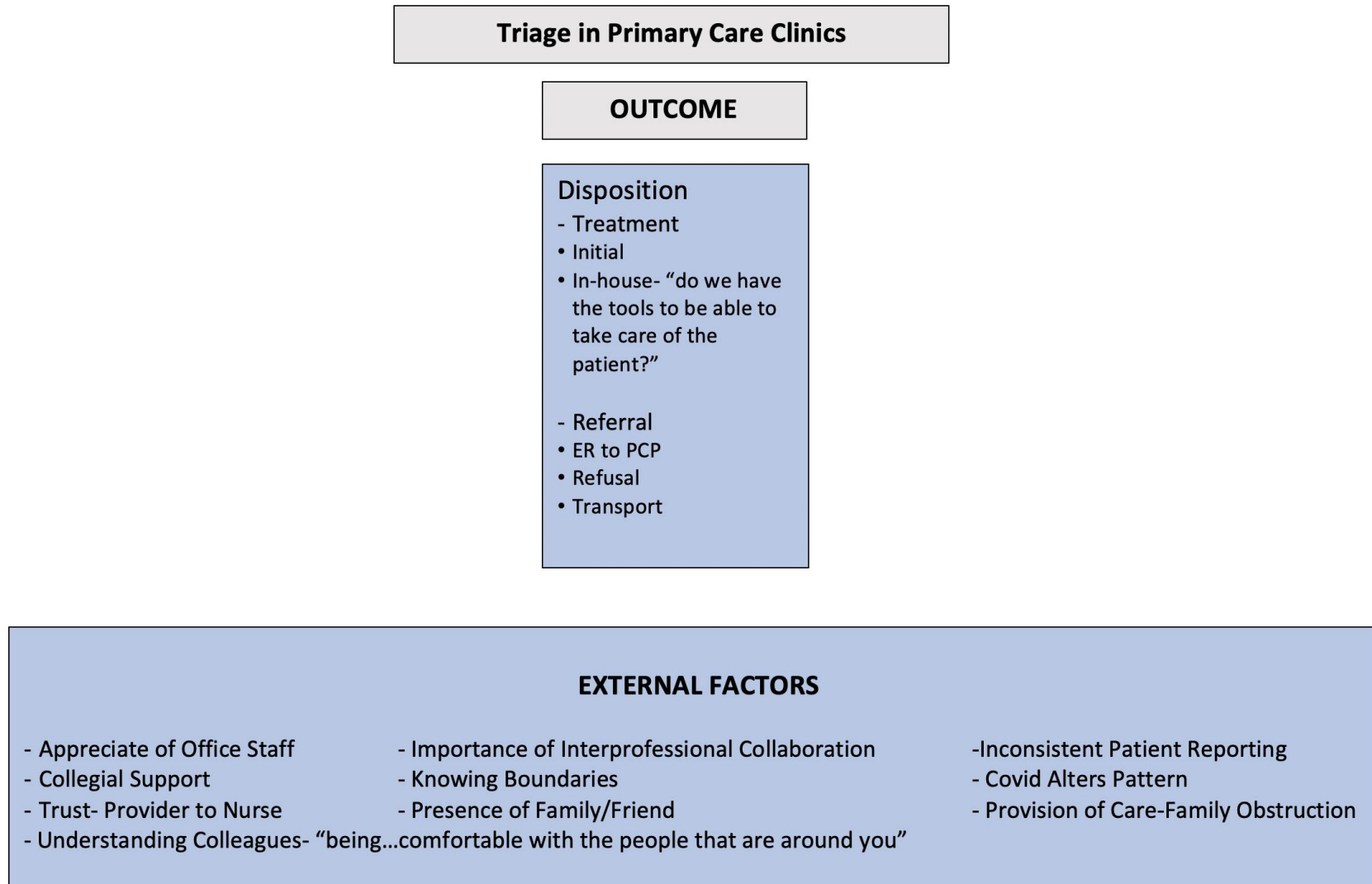


Figure 3.

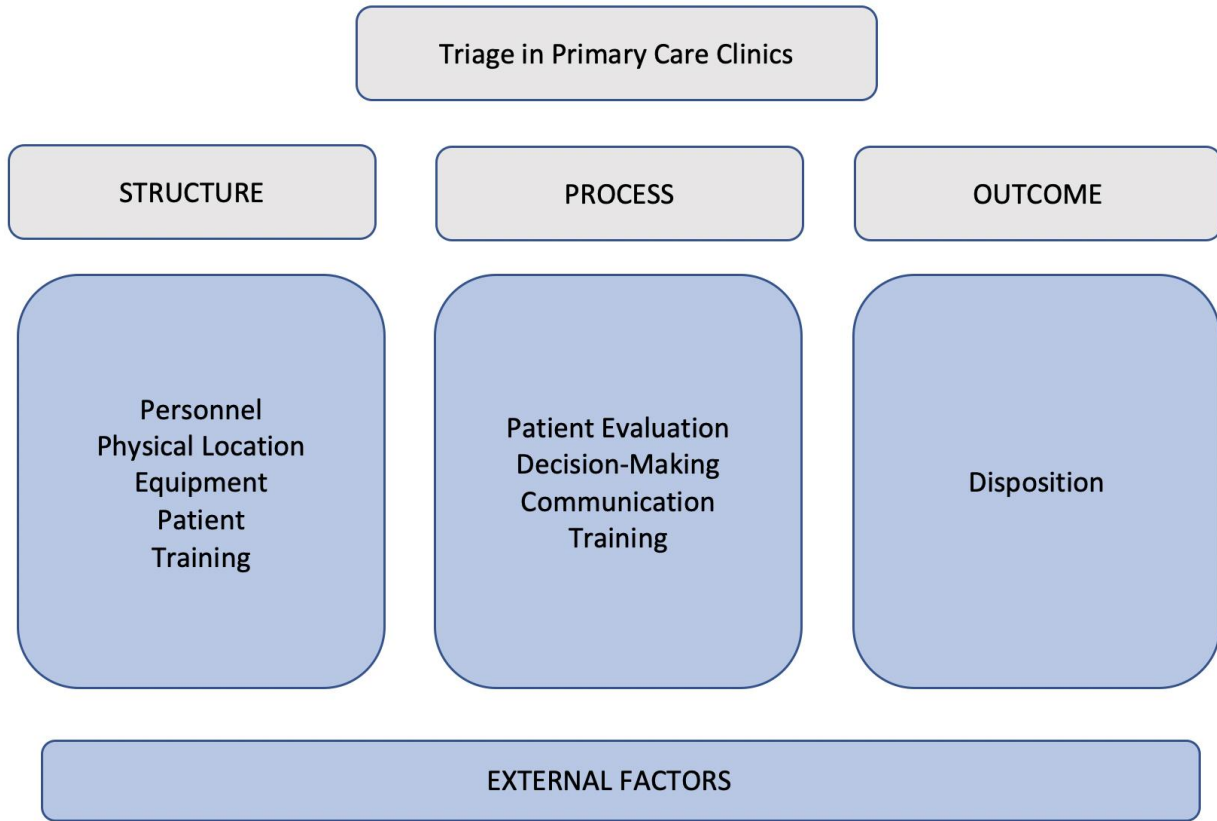


Table 1.

Demographic Data Table	
Demographic Information	Average
Gender (Male/ Female)	100% Female
Age (Years)	39
Professional Title	1 CCMA, 4 LPNs, 1 RN
Years in Profession	9 years
Years at Current Facility	6 years
Training on Triage during Job Orientation	100% - Yes
Triage Protocol	67% - Yes; 33% - No
Nurses Present on an Average Day	1-4 nurses (50%); 5-9 nurses (17%); > 10 nurses (33%)
Designated Triage Nurse	33% - Yes, 67% - No

## Appendix A

### BELMONT UNIVERSITY RESEARCH PROJECT INFORMATION SHEET

#### [TRIAGE PROCESSES IN PRIMARY CARE CLINICS]

Principal Investigator: [Ashley Vasilik, RN, BSN, nursing dept.]

Faculty Advisor: [Dr. Steven Busby, PhD, FNP-BC, Belmont University]

You are invited to participate in a research study about triage processes in the primary care setting.

If you agree to be part of this project, you will be asked to answer one or more questions detailing the clinics triage process in an interview that will be recorded for transcription. A 10-question demographic survey will be asked during the online interview and answers will be recorded and transcribed by the principal investigator. The interview will take approximately 30 minutes and will be conducted in a quiet, private room to promote confidentiality. To abide by social distancing policies, the interviews will be held via Zoom in the private room chosen by the nursing staff member. The interview will be scheduled between September and November with the participant choosing the date that works best for you.

Benefits of the research: This research will provide information on triage processes in 6-10 primary care clinics. The clinics will have the option to acquire a copy of the de-identified, aggregated project findings and conclusions once it is complete, for use in their office if desired. Their understanding of their own process and how they compare to those of other practices may improve their triage processes.

You will receive a free lunch of your choosing during the interview that will be delivered to you by a delivery service.

Risks and discomforts to this project include, emotional discomfort that may be experienced or triggered during the interview if you have negative feelings or experiences with triaging patients.

It is your choice whether or not to participate in this study. Even if you decide to participate now, you may change your mind and stop at any time.

We will protect the confidentiality of your research records by recording the online interviews and assigning pseudonyms during the transcription process to de-identify participants personal information. The recorded online interviews will be saved on an encrypted flash drive and password-protected laptop belonging to the principal investigator. All other copies of the recorded interviews will be deleted, and the pseudonyms will only be known and accessible by the principal investigator. A transcriptionist who will sign a confidentiality agreement will transcribe and review the interviews. The flash drive, laptop and transcripts will be secured in a private, locked location by the principal investigator.

Information collected may be shared with other researchers involved in this project. We will not share any information that could identify you with others outside of the research team. If results of this study are published or presented, individual names and other personally identifiable information will not be used.

If you have questions about this research study, please contact Ashley Vasilik (336) 214-6571 or Dr. Steven Busby (615) 460-5518.

Name of Participant (Please print): \_\_\_\_\_

Signature of Participant: \_\_\_\_\_ Date:  
\_\_\_\_\_

Signature of Investigator: \_\_\_\_\_ Date:  
\_\_\_\_\_

## Appendix B

### *Belmont University Institutional Review Board Release of Recordings*

**Project Title: Triage Processes in Primary Care Clinics**

**Principal Investigator: Ashley Vasilik**

**Faculty Sponsor: Dr. Steven Busby**

#### **Use of audio and/or video recordings within the research protocol:**

1. Describe the kinds of recordings that will be made. Explain how subjects will know they are being recorded, and when the equipment is on or off.  
Audio recording of the interview will be used via the Zoom online application. Participants will be given a consent form to sign before the interview detailing the use of audio recording during the interview. Once the participant joins the Zoom interview, the principal investigator will inform them when the audio recording starts and verify their consent to be recorded. After the interview is complete, the principal investigator will inform the participant of ending the audio recording and ask for any last remarks.
2. Explain how this material will be used within research. Describe how the recordings will be stored and when they will be destroyed.  
The audio recordings of each interview will be transcribed and used as the raw data in this qualitative research for coding purposes and thematic development. The recordings will be stored on the principal investigator's password protected flash drive and laptop. The principal investigator will secure the flash drive and laptop in a locked location. The recordings will be destroyed after six years, and data will be disposed by deleting the flash drive of all recordings. The transcripts will be kept since they will only include the pseudonym, and no personal identifiers will be included. Computer copies will be deleted and all hard copies will be shredded.
3. Describe the measures taken to ensure subject confidentiality.  
Online interviews will be held in a quiet, private room of the participants' choosing, and the principal investigator will also be in a quiet and private room to conduct the interview. These interviews will be conducted virtually and not face to face. The principal investigator will create alphanumeric pseudonyms for each participant to de-identify their personal data. The principal investigator alone will maintain the participant/pseudonym identities. The recordings from the online application will be uploaded to a password-protected computer and an encrypted flash drive. This will provide secure, redundant information. The flash drive and typed transcripts of the interviews will be maintained in a locked, secure location.

#### **Statement from Subject:**

I \_\_\_\_\_ freely consent to the use of the audio and/or video recording of my words and/or actions as described above in this study. I understand that the recordings



may be used as described in presentations, research reports, and other formats, and I waive the right to inspect or approve use of this material as incorporated in the work. I acknowledge that investigators shall be under no obligation to use the recordings in the work.

I release investigators, sponsors and successors from any claims that may arise regarding the use of the recordings, including any claims of defamation, invasion of privacy, or infringement of moral rights, rights of publicity or copyright. I acknowledge that I have no ownership rights in the recordings or the research.

I have had an opportunity to ask any desired questions about the recordings and am in agreement with the answers provided. *I have been given a copy of this form for my records.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Address: \_\_\_\_\_

**Parent/Guardian Consent (if Subject is under 18)**

I am the parent or guardian of the minor named above. I have the legal right to consent to and do consent to the terms and conditions of this Interview Release.

Parent/Guardian Name: \_\_\_\_\_ Date: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

## **Appendix C**

### **Interview Questions**

1. Tell me in detail about all of the steps that are taken when triaging patients who may require urgent care. Please include all equipment, staff, communication and decisions that are a part of that process. Begin from the first contact with the patient to their disposition.

If not clearly explained from statement 1, the following questions will be asked.

2. What equipment and documentation methods are used/required during an urgent patient encounter?
3. How do the health care staff communicate when the patient enters with urgent symptoms to assessing the patient and providing treatment, and finally to the disposition?

**Appendix D****Demographic Survey**

1. Name: Pseudonym for anonymity:
2. Gender: M/F
3. Age:
4. Professional title: RN/LPN/MA
5. Years of experience in profession:
6. Years of experience at current facility:
7. Did you receive training on triage procedures during job orientation? Y/N
8. Does the practice have a triage protocol in place? Y/N
9. How many nurses are present on an average day? 1-4, 5-9, >10
10. On a given day is there a person designated to do triage? Y/N