Development of a Fast Track Protocol to Decrease ED Wait Times

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Abstract

The abstract of the proposal is a concise summary of your complete proposal (maximum of 250 words). Do not cite in this section. Any key terms that were used during the literature review should be listed in the keyword section below.

Keywords: example, example, example

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Introduction

One of the main problems in the emergency department (ED) is patient wait times. The majority of patients coming into the ED do not have emergent issues which decreases turnaround time. Patients that use the ED for non-emergent medical problems may benefit from a system that increases turnaround time. Implementing this system will not only decrease turnaround time but will also decrease overall wait time in the ED (Aksel, 2014). Approximately half of all EDs report operating near or above maximum capacity (McHugh, 2016). Several studies have presented evidence that ED crowding contributes to a reduction in the quality of patient care, delays in commencement of treatment and that adherence with recognized guidelines worsens (McHugh, 2016).

A successful strategy that has been proven to work is the use of fast tracks that are run by advanced practice providers. These fast tracks have been proven to decrease wait time, increase patient satisfaction and increase bed availability for true emergencies. The fast track is utilized to separate patient flow for patients with noncomplex, simple, uncomplicated medical problems. These types of problems may consist of simple abscess, simple lacerations, upper respiratory infections, and medication refills (Fitzgerald, 2017).

Fast Track areas must be equipped with supplies that are suitable for non-emergent situations such as sutures and scalpels. Fast tracks should be designed for quick turnaround meaning that patients should be seen and discharged in less than one hour. Being able to accomplish this goal starts with having a protocol in place based on the evidence based practice and also training triage nurses on the process and how to appropriately designate patients that meet certain criteria to be seen in the fast track. (Lydakis, 2014).

Background

Since the initiation of the Affordable Care Act, 75% of ED providers have noted an increase in patient visits (Mandavia, 2016). This increasing number of patients with access to healthcare is causing emergency departments to treat an increasing number of patients under limited resources and rising costs. As a result, emergency departments are becoming overcrowded causing increased wait times, increased patient length of stay, decreased patient satisfaction, and increased mortality (Fitzgerald, 2017). Therefore, a significant amount of research has been conducted in order to find solutions to these problems, but researchers have been unable to conclusively decide on a single solution to decrease ED wait times (Salway, 2017). However, a new topic of discussion is the idea of implementing fast tracks into emergency departments, and the results thus far have been promising. Adding fast tracks into the ED is still a new concept, and additional research proving their efficiency, cost-effectiveness, and ability to improve ED wait times must be conducted (Fitzgerald, 2017).

Problem Statement

The current problem is that the ED practice site does not have a fast track protocol based on evidence based practice, and the current process being used has resulted in high patient wait times. High patient wait times result in negative effects such as decreased patient satisfaction, increased mortality, beds in the hallways, and high nurse-to-patient ratios, all of which contribute to a lower quality of care a hospital has to offer (Fitzgerald, 2017). Once the patients experience these long wait times or low quality of care, they will take their business to other hospitals. The development and implementation of a fast track protocol will assist in improving patient wait times (Lydakis, 2014). This DNP project will compare the average patient wait time before the fast track protocol to the patient wait time after implementing the fast track protocol. The outcome of this project will be to improve patient wait time.

Development of a Fast Track Protocol to Decrease ED Wait Time

Purpose Statement

The purpose of this project is to develop and implement a fast track protocol supported by evidence based practice. The project implementation will evaluate what impact a fast track protocol has on the ED practice site and if a fast track protocol will improve patient wait times. In addition, the ED staff and healthcare leaders will be educated on this protocol as part of the intervention for this DNP project. This DNP project will improve patient care and provide evidence based practice which may serve as a resource to other Emergency Departments.

Project Question

The project question is: Will the development and implementation of a fast track protocol based on evidence based practice improve patient wait times in the emergency department?

Project Objectives

The project objectives are:

1. Develop a fast track ED protocol based on evidence based practice to be used by ED staff and providers in an emergency department setting.
2. Present the developed fast track ED protocol to ED staff and providers and evaluate their understanding of the protocol.
3. Implement the fast track ED protocol into the care of ED patients in the emergency department setting.
4. Evaluate the impact on patient wait time using the fast track ED protocol through patient chart review.

Significance

As a result of the Affordable Care Act, emergency department physicians have seen a 56 percent increase in Medicaid patients, and an overall increase of all patient types by 28 percent (Mandavia, 2016). As more patients receive coverage, they are able to seek medical care which

results in higher patient volumes, overcrowding of emergency departments, and long ED wait times. Overcrowding of the ED leads to negative effects on patient safety, comfort, and satisfaction (Aksel, 2014). In order to avoid these negative effects, emergency rooms must implement a strategy to decrease wait times. New research has shown that the introduction of a fast track into the ED can help to improve patient wait times, resulting in less overcrowding and improved patient satisfaction scores. In fact, one study revealed that the introduction of a fast track into the ED reduced wait times by approximately 55%, while preserving the high quality care provided to patients (Aksel, 2014).

Search Terms

An in-depth keyword search was conducted utilizing CINAHL, PubMed, and EBSCO Host. The keywords used in the search were emergency department, fast-track, overcrowding the ED, and ED wait times. Inclusion criteria consisted of articles published within the past five years, full-text available, and peer-reviewed articles. The articles must have addressed either emergency department wait times, overcrowding of the ED, or the implementation of a fast track into the ED. Articles were excluded if they were older than five years old, were in a language other than English, and did not address interventions to reduce ED wait times.

Review of Literature

Impact of the problem

Historically, a major topic of concern in the ED has always been long wait times and overcrowding. The reason long wait times is a concern is because there are negative effects which include increased mortality, high nurse-to-patient ratios, unsatisfied providers, and decreased patient satisfaction scores (Fitzgerald, 2017). These negative effects of long ED wait times lead to a lower quality of patient care, resulting in patients taking their business to other hospitals. One negative impact of overcrowding in the ED is the decreased bed availability. When a high number

of low-acuity patients are occupying ED rooms, this leaves no room for more acute and true emergency patients causing ambulances to divert to a different ED, thus taking business away from the hospital (Salway, 2017).

With the recent healthcare reform, it is crucial to be able to have the resources and bed availability to provide emergency services to all patients. There have been multiple research studies discussing ways to improve long ED wait times. A few solutions to improving ED wait times have included the addition of more ED beds, the addition of hospitalists for bed management, the addition of a provider in triage, and increasing weekend discharges. (Salway, 2017). However, although these may be successful solutions, they may exceed the hospital budget. Therefore, one of the most common and cost-effective solutions in research has been the addition of a fast track into the ED. The benefits of a fast track include improving patient wait times in the ED, improving patient satisfaction scores, and maintaining high quality of care to patients (Aksel, 2014). This DNP project will implement a fast track into a busy ED, which will allow direct visualization and analysis regarding the success of the fast track.

Addressing the Problem with Current Evidence

This literature review has exposed three main benefits to an evidence-based fast track implementation into the ED including improving patient wait times, improving patient satisfaction scores, and maintaining high quality patient care.

Prevention. Ways to prevent overcrowding and long patient wait times in the ED include medical screening. Medical screening is done by a provider to evaluate the acuity of a patient. If the patient does not meet criteria, the patient would have to pay a deductible before being seen in the ED. This may work because patients presenting with non-emergent issues will need to pay a higher deductible in the ED than going to their primary care provider or urgent care (Mandavia, 2016).

Current management. One of the ways the practice site is trying to reduce ED wait times is by implementing patient registration at the bedside and trying to increase the amount of weekend discharges. The practice site is also discharging non-emergent patients from triage. For example, patients coming in for a rash will be triaged, evaluated by a provider, and discharged by the triage nurse without being transferred and occupying an ED bed.

Current recommendations. Current literature recommends various interventions to improve ED wait times such as optimizing staffing, adding beds, adding hospitalists, and adding a provider in triage. Other options include triage changes such as implanting a fast track system or a direct bedding strategy (Mandavia, 2016). External to the ED, recommendations include increasing weekend discharges as well as increasing weekend services (Salway, 2017).

Benefits of Current Recommendations. Various studies have shown an improvement in patient wait times with the implementation of a fast track. One study showed that the wait times decreased by about 55% and cited another study that reduced wait times by 50% (Aksel, 2014). Another study showed that overall patient wait times decreased by 35% with the addition of a fast track, and the wait times for high-acuity patients actually decreased by over 70% (Fitzgerald, 2017).

The implementation of a fast track has also been shown to improve patient satisfaction scores, which can result in more business for the hospital. A study showed significant improvement in patient satisfaction scores as a result of patient surveys, although it did not specifically define the “significant improvement” (Aksel, 2014). Another study showed an important determining factor in better patient satisfaction scores was lower ED wait times (Mandavia, 2016).

Finally, the literature has proven that the addition of a fast track will not sacrifice high quality patient care. One study showed that mortality and revisit rates did not increase with the addition of a fast track, proving that high quality care has been maintained (Aksel, 2014). A second

study showed that high quality care was maintained because the ED throughput was improved overall (Fitzgerald, 2017).

Issues still under investigation. Research is still evaluating whether the fast track should be implemented 24 hours a day, or only during peak hours. If it is found that peak hours are more efficient, more research must be conducted to determine what those peak hours are.

Issues not yet addressed. An issue that has not yet been addressed is whether or not a physician or advanced practice provider should be placed in the fast track. Research must be evaluated to determine whether these providers are competent enough to be able to care for these patients properly while providing high-quality emergency services. It must also be determined whether or not patients feel more comfortable with a physician or advanced practice provider.

Controversies. A major controversy for some religious-based hospital systems in implementing a fast track is that they feel every patient deserves to be seen in an equal setting, not feel rushed in fast track setting, and should not be placed in different areas based on a subjective evaluation of acuity. Another controversy is whether or not fast track patients should be charged the full amount like that of a patient who is seen in the main ED.

In summary, improving patient wait times is a critical problem that must be solved in order to continue to adequately care for the ever-increasing volume of patients that are being seen in the ED. This literature review has revealed that there are clear benefits to the implementation of a fast track into the ED without any current negative impacts. The implementation of a fast track into the project site is crucial in order to help improve long ED wait times without increasing budget. The project site has already attempted various strategies to improve wait times and overcrowding, however, costs continue to rise. The addition of a fast track could potentially help bring in revenue to the hospital by improving patient satisfaction scores and maintaining a budget.

Theoretical Framework

The theoretical framework that will underpin this DNP project is the Donabedian Model. The Donabedian Model includes three major tenants that are utilized to identify all of the concepts needed to clearly define this DNP project. These tenants are structure, process, and outcome, which will be described in more detail in this paper and can be found in the diagram in the Appendix A (Sasidharan, 2013). In addition, this framework is chosen because it can be used to modify a process within a healthcare delivery unit. This DNP project focuses on decreasing wait times in the emergency department utilizing a fast track system. In order to connect all important aspects of this DNP project, the Donabedian Model will be a useful map to connect all the dots (Moran, 2016).

Historical Development of the Theory

The Donabedian Model was created in 1966 by Dr. Avedis Donabedian, a physician and health services researcher at the University of Michigan. The model was first used to analyze the methodologies of health services research (Donabedian, 2005). According to Berwick (2016), the Donabedian model was described as three main tenants that are used to assess the quality of care which are structure, process, and outcome. According to Berwick (2016) the model gained popularity and further research was conducted to further the detail of the three tenants.

Major Tenets

The Donabedian Model utilizes three major tenets to describe this framework which are structure, process, and outcome. In order to assess the quality of a new healthcare process, it is essential to fully explore these tenants and relate them to the process in question.

Structure. As seen in the diagram in the Appendix A, the structure tenant includes all of the factors that affect how care is delivered (Moran, 2016). The structure includes community, institution, provider, and patient. Community describes the patient population for which care is being administered. For example, a low-income community, war veterans, renal failure patients, or patients with a specific religion or belief such as Jehovah's Witnesses (Center, 2006). Institution

explains the physical location where care is taking place such as a hospital, urgent care, physicians' office, etc. It also describes the size of the facility. Provider will define the person performing care and all of the human resources needed to apply the new process. Finally, patient specifically states the patient population for which care is being provided (Sasidharan, 2013).

Process. The process tenant includes all of the actions that make up healthcare such as the treatment process, stages of treatment, appropriateness, and services process (Moran, 2016). Treatment process may include registration, admissions, diagnosis, equipment needed to treat the patient, and diagnostic tests. Stages of treatment describes diagnosis, treatment, preventative care, patient education, and any other processes needed to provide treatment to the patient. In addition, this framework also examines the appropriateness not only of the new process in question, but also of the individual processes that are performed during patient care. Lastly, services process describes the interpersonal processes between all staff who come into contact with the patient and evaluates the quality of each interpersonal relationship and necessity with that of the patient (Sasidharan, 2013).

Outcome. The third tenant, outcome, summarizes all the effects of the previous two tenants on patients. Examples of outcomes may include patient satisfaction scores, adverse events, death, readmission to hospitals, and cost of the new process implemented. According to Sasidharan (2013) the Donabedian model identified outcome as the most important indicator of quality, of the new process, because the primary goal of healthcare is improved patient care. Unlike structure and process, the outcome tenant is very difficult to objectively measure, and may lead to inaccurate evaluation of the new process that was implemented (Sasidharan, 2013).

Applicability of Theory to Current Practice

The Donabedian Model was developed in order to be able to apply it in many diverse healthcare settings and among various levels of delivery systems (Berwick, 2016). For example,

the model may be used to implement a new process in order to decrease wait times in the emergency department. The model will help examine all aspects of the ED that are attributing to long wait times, how to eliminate unnecessary processes, and evaluate the quality and effectiveness of a new process to help decrease wait times (Donabedian, 2005).

The Donabedian Model is generalized and breaks down each tenant into specific aspects of any and all proposals, it is easy to incorporate this model to evaluate the quality of outcomes in new processes (Donabedian, 2005). By closely examining and breaking down each piece of the proposal, the Donabedian Model can help connect all the important aspects of the project and clarify each piece of the DNP project. The model can help to summarize each piece of the DNP project and find areas for improvement (Moran, 2016).

Theory Application to the DNP Project

By exploring the tenants of structure, process, and outcome to this DNP project, the intervention of decreasing ED wait time can be examined and implemented clearly. The structure includes a level three trauma center hospital located in a rural, low-income community in East Texas. The providers include the interdisciplinary team that care for the patients, including ED physicians, physician assistants, nurse practitioners, registered nurses, respiratory therapists, radiology technicians, and pastors. The patient population includes patients who are in need of acute interventions.

The second tenant of the Donabedian Model is process (Donabedian, 2005). The process of decreasing ED wait time includes the implementation of a fast track system. The process of the fast track begins when the patient comes into the ED, and is assessed by the triage nurse and then placed into an acuity category. If the acuity category is a four or a five, and the patient meets specific fast track criteria, then the patient will be accepted into the fast track system. Once in a fast track room, the patient will be examined by a nurse practitioner, given a diagnosis, and given

treatment at the highest level available. After treatment is completed, the patient will be discharged home (Lydakis, 2014). The idea behind implementing a fast track system is to increase turnover time in low-acuity patients coming into the ED in order to provide available beds and services for patients with high acuity problems (Lydakis, 2014).

Lastly, the outcome of implementing a fast track into the ED will be evaluated. Evaluation of the quality of this DNP project will be to objectively compare ED wait times before and after implementation of the fast track system. In addition, patient satisfaction scores, costs of fast track implementation, and patient turnover rates will be analyzed to evaluate the quality of the fast track system.

Project Design

An evidence-based quality improvement (QI) project design will be utilized for this DNP project. A fast track protocol will be developed by the project lead. This design was chosen because the overall goal of this project is to improve wait times in the emergency department (ED). Specifically, improving the time from when the patient walks through the ED doors until the patient is first seen by the provider.

This project will consist of both independent and dependent variables. The independent variable is ED wait times and the ED wait protocol. The dependent variable is the impact patient wait time in the ED.

The population of interest will be the staff that will implement the protocol in the ED. The project lead will review the Fast Track Protocol (Appendix B) with the staff prior to implementation. The purpose of this project is to decrease overall ED wait times through implementation of a fast track protocol. Data analysis will be performed by a pre-implementation chart review of patient wait times in the ED and also a chart review of the post-implementation patient wait times in the ED following implementation of the fast track protocol.

In order to analyze whether or not the fast track protocol is successful in improving ED wait times, a systematic and thorough chart review will be completed of all patients included in both the pre-implementation and post-implementation phase. Times will be included from the time the patient entered the ED waiting room until the provider placed his/her first documentation.

By using a quality improvement design for this project, the DNP project objectives will be accomplished. Specifically, the implementation of the fast track protocol will be accomplished by acting as the specific variable utilized in this project design. After implementation of the fast track protocol, the pre- and post-implementation data will be compared to evaluate whether or not ED wait times were, in fact, improved. By comparing the pre- and post-implementation data after the intervention is implemented, the fourth project objective will be accomplished. This objective is to evaluate the impact on patient wait times using the fast track ED protocol through patient chart review.

Population of Interest

The population of interest in the DNP project will be the ED staff which will be implementing the fast track protocol to determine if there is a decrease in patient wait times. The staff that will be participating in this project will be all that have two years of ED experience and have been trained in both ED triage and the new fast track protocol. Exclusion criteria of the staff include anyone who has less than two years ED experience and anyone who has not been trained in both triage and the new protocol.

Patients are secondary to the project outcome and, based on the protocol, it will be determined that patients eligible for the fast track protocol will be anyone below the age of 65, male or female, any race, can speak any language, any religion, and are admitted to the ED with uncomplicated medical diagnosis. Uncomplicated medical diagnosis are conditions that do not need extensive work up and can be diagnosed with minimal tests and imaging. Examples of

uncomplicated medical diagnosis include lacerations, wound infections, cough, and upper respiratory infections. Patients that will be excluded from the protocol are any patients older than 65 or who present with complicated medical diagnosis. Complicated diagnosis are conditions that need extensive work up and will also need consultation with multiple specialists. Examples of complicated medical criteria include acute myocardial infarction, cerebrovascular infarction, abdominal pain, chest pain, complicated fractures, etc. These criteria such as age and urgency were decided by the medical staff due to the comfortability of patients being seen in the fast track. Patients above the age of 65 usually have co morbidities and due to these complications the safest care would be to be seen in the main ED.

Setting

The setting of the DNP project will be a rural, community-based hospital emergency department. Permission from the project site administrator has been obtained.

Stakeholders

Stakeholders in this DNP project include all staff involved in patient care in the ED. This includes physicians, physician assistants, nurse practitioners, registered nurses, and registration personnel. In order to establish rapport with these healthcare workers, it will be explained that patients will experience shorter wait times and overall an improved patient satisfaction score. By allowing the staff to understand the benefits of the fast track system, they will hopefully be more willing to participate in the new fast track protocol. Other stakeholders include management personnel who may benefit from the fast turnover and reduced wait times that result from implementation of the fast track system.

Recruitment Methods

The recruitment method for this project design was that of direct recruitment which consisted of meeting with the providers to deliver information about the DNP project and the fast

track protocol that will be developed by the project lead. By educating the providers on the benefit of shorter ED wait times utilizing the fast track protocol, it will be possible to recruit staff in order to help implement this protocol.

Tools/Instrumentation

The project will include a pre- and post-implementation review of patient medical records to determine the time it took the patient to get from entrance into the ED until the first provider's note is written. The project will also include a Fast Track Protocol (Appendix B) which will be developed by the project lead using evidence based practice and will be approved by the medical staff of the ED. A chart audit tool (Appendix C) will be used to collect data. An excel spreadsheet will be used to input these times and calculate an average wait time for each group. These tools will help determine ED wait times and assist in the success of the fast track process.

Data Collection Procedures

The data collection procedure will consist of collecting each patient's wait times from the chart and inputting those times into the excel spreadsheet. This data will be collected after the patient has already been discharged. To maintain patient confidentiality, only wait times will be recorded, and only one provider will have access to the medical records. Patient wait times of both the main ED and the fast track protocol will be analyzed. This will allow the project lead to compare wait times to evaluate whether or not the fast track protocol is successful in decreasing wait times. A total of 100 charts from the pre-implementation group and 100 charts from the post-implementation group will be evaluated. Of each group, half of those charts will be from the main ED and the other half will be from the new fast track protocol.

Intervention/Project Timeline

The timeline for this project is six weeks. The timeframe includes implementation of the project intervention, data collection, and analysis/interpretation. The project implementation will

start at the beginning of DNP Project III. Data collection from the patient's Electronic Medical Record will determine if the implementation was successful and beneficial to the patients and institution. Patient chart review will be completed, and times will be collected to average out the patient wait times and compare them to patient wait times before the implementation of the Fast Track protocol. Patient surveys will also be a part of data collection for patient input to verify if patients benefit from the fast track area or if they would rather be seen in the main Emergency Department. This survey will give administration an insight of patient satisfaction to analyze if change is needed and where that change is needed.

Approval by the site to initially implement the Fast Track Protocol for this project will be obtained in DNP II. A meeting will be held by the project lead on January 30, 2019 with the CEO, CNO, Emergency Medical Director, and the Lead Advanced Practice Provider in order to obtain site approval for the implementation of this project.

Week 1 will begin by educating the providers and staff on proper criteria and protocols involved in the upcoming implementation of the new Fast Track system. The way in which data collection will occur will also be discussed. In week 2, the implementation of the Fast Track Protocol into the emergency department will occur. The data obtained from the chart audits will be collected in weeks 3 and 4. In week 3, the collection of pre-implementation data from the patients' EMR will be recorded. In week 4, the collection of post-implementation data from the patients' EMR will be recorded. Week 5 will consist of analyzing the data collected from chart audits in the previous two weeks. In week 6 the efficacy of the Fast Track Protocol will be evaluated by comparing patient wait times before and after implementation of the Fast Track to determine if the Fast Track is beneficial. This is outlined in the table below:

Week 1	Education of the providers and staff on proper criteria and protocols involved in the upcoming implementation of the new Fast Track system
Week 2	Implementation of the Fast Track Protocol into the emergency department

Week 3	Collection of pre-implementation data from the patients' EMR will be obtained and recorded, specifically, the time from initial check-in into the ED until the first provider's note
Week 4	Collection of post-implementation data from the patients' EMR will be obtained and recorded, specifically, the time from initial check-in into the ED until the first provider's note
Week 5	Analysis of the collected data will be performed
Week 6	Evaluation of the efficacy of the Fast Track Protocol will be performed by comparing patient wait times before and after implementation of the Fast Track

Ethics/Human Subjects Protection

The required IRB determination form will be submitted for review to remain compliant with Touro University Nevada Internal Review Board (IRB). The project site will not require IRB review because this is a quality improvement project, not a research project. This was determined by the medical review board because this project is being implemented in the ED and is not a direct patient care project. The information extracted from the patient charts will be documented on the chart audit tool. No patient names or identifying data will be utilized. HIPAA compliance will be followed. Any patient information that needs to be emailed will be encrypted with the proper software to protect patient information. For example, TigerConnect is a HIPAA approved software that is used by medical professionals to share patient information that is secure and encrypted.

Benefits of the participation of the project is to allow the organization and staff to determine if the Fast Track is beneficial to patient care. The benefits to patients will improve care by acknowledging patients' needs faster and not making a patient wait hours to be seen by a provider who has a simple problem that can be treated rapidly. This will also benefit critical patients that need emergent care, such as CVA's and MI's, because there will be available beds and medical staff immediately upon arrival for care. By providing these benefits to the patients, the Fast Track will also increase patient satisfaction scores because if patient outcomes improve then the patients will be more satisfied. In addition, the hospital will benefit by decreasing

overcrowding in the Emergency Department and decreasing the load of patients for the providers in the main ED. A potential risk includes the unwillingness of providers to change their approaches to treatment.

Plan for Analysis/Evaluation

In order to determine the outcome of the Fast Track Protocol, patient wait times will be analyzed and evaluated. The plan to analyze results include collection of data from the patient's electronic medical record. Once this data is analyzed, evaluation of wait times prior to implementation of the fast track can be compared to wait times after implementation in order to identify the benefit of the Fast Track Protocol.

Specifically, the plan is to collect patient wait times, which will be the time the patient first checks-in into the ED until the first provider's note is in the chart. These patient wait times will then be organized into an excel spread sheet to formulate an average wait time for the day. Then, the averages of the days will be calculated for the week to get a weekly average. This weekly average will be compared to the average patient wait time before the fast track was implemented.

The statistical analyzes test that will be implemented into this project is the Independent T Test. This statistical test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Johnson, 2012). The Independent T Test will allow a comparison of the results and evaluate whether there is a statistically significant difference in wait times before and after the Fast Track Protocol.

Significance and Implications for Nursing Profession

The potential significance of the project results can improve healthcare and patient satisfaction. This could lead to other emergency departments implementing a Fast Track Protocol to decrease patient wait times resulting in improved patient satisfaction. The results of this project can show that the Fast Track can decrease ED overcrowding and allow quicker healthcare to

patients with more critical emergencies. These results are significant for the nursing profession because nursing is a career that focuses on high-quality, patient-centered, evidence-based care. By providing these results, the nursing staff can help to implement this change to allow an innovative way to provide higher quality patient care that is greatly needed in the ED. The nursing staff can be leaders to implement change and allow a pathway for all the different disciplines to join together and function as a team in healthcare.

Themes in the literature review showed evidence that the fast track is beneficial in the ED and decreases patient wait times. In a Dutch ED setting, the introduction of Fast Track led to a significant reduction in overall wait time of over 41 minutes relative to the period before the fast track system was introduced (Theunissen, 2014). Comparing the results of current literature through a literature review and providing the results of this project will allow nurses to implement change into the ED setting to comply with up-to-date evidence-based healthcare.

Analysis of Results

The aim of this project was to develop and implement a fast track protocol supported by evidence based practice. The outcome that was measured determined whether there was an improvement in ED patient wait times following the implementation of a fast track protocol. There were two hundred and seven patient charts included in this DNP project. Three patient charts were excluded from the chart audit because the triage process was not followed. The project lead collected wait time data from 15 patient charts per day for 7 days, both pre- and post-implementation of the fast track system. There were 105 wait times that were analyzed pre-implementation of the fast track system and 102 wait times analyzed post-implementation. The project lead utilized the independent t test which allowed the comparison of pre- and post-implementation wait times and evaluated whether there was a statistically significant improvement in ED wait times after implementation of the Fast Track Protocol. SPSS was used to compile the

data and obtain the independent t test results.

In the pre-implementation group, the average ED wait time was 119.53 minutes. The shortest wait time pre-implementation was 44 minutes, and the longest ED wait time was 198 minutes. The post-implementation group had an average ED wait time of 30.51 minutes after implementation of the fast track system. The shortest wait time pre-implementation was 7 minutes, and the longest ED wait time was 127 minutes. Overall, this was an average decrease of 89.02 minutes (95% CI = 80.918 – 97.129; P = 0.000).

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
ED_Wait_Times	Pre_Implementation	105	119.53	31.640	3.088
	Post_Implementation	102	30.51	27.274	2.701

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ED_Wait_Times	Equal variances assumed	3.028	.083	21.655	205	.000	89.024	4.111	80.918	97.129
	Equal variances not assumed			21.702	202.158	.000	89.024	4.102	80.935	97.112

Long ED wait times continue to be a problem nation-wide, leading to overcrowding and poor patient satisfaction scores. The wait times before implementation of the fast track for one week in March, 2019 in the ED averaged at 120 minutes. The fast track system was then implemented, and analysis of data for one week post-implementation showed the wait times decreased by almost 1.5 hours; to only 31 minutes.

Discussion

After close analysis of the data collected, the project question can be answered. The project question was: will the development and implementation of a fast track protocol based on evidence-based practice improve patient wait times in the emergency department? The data collected and analyzed during this project showed that there was a decrease of patient wait times by almost ninety minutes after the implementation of the fast track protocol. The p-value is 0.000 which indicated a decrease in patient wait times in the ED and showed a statistically significant difference after implementation of the fast track protocol. For example, before implementation of the fast track system each patient was waiting for almost two hours, on average, before being seen by a provider. The fast track system was then implemented, and the average overall wait time for the patients in the ED decreased to only a thirty-minute wait. This 75% decrease of patient wait times in the ED, along with a p-value of 0.000 indicated that the implementation of the fast track protocol showed a statistically significant difference. The findings of this project may be able to be applied to emergency departments and improve productivity.

Significance/Implications for Nursing

The significance of this project has revealed that implementing a fast track system in the emergency department can help to decrease patient wait times. Current literature shows that this decrease in patient wait times may also be associated with improved patient satisfaction scores and also may help to decrease overcrowding in the ED (Aksel, 2014). This project has shown that ED wait times have the potential to decrease by up to 75%. Therefore, by significantly reducing wait times, the fast track protocol has the potential to improve patient satisfaction scores, increase reimbursements for quality care, and provide more available beds for patients that actually need high acuity care (Mandavia, 2016).

The results of this particular project align with current literature that shows the fast track system does indeed provide a statistically significant decrease in ED patient wait times. One study

found that ED wait times decreased by 55% after implementation of a fast track system (Aksel, 2014). In addition, another study focused on implementing the fast track system within a high acuity ED. This study found that the wait times decreased by 70% in the ED, which correlates closely with this project's results (Fitzgerald, 2017). In addition, current literature shows other benefits from reducing patient ED wait times including increasing patient satisfaction scores and reducing the overcrowding in emergency departments (Aksel, 2014). Finally, current literature also shows that high quality patient care is not compromised with the implementation of a fast track system (Mandavia, 2016). This results of this project, along with current literature, show that the implementation of a fast track system into emergency departments can provide a wide range of benefits for not only the patients, but also the entire hospital.

Limitations

Like most project designs, certain limitations exist. A limitation of the project design was the relatively small sample size of 207 patient charts that were reviewed when compared to projects within larger health care systems. This limitation existed because the project took place in a rural hospital rather than a large urban hospital with a higher patient volume. In addition, another limitation of the project was the short time frame of data collection. The data collection of this project was one week, and if the data collection was longer, more charts may have been able to be reviewed, increasing the sample size.

A second limitation of the project was that of data recruitment. It was noted in the patient chart reviews that at times patients were incorrectly triaged and misplaced into the fast track system instead of the main emergency department. This limitation may have skewed the results and may have caused the resulting wait times to be falsely elevated.

Finally, a limitation of the data analysis of the project is whether or not these results can be duplicated in an urban hospital setting with a high volume of patients. The data analysis occurred

in a small, rural hospital where the fast track system was able to be controlled. However, will these results still hold true in a high-volume emergency department. For example, can a fast track system still be implemented and controlled in a busy, Level I, urban trauma emergency department?

Dissemination

The dissemination of this project will include a final presentation to the Touro University Nevada nursing faculty and students as a program requirement. The project results will also be disseminated to the nursing leadership and hospital administration through a series of staff meetings. In addition, the project will be further disseminated into a larger nursing audience at an emergency nursing conference. On October 27-30, 2019 the American College of Emergency Physicians will host the largest emergency conference in the world at the Colorado Convention Center. A poster of this project will be created and presented to educate other emergency providers about the benefits of a fast track protocol in decreasing patient wait times. This project will also be submitted to the Doctor of Nursing Practice Organization to enhance practice innovation and professional growth in nursing. By educating emergency personnel about current results and current research at a conference, hopefully other hospitals will begin to implement fast track systems to improve patient wait times.

Project Sustainability

This fast track system protocol is planned to continue at the project site due to the successful decrease in patient wait times. In order to ensure sustainability at the project site, long term vision and goals must be developed. The vision will be to keep high-quality patient care the center of the fast track system, while always striving to improve patient wait times. The goal will be to continue to maintain short patient wait times in the emergency department while maintaining high patient satisfaction scores. Financial sustainability will be obtained because the decreased wait times in the ED will allow more patients to be seen in one day, which will increase the money

raised by the emergency department. The increased money obtained can be utilized to sustain the fast track system by paying for the providers and training needed to continue to fast track protocol. The plan for future evaluation beyond this project timeline includes quarterly chart audits for one year, followed by biyearly chart audits for the next three years. These chart audits will occur for one week, and will determine the current patient wait times in the ED. The results of the chart audit will be compared to the previous wait times to determine whether short wait times are being maintained.

In addition to sustainability at the project site, this project also has a high projection of sustainability not only on a national level, but on a worldwide level, due to the impact that a fast track system can make on emergency departments all over the world. This project can help to guide other emergency departments that struggle with high patient wait times, by implementing the fast track protocol. Implementation of the fast track protocol is a low-cost project that requires the training of triage nurses and the providers who will be caring for the fast track patients. The project results would provide education to other emergency departments on how to implement a fast track system to improve patient wait times. Once more emergency departments begin implementing fast track systems, more data may be collected to determine the best evidence-based practice regarding the most efficient and productive fast track system. Once this is determined, then development and implementation of a fast track protocol may be standardized in all emergency departments.

Conclusion

In this section, you will summarize the contents of this document. The table of contents should automatically populate. Please see Microsoft Website for any specific table of contents formatting section.

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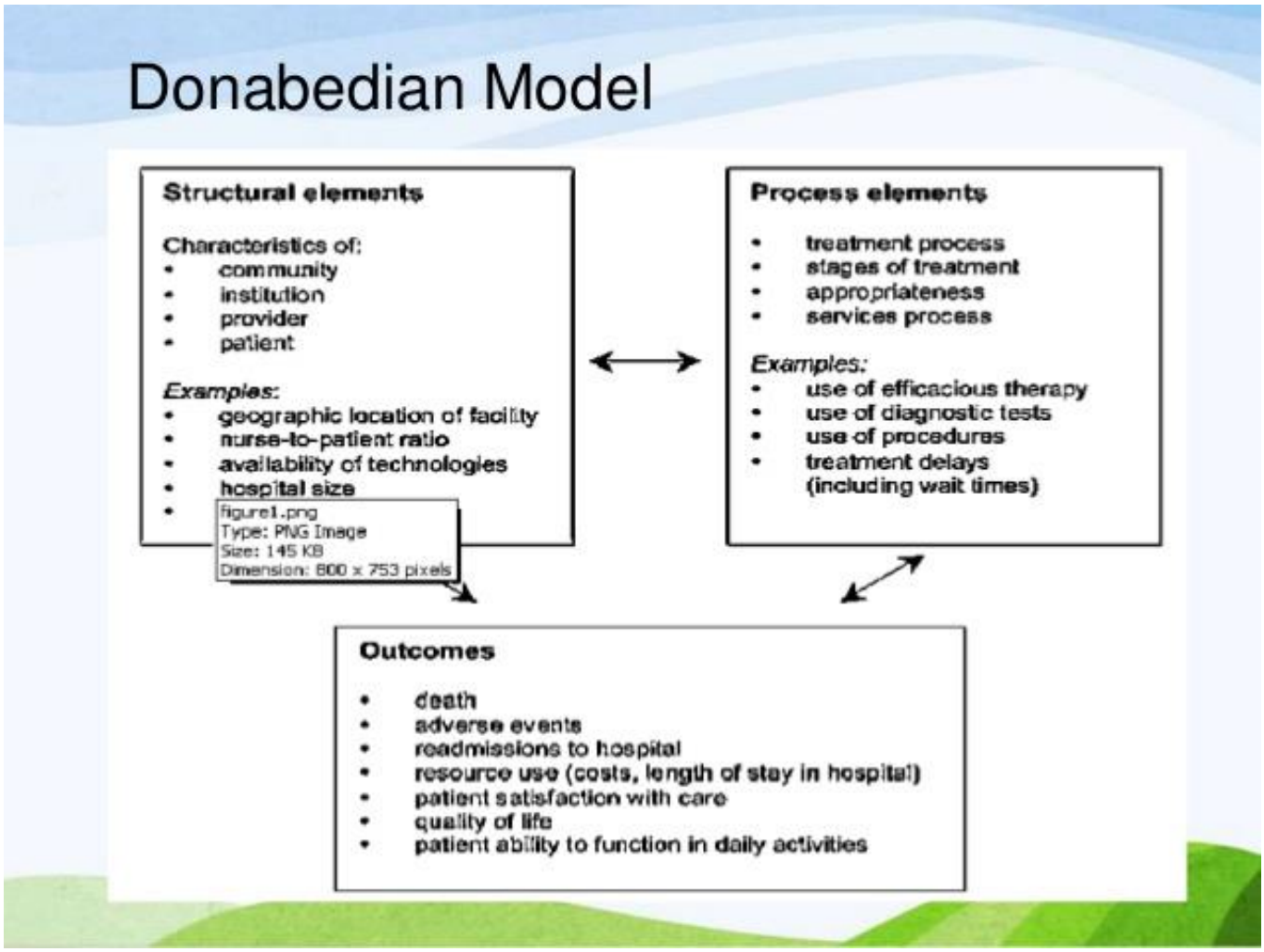
Appendix A



(Sasidharan, 2013).

Appendix B

Fast Track Protocol

Fast Track Inclusion Criteria

Abrasions	With or without localized infection
Abscess	Simple with or without a fever
Allergic Reaction	Without systemic symptoms such as: difficulty swallowing
Back Pain	Lower back pain without signs of trauma or numbness
Bites	Animal, human, aquatic, insect without systemic symptoms
Burns	Simple, isolated to extremity, non-circumferential and no greater than 5% BSA
Cold Symptoms	Temperature < 104 without respiratory distress or chest pain
Cough	Non-cardiac, no hemoptysis, no respiratory symptoms (such as SOB)
Dental	Without facial trauma
Dysuria/UTI	Without symptoms of pyelonephritis
Ear	Earaches without bleeding/drainage
Employee Health	Minor illnesses, body fluid exposure, return to work
Eye	Minor damage with normal visual acuity, non-traumatic, and no contact lenses
Finger/Toe	Minor injury or infection
Foreign Body	Superficial, soft tissue, not requiring sedation or surgical removal
Fracture	Simple, not requiring conscious sedation. No obvious deformities, no reductions
Hands	Paronychia, soft tissue infection with or without trauma
Headache	Mild to moderate with chronic history, no new onset, no trauma
Hemorrhoids	Bleeding controlled
Immunizations	Tetanus prophylaxis
Joint Pain	Chronic, atraumatic
Lacerations	Intact neurovascular status, no significant bleeding, simple lacerations <4cm
Medications	Medication refills
Musculoskeletal	Minor injuries without penetration or complicated lacerations
Nosebleeds	Minor bleeding, without hypertension or blood thinners
Orthopedic	Sprains, extremity dislocations, no deformities
Pediatric	>2 months without fever
Psychiatric	Non-suicidal, non-homicidal, A&O x4
Puncture Wounds	No major vessel, bone, or nerve involvement
Rash	Simple history, no systemic allergic reaction
Sore Throat	Temperature <104 and no respiratory distress
STD	Urethral discharge, exposure
Tissue Infection	Inflammation or infection with fever <103
Viral Syndrome	Temperature <104, URI symptoms, and non-specific muscle aches
Wound Checks	Except burns
X-ray	Recalls

Appendix C

EMR Data Collection

Patient	Wait Time
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Total Number of Patients:	**Average Total Wait Time:**