Mobile Care Team Capstone Paper

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18 March 2022

Introduction

Over the past few years, Emergency Departments (ED) across the country have seen increases in wait times related to a variety of factors. These wait times have been found to be detrimental to patients' morbidity and mortality rates. Most hospital systems have recognized this issue and have begun to address it, each in different ways. There is not one simple solution to fix the issue, however, due to the widespread systemic nature of the problem. Population growth has been used to explain the crowding in EDs, however this is not the sole influencing factor. Other factors include the number of patients waiting to be seen, or input, delays in the diagnosis and treatment process, or throughput, and delays in discharging or admitting patients to the floor, or output (Morley et. al., 2018). After recognizing the source of the issue, hospital administrators look at each factor to synthesize solutions that will expedite the process for these patients, reducing patient mortality and morbidity and increasing patient satisfaction. Danbury Hospital has recently implemented the Mobile Care Team (MCT) as a solution to their waiting room time issues. The goal of this care team is to dramatically decrease the amount of time patients spend before seeing a provider, as well as decrease the number of patients who leave without being seen. This capstone project sought to explore the impact that the implementation of the MCT has had on various statistics thus far, as well as provide material to patients to explain the reasoning behind the long wait times and what Danbury Hospital is doing to fix it.

Background

Overcrowding in Emergency Departments in the United States is an issue that has been greatly highlighted due to the Covid-19 pandemic. However, this problem began long before 2020. In the past, most hospital admissions were scheduled and there were very few emergent admissions (Salway et. al., 2020). Over the past 30 years, however, statistics show that the

majority of admissions have been emergent as more previously inpatient procedures have been moved to the outpatient setting (Salway et. al., 2020). This left behind a larger population of sick people, which have since filled hospitals. Patients who are unscheduled admissions are required to go through the ED to receive care. Most of these patients present to the hospital during the evening and nighttime, despite most of the rest of the hospital functioning on a 9 A.M. to 5 P.M. schedule (Salway et. al., 2020). Combined with the typical low staff numbers and lack of discharging patients on weekends, waiting times in the ED have increased tremendously (Salway et. al., 2020).

Consequences of longer wait times in the ED are very serious. Studies have been conducted to determine the broad effects which include sick patients waiting longer than they should have to in order to receive care, increases in total length of time spent in the hospital, increase in patients leaving without being seen by a provider, regardless of their condition, and reduction in quality of care by hospital staff as well as medical errors (Salway et. al., 2020). Increases in mortality as well as ambulance diversion also occur. Numerous studies have determined the statistics surrounding these factors to see the effect that increased waiting times, or boarding, in the ED has had on them. In general, ED boarding has been shown have had a longer total length of stay in the hospital by at least one day, with longer length of time spent in the waiting room having an increased length of stay of 3 days (McKenna et. al., 2019). Boarding also has been linked to an increase in patients left without being seen, as well as an increase in incidence of medical errors and reduced quality of care due to overwhelming of the staff (McKenna et. al., 2019). Above all, increases in boarding has been directly linked to increases in 10 and 30-day mortality rates (McKenna et. al., 2019). These statistics show the need for

additional solutions to be developed to care for patients in the best way. Various hospitals have examined solutions, however, there have not been any breakthrough solutions in recent time.

Members of Danbury Hospital administration have continuously recorded and examined data related to various aspects of the ED. After noting the increases in wait times and decreases in patient satisfaction, the administration decided to implement the MCT in hopes of decreasing various factors. Data examined for the purpose of this project was provided by Neil Martin, the Assistant Nurse Manager of Danbury Hospital Emergency Department. Data provided was tracked from February 2021 to February 2022 and includes various aspects of the ED, including total length of stay, number of patients left without being seen, elopements (patients who left the ED after seeing a provider), number of patients admitted to the hospital, door-to-doctor times, as well as many others. The average number of patients seen in the ED per day is approximately 169 patients. Between February 2021 and February 2022, the average door-to-doctor time, meaning the average time it took for a patient to be seen by a provider from the moment they check into the ED, went from 34.7 minutes to 22.6 minutes (N. Martin, Personal Communication, February 17, 2022). The number of patients that left the ED without being seen by a provider went from 3.8 patients to 2.9 patients (N. Martin, Personal Communication, February 17, 2022). The average length of stay prior to discharge went from 222 minutes to 206 minutes (N. Martin, Personal Communication, February 17, 2022). These statistics were examined after the implementation of the MCT. All these factors have decreased since initiating the MCT, which is the desired goal. It is the hope that these numbers will continue to decrease as the MCT becomes more established. Within the time these statistics were recorded, Danbury Hospital changed from having a Physician's Assistant and a patient care technician in the MCT to having a Physician's Assistant and a Licensed Practical Nurse fulfilling the role. This change

will also help to decrease some of these statistics, as the Licensed Practical Nurse has a larger scope of practice and can perform more tasks, helping to complete the provider's orders more efficiently.

The Nurse's Role

Emergency Department nurses face a wide variety of challenges associated with the broad array of issues in which each of their patients present. Each patient has a different acuity, or requirement of nursing care intensity (Juvé-Udina et. al., 2019). At Danbury Hospital, patient acuity is measured in Emergency Severity Index (ESI), which ranges from level 1 to level 5, with level 1 being the most urgent to level 5 being the least urgent (Agency for Healthcare Research and Quality, 2020). This system allows nurses to prioritize patients appropriately and deliver care to patients with an increased risk of mortality before those who can wait longer for care without a negative impact on their health (Juvé-Udina et. al., 2019). When a patient enters the ED, they are taken into a triage room in which a Registered Nurse (RN) performs a basic assessment on the patient, which includes vitals, a history of the background of the patient's condition, and a quick physical assessment to determine in which ESI level the patient fits (Shen & Lee, 2019). This patient is then either returned to the waiting room if they are of low acuity or brought immediately back into a room if they are of higher acuity.

While the nurse-to-patient ratio differs depending on the facility, Danbury Hospital ED nurses are typically assigned to five patients for the duration of their shift. These patients vary in ESI level, and although charge nurses try to limit the number of patients of high acuity per nurse assignment, this is largely dependent on the number of high acuity patients in the department at the time. Patient acuity and the workload of the nurse are closely related, as the higher the patient acuity, the more nursing care is required for the patient (Paulsen, 2018). With the

implementation of MCT, the workload of the nurse is greatly reduced, as there are less ESI level 4 and 5 patients brought back into rooms and added to nurse assignments. The LPNs complete basic tasks, such as EKGs, blood draws, and oral medication administration for these patients which reduces the workload on the RN overall. Radiology orders are entered by the provider and may also be completed prior to them being brought into a room. This allows the RN to prioritize patients of higher acuity and complete their orders, further reducing patient mortality.

Ethical and Legal Considerations

Delays in patient care, regardless of the reason, have large implications on ethical and legal factors. Government officials have recently begun to examine the impact that unsafe staffing ratios have on the cost of patient care, as well as overall patient outcomes. Staffing ratios include the number of patients assigned to RNs, as well as the acuity of patients within an assignment. While the primary issue facing ED nurses is not ratios related number of patients being assigned to them, the acuity of their patients and the workload associated with these patients presents a large problem.

In terms of lawsuits and allegations against hospitals, delay in treatment in the ED is the fourth highest of the most frequent hospital lawsuits presented to lawyers (Gibson et. al., 2019). The ED is unique in nature, as it has an overall faster pace and higher-pressure environment that can impact care. There is also a more stressful environment due to the individuality of each patient's case, acuity, and information presented to the healthcare providers about the patient (Gibson et. al., 2019). For all these reasons, the ED is a top concern in relation to patient care and status (Gibson et. al., 2019). Across the nation, 52% of emergency medical doctors will be sued, with 26% of them more than one time (Gibson et. al., 2019). This is not only an alarming statistic in terms of patient safety and satisfaction, but also in terms of finances of the hospital.

Patient dissatisfaction related to increased wait times not only has a large cost related to lawsuits, but also related to the satisfaction of the staff workers. As patients become more dissatisfied, they begin to treat healthcare professionals more poorly, not appreciating the hard work that is being put into their care. Staff turnover rates tend to be higher in the ED than most other departments due to a variety of reasons (Kurnat-Thoma et. al., 2017). The cost of staff turnover as a whole is estimated to make up 5% to 5.8% of annual hospital budgets (Kurnat-Thoma et. al., 2019). This has a large implication on the finances of the hospital and are linked to low support for staff, excessive amounts of stress, increases in burnout, and poor treatment of staff by patients (Kurnat-Thoma et. al., 2019). Danbury Hospital's implementation of the MCT coupled with this project allow patients to feel cared about with the hopes of increasing their overall satisfaction and improve their treatment of healthcare workers in the department. While these are improvements, there has also been an increase in patients who eloped since the implementation of the MCT. A patient who leaves the ED after being seen by a provider is considered an eloped patient (N. Martin, Personal Communication, February 17, 2022). In these cases, under to the Affordable Care Act, the hospital is not paid for any goods or services provided to these patients (Paulsen, 2018). This poses a large financial burden on the hospital system, as the care for these patients must be covered by the hospital. Additionally, the Centers for Medicare and Medicaid Services will not pay for care if quality care targets are not met appropriately (Paulsen, 2018).

Long wait times prior to admission or treatment in the hospital poses has a large implication on patients' morbidity and mortality rates. This poses a large concern ethically, as the goal for all healthcare providers is to provide safe, efficient, and high-quality care to each patient. Studies have shown that waiting more than 5 hours in the emergency department prior to

admission into the hospital is linked to a higher risk of death within 30 days due to any reason (Handley, 2022). The risk of acutely ill patients leaving without being seen and subsequently increasing their risk of more complications also increases as the time spent both in the ED and in the waiting room increases (Kelen et. al., 2021). Outsiders may see the impact of the length of stay as indirectly demoting the principle of non-maleficence, however, the wait is not directly due to an action of the provider. There are various negative patient outcomes that can occur from an increased wait, which poses an overall large ethical implication.

The project design utilized was intended to promote patient advocacy and provide resources to patients to explain how Danbury Hospital is combatting the issue of extended wait times in the ED. The purpose of the project is to provide basic information about the MCT, the importance of it, and the impact of it on patients and their experience. Statistics regarding the impact of the MCT on various aspects of ED metrics are given to patients to provide transparency about the current issue. A link to a video that gives a step-by-step explanation of the entire care process from the moment the patient walks into the waiting room until their admission or discharge is provided. Also included in the project is a statement from a staff perspective, which explains how the department is doing all in their power to provide high quality and efficient care to each patient that presents to the ED. Overall, the tool explains how the Danbury Hospital administration is promoting patient care and trying to improve the patient experience overall.

Patient Population

The project is designed to be placed in the waiting room of the ED, a space in which patients of all demographics present. The ED sees one of the most diverse populations, as patients ages range from newborns to the elderly. These patients also come from different

socioeconomic statuses and cultural backgrounds, ranging from those of low socioeconomic status to very high socioeconomic status and those of English-speaking origins to Spanish and other language origins. The use of bright colors is catered towards the younger population, as it easily draws attention and is visually pleasing. It provides a written explanation of the MCT, as well as a QR code to a link of a video that explains the wait times in depth. Subtitles of different languages are available, which caters to a wide variety of people. This video also caters to those who learn better using audio. Plain language is used, as well, to allow for patients of various developmental stages to read and understand the pamphlet.

Appreciation for diversity, equity and inclusion is extremely important in providing high quality care to patients (Stanford, 2020). A large gap in patient satisfaction ratings from groups of minorities and those of majorities exists because of various factors (Stanford, 2020). Various academic institutions and associations have called for an increase in cultural, racial, and gender education in relation to patient care (Stanford, 2020). These concepts have been widely integrated into nursing education curriculum, which includes both nursing school as well as continuing education programs within individual units. Still, however, there is a large need for improvement within hospital systems as a whole. Within this capstone project, diversity and inclusion is touched upon using the educational video with subtitles in different languages. There is also an acknowledgement of the various populations that present to the ED daily. Within the ED, the use of interpreter technology bridges the language barrier between the healthcare staff and patients. Investigation and acknowledgement of the different cultural considerations of patients is also done on a case-by-case basis. To incorporate a wider variety of patients, this project could be translated entirely into Spanish, as most of the minority patients are Spanish speaking.

Patient-Centered Care

Patient-centered care (PCC) is a concept that has become integrated into healthcare, especially over recent years. It is described as the concept of understanding that each patient is an individual and unique human (Fix et. al., 2018). The goal of PCC is to increase patient satisfaction and improve overall outcomes (Fix et. al., 2018). Overall, improvements in PCC have been linked to increased lifestyle and medication adherence, decreased healthcare utilization and need, and increases in care satisfaction ratings (Fix et. al., 2018).

Aspects of PCC were integrated into the project. The five primary concepts of PCC are the biophysical component, acknowledging the patient as a person, sharing responsibility and power over patient care, therapeutic concepts, as well as doctor and providers as a person (Fix et. al., 2018). Within the project, the biophysical component is acknowledged, as the importance of providing timely care to patients of each acuity is emphasized. The variety of issues of each patient is addressed briefly under the importance section of the pamphlet. The patient is acknowledged as a person using second person point of view throughout the pamphlet. Responsibility of the power over patient care and therapeutic concepts are used within the paragraph explaining Danbury Hospital's view of patients. It is explicitly stated that the hospital cares about each patient and acknowledges the feelings surrounding long wait times in the ED. There is also an explanation of how the ED staff works hard to provide high quality, efficient care to each patient, despite what the patients may be feeling. This also allows patients to see the healthcare staff as humans, because while patients may feel there is not much happening behind the scenes, healthcare workers are working tirelessly to ensure everyone is provided with safe, high-quality care. This project is generalized to each population; however it can be viewed by parents of pediatric patients to reassure they are receiving the care they need. By providing this

resource to patients in the waiting room, it reassures that their needs are not being overlooked. It explains that regardless of their socioeconomic status, culture, or background, they are being viewed as a human with individual needs.

While this project is intended to reassure and educate patients on the ED process, there is also an emphasis of the professional nurse's role in patient care. By explaining how provider orders work and who is allowed to complete which orders, it helps patients to be more patient and understanding of the hard work that goes into the care of each individual. This was done with the hope that each patient is more educated on the process and shows more empathy and understanding towards the professional nurses and other staff working to care for them.

QSEN Objectives

The project was created with regards to the Professional Nursing Competencies of inter-professional collaboration, quality improvement, and safety principles. Interprofessional collaboration is a concept is crucial to positive patient outcomes. It is described as the ability to embrace and integrate the roles of each professional, work together effectively, share responsibility for decisions regarding care, and make decisions regarding the execution of patient care (Busari et. al., 2017). The MCT involves great interprofessional collaboration. The role of each of the professionals is explained within the project. The triage RN is responsible for initially determining the acuity of the patient, which results in sending the patient directly into the ED or holding them in the waiting room. Once MCT is initiated, the Physician's Assistant (PA) assesses the patient and enters orders to be completed by the LPN that works alongside the PA. Some of the orders included in their scope of practice include EKGs, blood tests, throat cultures, urine dipstick tests, as well as some medication administration. Imaging orders are completed by radiology department professionals, which is also outlined in the project. The role of the RN

once the patient is brought into the back is also outlined, as they may take a longer time to visit the patient due to the completion of the orders.

Quality improvement (QI) is also addressed within the project. Quality improvement is explained by improvement in patient experience and outcomes by identifying areas that are lacking and implementing new solutions to these issues (Backhouse & Ogunlayi, 2020). This project specifically explains how the administration at Danbury Hospital noticed an issue with extended waiting room times and implemented the MCT to combat the problem. Statistics surrounding the issue overall were provided, as well as an analysis of unit specific ones. The average length of stay, door-to-doctor time, and length of stay prior to discharge were provided and analyzed. This shows the readers that these metrics are being recorded and analyzed, as well as improved upon.

The concept of patient safety is not only extensively emphasized in education and literature but is also widely incorporated into the professional nurse's practice. Patient safety is defined as the absence and prevention of unnecessary harm to patients (Vaismoradi et. al., 2020). Safety in relation to this project includes the early identification and intervention of the patient's condition. As stated in the pamphlet, MCT promotes patient safety by providing early access to a provider and beginning crucial orders in a timelier manner than if the individual had to wait to get a room. Patients who are deemed a higher acuity have more expedited care, reducing the morbidity and mortality of patients overall.

Most patients who present to the ED do not understand the process of the ED and all that goes into each individual care plan. By providing a resource to these patients for them to understand this process, it assists in quality improvement outcomes. Patients may leave more satisfied if they feel the staff is transparent and does not leave the reasoning undisclosed. In

general, as transparency is provided by healthcare professionals, patient satisfaction is increased (Wiig et. al., 2018).

Clinical informatics refers to the technological aspect of healthcare including charting and interprofessional communication digitally (Aickelin et. al., 2019). While this pamphlet does not involve or mention clinical informatics specifically, this is still a concept that is incorporated into the MCT. Providers input and document orders to be completed by the LPN and other healthcare professionals. As these orders are completed, they are documented for the rest of the staff caring for these individuals to know and plan their care accordingly. There is a strong documentation program that is utilized within Danbury Hospital, which improves overall patient care. This allows for enhanced interprofessional collaboration, which is a key aspect of patient care.

Conclusion

The development of the Mobile Care Team by Danbury Hospital was proposed as a solution to the issue of extended wait times and overcrowding in the ED that has increased over recent years. While the data regarding direct impact on various aspects of emergency care is still being collected, the positive impact has been seen already. The hope of this process is that overall patient satisfaction will increase, which will help with staff satisfaction and turnover rates, as well. This capstone project serves as a tool for patients and their families to help better understand each aspect of the ED and why their wait times may be longer than expected. It explains the MCT and the steps that Danbury Hospital is taking to improve the overall patient experience and reduce wait times. A QR code with a link to a YouTube video was provided with subtitles in different languages to incorporate patients of all populations. Overall, the goal of this

project is to emphasize that safe, high-quality patient care is the primary goal of each healthcare worker and there are steps in place to ensure this is occurring.

References

Aickelin, U., Chapman, W. W., & Hart, G. K. (2019). Health Informatics- Ambitions and Purpose. *Frontiers in Digital Health*, 1(2). https://doi.org/10.3389/fdgth.2019.00002

Agency for Healthcare Research and Quality. (2020). Emergency severity index (ESI): A triage tool for emergency department. *AHRQ*. Retrieved March 19, 2022, from https://www.ahrq.gov/patient-safety/settings/emergency-dept/esi.html

Backhouse, A., & Ogunlayi, F. (2020). Quality improvement into practice. *BMJ (Clinical research ed.)*, 368, m865. https://doi.org/10.1136/bmj.m865

Fix, G. M., VanDeusen Lukas, C., Bolton, R. E., Hill, J. N., Mueller, N., LaVela, S. L., & Bokhour, B. G. (2018). Patient-centred care is a way of doing things: How healthcare employees conceptualize patient-centred care. *Health expectations : an international journal of public participation in health care and health policy*, 21(1), 300–307. https://doi.org/10.1111/hex.12615

Gibson, T., Burke, A., Dittmann, S., & Small, M. (2019). Through the Lens of Liability Claims. *A Dose of Insight*, *1*, 35.

Handley, E. (2022). Higher risk of death at emergency centres with 5+ Hour wait times. *Open Access Government*. https://www.openaccessgovernment.org/emergency-care-wait-times/127881/

Kelen, MD, G. D., Wolfe MD, R., D'Onofrio MD, MS, G., Mills MD, A., Diercks MD, D., Stern MD, S. A., Wadman MD, M. C., & Sokolove MD, P. E. (2021). Emergency Department Crowding: The Canary in the Health Care System | *Catalyst non-issue content*. https://catalyst.nejm.org/doi/full/10.1056/CAT.21.0217

Juvé-Udina, M. E., Adamuz, J., López-Jimenez, M. M., Tapia-Pérez, M., Fabrellas, N., Matud-Calvo, C., & González-Samartino, M. (2019). Predicting patient acuity according to their main problem. *Journal of nursing management*, 27(8), 1845–1858. https://doi.org/10.1111/jonm.12885

Martin, N., Personal Communication. 17 February, 2022.

McKenna, P., Heslin, S. M., Viccellio, P., Mallon, W. K., Hernandez, C., & Morley, E. J. (2019). Emergency department and hospital crowding: causes, consequences, and cures. *Clinical and experimental emergency medicine*, 6(3), 189–195. https://doi.org/10.15441/ceem.18.022

Morley, C., Unwin, M., Peterson, G. M., Stankovich, J., & Kinsman, L. (2018). Emergency department crowding: A systematic review of causes, consequences and solutions. *PloS one*, 13(8), e0203316. https://doi.org/10.1371/journal.pone.0203316

Paulsen R. A. (2018). Taking nurse staffing research to the unit level. Nursing management, 49(7), 42–48. https://doi.org/10.1097/01.NUMA.0000538915.53159.b5

Salway, R. J., Valenzuela, R., Shoenberger, J. M., Mallon, W. K., & Viccellio, A. (2017). EMERGENCY DEPARTMENT (ED) OVERCROWDING: EVIDENCE-BASED ANSWERS TO FREQUENTLY ASKED QUESTIONS. Revista Médica Clínica Las Condes, 28(2), 213–219. https://doi.org/10.1016/j.rmclc.2017.04.008

Shen, Y., & Lee, L. H. (2020). Improving the wait time to triage at the emergency department. *BMJ Open Quality*, 9(1), e000708. https://doi.org/10.1136/bmjoq-2019-000708

Stanford F. C. (2020). The Importance of Diversity and Inclusion in the Healthcare Workforce. *Journal of the National Medical Association*, 112(3), 247–249. https://doi.org/10.1016/j.jnma.2020.03.014

Vaismoradi, M., Tella, S., A Logan, P., Khakurel, J., & Vizcaya-Moreno, F. (2020). Nurses' Adherence to Patient Safety Principles: A Systematic Review. *International journal of environmental research and public health*, 17(6), 2028. https://doi.org/10.3390/ijerph17062028

Wiig, S., Aase, K., Bourrier, M., & Røise, O. (2018). Transparency in health care: Disclosing adverse events to the public. *SpringerLink*. https://doi.org/10.1007/978-3-319-74098-0_8