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Evidence Based Change to Improve Outcomes in Cardiac Patients

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Evidence Based Change to Improve Outcomes in Cardiac Patients: A Benchmark Project

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Executive Summary

According to the Centers for Disease Control and Prevention, “heart disease is the leading cause of death in the United States” (CDC, 2022). Modern healthcare has made numerous advances in changing the prevalence of heart disease and has shifted resources to promoting prevention. When a patient requires admission to an acute care facility for heart disease exacerbation, the focus is more of treating the acute process and how to manage the condition moving forward.

Although there have been a substantial number of resources that have been allocated to prevention in the primary care and outpatient setting, there is a need for additional resources in the acute care setting for prevention and management of a newly acquired heart condition. In October of 2012, Centers for Medicare & Medicaid Services (CMS) created the Hospital Readmissions Reduction Program (HRRP) which reduces payment to those facilities that have “excess readmissions” within a 30-day period for common health conditions that include acute myocardial infarction, heart failure, and coronary artery bypass graft surgery (CMS, 2023). There is a unique opportunity for nursing interventions to make significant changes in the outcomes for this patient population at the acute care level and beyond.

The focus of this project is to have a nurse navigator in an acute care facility that primary focus is patients with coronary artery disease and a newly placed coronary stent during a recent hospital admission. In effort to reduce readmissions and improve outcomes for these patients. Therefore, it is recommended for acute care facilities to allocate resources for a nurse navigator to monitor, track, and lead an interdisciplinary committee to promote early intervention for those patients discharged with a newly acquired diagnosis of coronary artery disease.

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Evidence Based Change to Improve Outcomes in Cardiac Patients: A Benchmark Project

1.Rationale for the Project

Almost three million patients in the U.S. between 2013 and 2017 received a coronary stent implantation (Inohara et al., 2020). This represents a large volume of patients coming to an acute care facility that received intervention for coronary artery disease. The CDC published that coronary heart disease was responsible for 382,820 deaths in the year 2020 (CDC, 2022). Early intervention and coronary stent implantation are the front-line treatments in an acute setting to prevent immediate mortality. Patients that do not receive proper education and close follow-up post intervention are more likely to return to the acute care setting.

According to a study by the Journal of the American Heart Association, they tracked 415,306 drug eluting stents placed in Medicare recipient patients. Within one year, 33,174 of these patients returned for repeat stent placements (Dhurva, S. et al., 2020). This shows almost eight percent of patients who had a stent placed returned to the hospital within a year and ultimately required an additional coronary stent placement. There is a need to provide sustained interventions and close follow-up in effort to improve these statistics for this patient population. Nursing interventions can be key for the improvement of outcomes in this patient population.

1.1 Project Goals

The goal of this benchmark project is to evaluate the effectiveness of a nurse navigator that performs routine, and structured follow-up phone calls in patients discharged from the hospital after receiving a newly implanted cardiac stent. The goal of the follow-up calls is to provide

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supplemental education to discharge teachings, and to increase medication compliance for these patients. They will also assess barriers to treatment and offer solutions. They will also discuss symptom management and encourage early interventions with the help of a multi-disciplinary team (to potentially avoid an ER visit and subsequent admission). The purpose of the project is to improve outcomes, quality of life, medication compliance and costly hospital readmissions for coronary heart disease patients.

1. Literature Synthesis to support Project

A search of the literature was performed in several databases and a small yield of articles were obtained. Amongst the articles are a systematic review, three randomized control trials, a synthesis of qualitative studies, and a descriptive qualitative study. The articles were appraised and determined to be relevant to the proposed project. A synthesis of articles was accomplished and can be summarized as follows: three randomized control trials demonstrated medication compliance was increased when the patient received a follow-up phone call from a nurse post discharge. (Palacio et al., 2015) (Rinfret et al., 2013) (Oscalices et al., 2019). In the systematic review and one of the single randomized control trials, hospital readmission rates were measured, and a decrease was noted with follow-up phone call from the nurse post discharge (Pio et al., 2019) (Oscalices et al., 2019). It can be concluded that follow-up phone calls in different environments all had a positive effect on hospital readmissions. This supports the idea that the evidence is *translational*. Translational evidence is the hallmark of evidence-based practice. These findings are in support of the project at an acute-care facility. It supports the addition of a nurse navigator that is solely responsible for coronary heart disease patients to reduce admissions, increase medication compliance, and improve outcomes.

2. Project Stakeholders

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Engaging the correct stakeholders can be the key factor in ensuring a project's approval, implementation, and continued success. For the benchmark project and subsequent proposed change as discussed above requires several stakeholders to collaborate to form a multidisciplinary task force. First and foremost, one of the most important stakeholders is the project leader. The project leader is the primary contact for all things related to the project and is instrumental in getting the project implemented and fostering sustained success. Other important stakeholders include a physician champion that would be assigned to oversee the medical portion of the project, and to give guidance and ensure correct guidelines are being carried out by the nurse navigator. The physician will also assist with medication issues (refills) and help patients maintain access to their much-needed medications. Also, nurse representatives from each unit in the hospital that discharges the cardiac patients from the facility (cardiac recovery, ICU, telemetry etc.). They will be instrumental in providing feedback on the project and collaborate with the nurse navigator at the time these patients are being discharged. The pharmacy team will be involved to assist with medication questions and to provide information to the team about medication compliance scores. The pharmacy team will also help furnish the case managers and social workers to give the patients the most current information on medication cost-savings. Due to the financial component of the project (cost of adding an additional full-time employee with benefits) there is a need to include senior management of the cardiology department (director) as well as members of the finance team to include the VP finance or financial analyst responsible for measuring labor productivity. Buy in from all mentioned stakeholders will be needed to proceed with approval and implementation of the project.

3. Implementation Plan

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The implementation plan will consist of four major phases. Phase one is the formation of an interdisciplinary splinter group and identification of the key stakeholders mentioned previously. The project leader is responsible for identifying the members, setting up the initial meeting, and creating the agenda and presentation to the group about the project. The initial meeting will consist of team introductions, presentation about the project (as given by the leader), proposed implementation plan, and an open forum where members can make suggestions for the project and discuss any potential barriers. The leader will be responsible for taking meeting minutes and compiling information discussed to be distributed to team members upon completion of the meeting. The leader will also start a list of action items and follow -up with the assigned member for status of such items. Phase one will take approximately two weeks to complete, and the project leader cannot proceed to phase two until the meeting is completed and the team has given the “green light” to move forward with the nurse navigator position.

Phase two includes recruiting, interviewing, and onboarding of the Nurse Navigator with input from the interdisciplinary group. This phase will take approximately one month to complete. The team will identify the ideal candidate to have experience in cardiology, a proven track record of implementing evidence-based practice, and someone that works well in an interdisciplinary group. Candidates’ resumes will be screened by all members of the group via email, and three candidates will be selected for an in-person interview with the team. After the in-person interviews are conducted, one candidate will be selected and offered the job. Ideally the candidate would be a nurse that is familiar with department and hospital system, physicians, the key stakeholders, and the patient population. Once a nurse navigator has been selected and hired, phase two is complete and Phase three can begin.

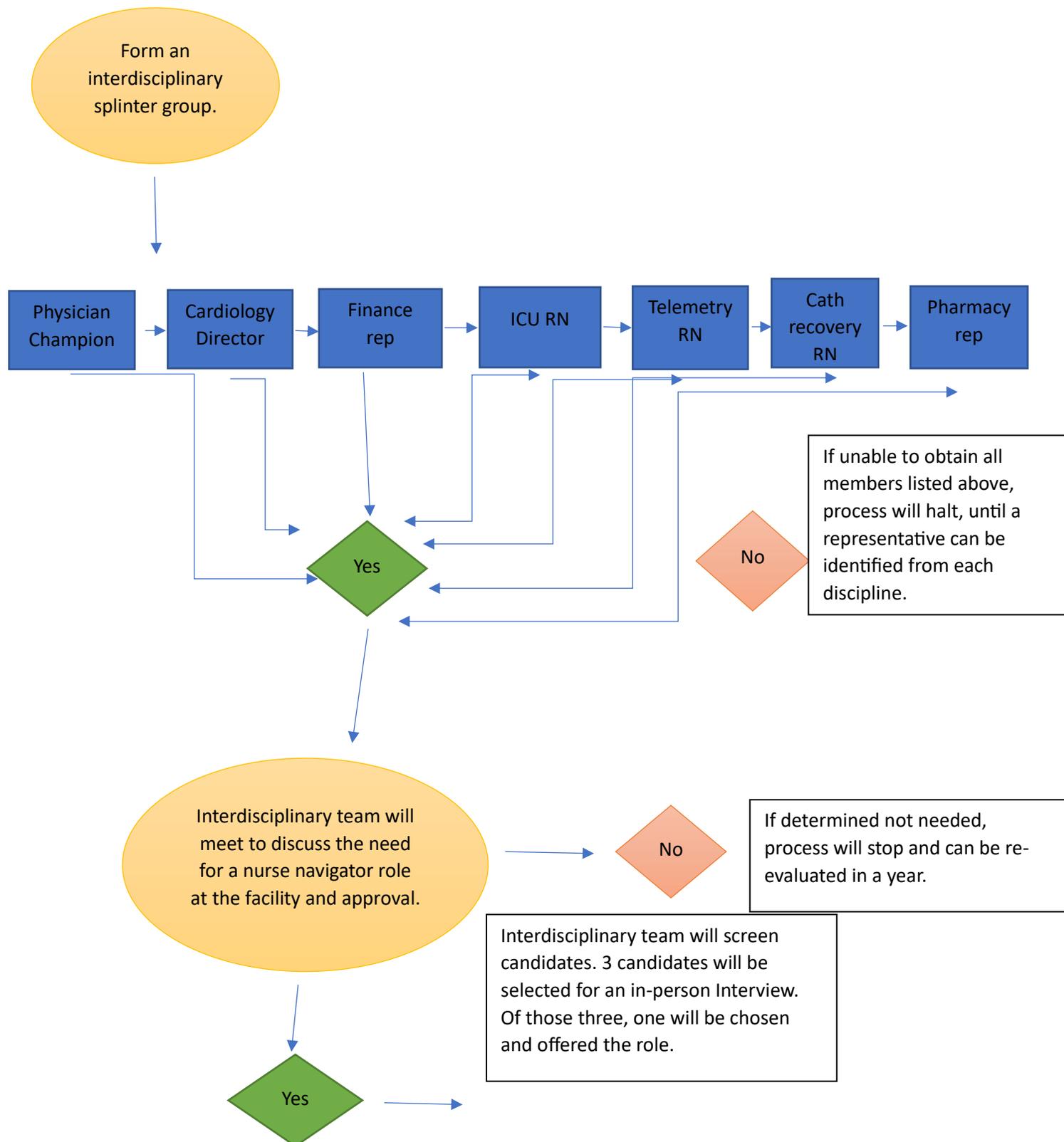
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The third phase is orientation period where the nurse navigator orients to their duties and set performance standards for the role. Orientation and onboarding are provided by the project leader. The orientation can be a fluid process and can take anywhere from four to eight weeks to complete. After orientation and onboarding is complete the nurse navigator will begin obtaining baseline data. Baseline data is obtained by gathering the previous twelve months of data from the electronic medical record to include rates of medication adherence and readmission rates of patients discharged with a new coronary stent placement. The nurse navigator will then collect the same data elements in real time (not retroactively) for the next twelve months to compare/contrast, baseline vs. intervention.

Phase four consists of project implementation and structuring, this phase will take twelve months to complete. Phase four consists of the interdisciplinary team setting standards for data elements collected such as how they want to measure medication adherence and define the criteria that counts as a readmission. The group will also collaborate and define expectations for time intervals regarding the follow-up phone calls. The information will be structured and given to the nurse navigator. The group will then meet quarterly to discuss complex patient situations, offer solutions, continued process improvement, and current trends. The meeting will be scheduled by the project leader, who is also responsible for collaborating with each team member to compile data for the quarterly meetings. The group will evaluate the nurse navigator's role in twelve determine effectiveness and sustained need moving forward.

Flowchart for Implementation

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4. Data collection methods

Data collection is performed by members of the interdisciplinary group that are responsible for their assigned data element. Ultimately the project leader is responsible for collecting and compiling all the data elements from the assigned team members. The project leader will then compile the data on an excel spreadsheet and ensure it is accessible to the nurse navigator the interdisciplinary group, and the project's key stakeholders as it is updated in real time on a shared drive. The project leader will then display the information via power-point quarterly to present in the meetings. The data elements collected and compiled on the spreadsheet include; readmission rates (collected by the nurse navigator), medication compliance scores (collected by the pharmacy team), questionnaire answers from the follow-up phone interviews with patients (collected by the nurse navigator), and any additional unanticipated patient outcome (collected by the nurse navigator).

5. Planned Evaluation

An actual evaluation has not been performed at this time due to the projects inability to be implemented at this time. The evaluation plan for the project includes compiling the data elements; readmission rates, medication compliance scores, data from phone interviews and unexpected outcomes into one spreadsheet. The compiled data will be presented in a quarterly meeting with key stakeholders to discuss trends. The project will be evaluated as a success if it mirrors the literature reviewed and decreases readmissions for coronary artery disease patients and increases medication compliance, therefore improving outcomes. The project leader will be responsible for compiling the data and the key stakeholders are the ones assigned to determine if the project has met the standards that are considered to be successful. They will then approve the

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resources to sustain the project. At the twelve - month mark, the key stakeholders will determine the project's future based on the data.

6. Cost/Benefit Discussion

In healthcare it is important to propose and implement changes that require low monetary investment from a health entity, while yielding large cost-savings due to the tight operating budgets that acute care facilities operate with. It is important to consider cost/benefit when implementing a change to practice as it can be the sole determining factor in project approval and implementation.

The proposed project would require the addition of a full-time benefitted employee to the cardiology departmental budget. This position would not be a reallocation of previous resources, but an entirely new addition to the operating budget. The addition of a full-time employee with benefits requires a one-time initial investment of approximately 20,000 dollars for onboarding, bonuses, costs of training and orientation. The yearly cost of adding a new full-time employee is approximately 150,000 for the employees' total compensation package. This includes the employee's salary, benefits, retirement, and paid time off. This would be a sustained cost to the department if the project was to continue.

The proposed project would have cost-saving benefits to the facility. CMS states that the average payment to a facility to a for an inpatient stay with a diagnosis of acute myocardial infarction is 32,000. According to Hospital Readmission Reduction Program spearheaded by the Center for Medicare and Medicaid services, if a patient discharged with a diagnosis of acute myocardial infarction and returns to the hospital for readmission within 30 days of their discharge, CMS will reduce the payment of that admission to the hospital by 3% (CMS, 2023). If a 300-bed acute care facility sees an average of 5,000 admissions for acute myocardial infarction

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per year at a cost of 32,000 per admission is an expected revenue of 160 million dollars. If 8 percent (as suggested by the literature, the average 30-day readmission rate) of these patients returned within 30 days with and the facility received a 3% reduced payment that would be a revenue loss of approximately 385,000 dollars.

According to these figures the hospital is projected to have 235,000 cost savings per year with the implementation of the nurse navigator. The project is not just monetarily beneficial to the facility, it will also improve outcomes patients and decrease mortality as suggested by the literature.

Conclusions/Recommendations

In conclusion the project proposed is supported by evidence and aims to improve outcomes for coronary artery disease patients. The implementation of a new nurse navigator is anticipated to achieve reduced readmissions, increased medication compliance, and support cost-savings to an acute care facility. The recommendation is to enact this project at acute care facilities with poor patient outcomes and high readmission rates. The facility would start by identifying key stakeholders and forming an interdisciplinary group to discuss the logistics of the project. After implementation they would evaluate the project and deem it successful or unsuccessful by the criteria set by the group. After a year the decision will be made to sustain the project by the key stakeholders. It is reasonable to conclude based on the literature that this project is translatable. Therefore, should be implemented at all acute care facilities that provide a cardiovascular service line to their communities. As nurses, it is important to advocate for those changes that improve outcomes for the patients in the community.

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