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Providing Education to Staff Members on Implementing Follow-up Education at Discharge to Patients with Low Heart Scores

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Providing Education to Staff Members on Implementing Follow-up Education at Discharge to Patients with Low Heart Scores

A DNP Project Submitted to the
Graduate Faculty of Jacksonville State University
in Partial Fulfillment of the Requirements for the
Degree of Doctor of Nursing Practice

By:
Daniel Ernest Burton

Jacksonville, Alabama
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Daniel Ernest Burton August 5, 2022

Abstract

Background: The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) provides accreditation to hospitals, including "heart certification." The facility was successful at meeting the four measures previously assigned to them. As a result, they were given four new measures. One of these standards is providing discharge education based on "heart scores.". Only 35% of patients are receiving discharge/follow-up education at discharge from the emergency department (ED).

Purpose: The purpose of this study is to increase the number of patients receiving chest pain education and follow-up instructions in the ED as evidenced by the improvement in documentation of the interventions.

Methods: In person education was provided to ED staff on the packet that patients will be receiving, content of the packets, and how to document the education to prove that it was provided. The pre/post intervention results will be compared to determine results of the study.

Results: The study results did demonstrate a marked improvement in the documentation and delivery of chest pain follow-up education. The overall compliance improved from 35% to 61%.

Conclusion: Educating the emergency department staff effectively improved the documentation and delivery of chest pain education and follow-up instructions. However, frequent reeducation is needed to maintain compliance.

Acknowledgments

I would like to express my gratitude to the faculty of JSU for their instruction and support during this program. This program was a valuable learning experience that I will use to create better patient outcomes and provide a higher quality of care in my advanced practice and teaching.

I would also like to thank the faculty of the facility of study. Dr. Stephanie Jones (Preceptor), Dr. Keith Brooks (Education Director), and Marsha Cowell (Cardiology Vice President) for all of their support in making this project possible. My partner and mother deserve a great deal of recognition for assisting me with things in my everyday life so I could focus on schoolwork.

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Providing Education to Staff Members on Implementing Follow-up Education at Discharge to Patients with Low Heart Scores

Chest pain is the universal symptom of myocardial infarction (MI). Thus, when someone experiences chest pain, they assume it is a heart attack. In addition to MI, there are multiple potential causes of chest pain, including gastroesophageal reflux disease (GERD), pulmonary embolism (PE), and muscle strain (Cleveland Clinic, 2020) . When a patient presents to the emergency department (ED) with chest pain, clinicians evaluate the patient for MI to rule out a life-threatening process (Mahler et al., 2018). If an MI is ruled out, clinicians then focus on other etiologies. One tool used by physicians to evaluate the risk of 30-day mortality related to MI is the HEART score (Brady & de Souza, 2018). Patients who are categorized as low risk of mortality using this scale can be safely discharged. Just because the patient is at low risk for an adverse heart event does not mean the patient should not receive proper chest pain education and follow-up instructions at discharge (Brady & de Souza, 2018). The project aims to increase the number of patients receiving chest pain education and follow-up instructions at discharge.

Background

There are approximately 7.6 million visits to the ED annually in the United States (U.S.) by patients experiencing chest pain, making this the second most common complaint in the U.S. (Hollander & Chase, 2020). Of these, approximately 1.5 million are diagnosed with and MI, though causes range from benign to life-threatening conditions (Hollander & Chase, 2020). Coronary artery disease (CAD), one of the primary causes of MI and associated mortality, is the leading cause of death in the US, resulting in 500,000 to700,000 deaths per year (Zafari, 2021). Therefore, it is imperative that patients receive education on the signs and symptoms of chest pain and how to differentiate if it is life-threatening.

Causes of Chest Pain

Chest pain has a variety of etiologies and does not always mean there is a life-threatening process; however, it is the symptom most commonly associated with an MI (Aroesty & Kannam, 2020). Differential diagnosis includes GERD, PE, stress, muscle strain, chest wall trauma, aneurysm, cholecystitis, and herpes simplex virus. Thus, when a chief complaint of chest pain presents to the ED, the most life-threatening process must be ruled out first, such as MI, PE, and aneurysm. If an MI is ruled out, the provider can use the heart score system to predict the risk of acute coronary syndrome (ACS) (Cleveland Clinic, 2020) .

HEART Score

According to the reference (Brady & de Souza, 2018), "rapid risk stratification tool for patients with chest pain according to their short-term risk MACE (defined as acute myocardial infarction [AMI], need for percutaneous coronary intervention [PCI] or coronary artery bypass graft [CABG], and death within 6 weeks) to help identify low-risk patients, suitable for earlier ED discharge within 30 days of index ED visit." This is all important in defining the score and describing the utility of that score. So, this tool may assess risk, but the important piece is that it then allows the clinician to determine whether the patient should remain in the ER/be admitted vs be discharged. The HEART score evaluates patient-specific history (H), electrocardiogram (E), age (A), risk factors (R), and troponin (T) to assess the potential for discharge in a patient presenting with chest pain. Specifically, this score stratifies patients into categories based on short-term risk of MI, percutaneous coronary intervention (PCI), coronary artery bypass graft (CABG), and death within six weeks. Each category of HEART is scored from 0 to 2 points, for a total potential score of HEART score of 10. Patients with a heart score of 0-3 are in the low-risk category and are generally safe to discharge. Patients scoring in the moderate and high-risk

categories are usually monitored for at least 24-48 hours in the inpatient setting and receive further diagnostic workup (Brady & de Souza, 2018).

Benefits of Providing Chest Pain Education

According to the American Heart Association Guidelines for the Evaluation and Diagnosis of Chest Pain, patients with a low heart score are safe for discharge but should receive education on the etiology of their chest pain and plans for follow-up with a provider after discharge Gulati et al, 2021). Patients with a low HEART score can often be overlooked because they are a low risk for cardiovascular events, thus do not commonly receive the education or follow-up they need. All patients with chest pain regardless of etiology should receive education. Earlier recognition of an MI leads to earlier treatment of the blockage, and earlier treatment means improved outcomes with less permanent damage. Permanent damage to the heart tissue begins within 30 minutes of the blockage. Thus, patients being educated on the signs and symptoms can lead to more prompt ED presentation (American Heart Association, 2016).

Needs Analysis

The results of one study showed that approximately 42% of patients did not receive complete discharge instructions. Meaning, they did not understand their diagnosis, follow up plan, or health maintenance (Sheikh et al., 2018). The facility's goal is to promote heart health to the community and improve the quality of life for patients. In November of 2021, JCAHO provided a new measure to the facility. The measure is to ensure that patients with a low heart score receive chest pain education at discharge and that they are instructed to follow up with their primary care provider. The measure will be implemented through providing discharge education and follow-up instructions to low heart score patients. The providers will be responsible for documenting the education in the patient’s medical record, which will be

reviewed for compliance. At the begging of this project the staff were not being educated and only 34% of patients were receiving both discharge instructions and follow-up information.

Problem Statement

The problem statement leads to development of the PICOT question. Does implementing the American Heart Association Guidelines for Chest Pain education (I) in patients with low heart scores (P) to the emergency department staff increase the number of patients receiving discharge instructions (O) compared to no current intervention (C) over an eight-week timeframe (T)?

Aims and Objectives

The overarching aims of this project were to:

1. Increase the number of patients receiving education on chest pain and follow-up instructions from medical staff prior to discharge from the Emergency Department.
    a. Improve documentation in the medical record of education provided to patients by medical staff.
2. Improve patient morbidity and mortality outcomes by providing chest pain education and follow-up instructions.
    a. Increase the number of patients receiving chest pain education

Review of Literature

A literature review was completed to collect data reviewing the impact of providing chest pain education and follow-up information to patients with low HEART scores. Data from this literature review was used to identify best practice for providing the education and to define the healthcare professional's role in delivering the education.

The literature review was performed through searches within CINAHL and PubMed using the following key terms: chest pain, follow-up, education, decrease, readmissions, HEART score. Results were limited to those articles published from 2017 to 2022 and excluded publications not relevant to chest pain were dismissed. Results were limited to a five-year window because anything older than five years can be considered out of date.

Check et al. (2022) discusses race and gender as independent predictors of cardiac disease. It also explains the HEART score and how it determines the 30-day mortality risk from a cardiovascular-related event. The HEART score is what the physicians use to determine if the patient needs to be admitted or is safe for discharge home with follow-up care. Gulati et al. (2021) is additional literature that provides the guidelines for evaluating and managing chest pain patients. It also breaks down the HEART score, what education is needed depending on the score, and what follow-up care is necessary.

Levine et al. (2019) further details the evaluation of chest pain in the ED and necessary follow-up recommendations. This helps to reinforce the need for follow-up care mentioned in this study. Oh and Asha (2022) reviews what interventions are necessary, like cardiac monitoring on chest pain patients based on their HEART score. If the HEART score is low enough, patients do not require hospital admission or cardiac monitoring. This article supports how patients can be safely discharge depending on their HEART score.

Orem, Renpenning, & Taylor (2003) is a book based on the theorist used for the project. The theory explains how patients need to be educated to control their health—essentially, giving power to the patient to promote self-care. Empowering the patient provides more incentive to maintain their health. The intentions of this study are to increase education being provided to patients so they have a better understanding of their health. Rushton & Carman (2018) talks

about alternative causes of chest pain and how they should be considered and evaluated. This is relevant to the study because education should also be etiology specific.

Sheikh et al. (2018) talk about educating patients at discharge and how some patients require different techniques. Inquiring about their preference of education can increase understanding and compliance with follow-up care. Regardless, patients need education and detailed instructions to care for themselves, and many patients report not understanding their diagnosis or instructions at discharge. Von. Bezold (2021) talks about how difficult narrowing down the etiology of chest pain can be and how frequent patients complain of chest pain. The study also depicts about the role of the primary care provider when evaluating chest pain. The first step is to rule out life threating process and stabilization of the patient.

Findings in this literature review support the importance of this study and the need for education. Staff is more likely to be compliant with providing education when educated on the importance of the intervention (Von. Bezold, 2021). Patients being adequately educated on chest pain signs and symptoms are more likely to present to the ED promptly, thus improving outcomes (Von. Bezold, 2021).

Theoretical Model

The theory used to guide this project is Dorothea Orem's self-care nursing theory (Orem, 2003). The theory focuses on patients being informed that they can better care for themselves under the assumption that all patients care for themselves and want what is best for them. There are three components to Orem's theory of nursing. The first is the theory of self-care which focuses on individuals caring for themselves to maintain their own life. The second theory is of self-care deficit which is when the nurse steps in because the patient is physically incapable of

caring for themselves. The last theory is the theory of nursing system that focuses on the relationship between the nurse and the client (Orem, 2003).

This theory is relevant to this project because the ED staff will be providing chest pain education and follow-up information to the patients. They will be giving them this information hoping they will take the education seriously and better their health. The staff will be supporting this intervention by providing patient instructions on what to do after their visit. From there, the power is in the hands of the patient, but they cannot care for themselves if they are uneducated.

Methodology

The project aims to increase the number of patients that have documented chest pain education and follow-up information who presented to the ED with chest pain with an assessed HEART score from 0 to3. The primary intervention of this project is to educate ED staff on the AHA chest pain guidelines to provide chest pain education and follow-up instructions to chest pain patients with a heart score of 0-3. All of the staff were not educated until approximately four weeks into the study, and reeducation was provided as needed.

The AHA guidelines are being used to educate the ED staff on the discharge instructions and education for the target population. All staff was educated on the recommendations when the project began and consented to be part of the study (Appendix A). There were also given the EHAC cards to provide to patients at discharge. The providers were also given instructions on where and how to document the education and follow-up instructions. Reeducation was provided to staff as needed to maintaining compliance with the study. The need for reeducation was determined by weekly monitoring of charts.

Setting

The project is in the ED at a regional medical center in northwest Georgia. The ED consists of 24 beds, can treat multiple health issues, and receives 40,000 visits annually. There are approximately 50 patients discharged from the ED weekly that presented with chest pain. In this study, the regional medical center is a center of excellence in cardiovascular and stroke care capable of numerous cardiac interventions and diagnostic tests. The facility has approximately 230 beds and is part of a more extensive health care system that spans most of the southeastern and Midwestern parts of the United States.

Population

All members of the ED staff involved in patient education and discharge, including physicians, nurses, and registration staff, were invited to participate in the study. Physicians were included as the primary focus group responsible for documenting the education and follow-up instructions. Nurses were included given their role in ensuring the physicians include the specified information within discharge education. Registration staff responsibilities are to ensure the document if the patient is already seeing a specialist or primary care provider.

Inclusion/Exclusion Criteria for who Receives Chest Pain Education

Inclusion criteria for patients:

- Patients with heart scores of 0-3.
- Patients that present with chest pain.
- Patients that are being discharged from the ED.

Exclusion criteria for patients:

- Patients with a heart score of greater than 3.
- Patients that do not have chest pain.
- Patients with chest pain who are admitted to the hospital.

Inclusion/Exclusion Criteria for Staff Education

Inclusion criteria for staff:

- The staff worked both day and night shifts and held permanent or contract positions.
- Patients that are being discharged from the ED.

Exclusion criteria for staff:

- Staff that do not work in the ED

Recruitment

Project information was shared in person to the staff. The detail was provided on how the study would be conducted and how the results would improve practice. Education took place over two weeks while the staff was on shift. Additionally, flyers detailing information about the study were placed in the ED.

Consent

Consent was obtained from the medical staff before auditing the charts for data. It was explained that it is DNP project to increase the number of patients receiving chest pain education and follow-up instructions. Participants were recruited by direct approach to each staff member. The student in charge of the project did not influence pay, scheduling, or promotions. No names of employees, personal identifiers, protected healthcare information, or patient identifiers will be included in the study.

Design

The project underwent Proposal Evaluation Review Committee (PERC) and Institutional Review Board (IRB) approval (Appendix H) at the host university and clinical facility before implementation. The project was started by educating the ED staff in person on the details and importance of the project. The staff was educated while at work. The author visited the hospital

on multiple occasions to educate and obtain consent from the ED staff. Additionally, flyers were placed in the ED detailing the project. The AHA has an EHAC card to serve as an educational pamphlet. The EHAC cards are given to the patients with the discharge paperwork. Charts were audited for compliance weekly. Those physicians that were not meeting goals (100% compliance) were provided additional support that also included reeducation on a weekly basis over an eight-week period.

Chart Review

After IRB approval, the author conducted chart reviews for any patient that came through the ED with chest pain and was discharged. The project looked at the three months before the study was conducted. The patients with chest pain were identified by printing the ED log from the electronic charting system at the facility (Appendix J). The chart was reviewed if the patient had a chief complaint of chest pain and was discharged from the ED. Patients admitted to the hospital or that refused treatment were omitted. The discharge education and instructions were then reviewed to see if chest pain education and follow-up instructions were provided. During the study, the charts were reviewed weekly to assess compliance and the need for educational reinforcement. All data was deidentified at pre/post intervention.

Risks and Benefits

There is minimal to no risk for those involved in the study. Any risk regarding confidentially was negated by explaining that no personal information would be released in the study. The benefits of this study include improving standards of care for the specified patient population in the project. There is a potential loss of confidentiality and ramifications to patients and participants.

Compensation

There was no compensation provided to participants in this study.

Timeline

This study was conducted over eight weeks, and the pre-intervention data was from the three months before the project was implemented (Appendix I). There is a timeline provided in appendix G.

Budget and Resources

The only expense to the study was printing of materials and the cost were approximately $50.

Evaluation Plan

Statistic Considerations

Descriptive statistics (frequencies, %) were used to depict the characteristics of the study population and frequency of documentation within the medical record. The statics were calculated on Microsoft excel. The numbers were evaluated three times to check for accuracy.

Data Maintenance and Security

The author was the only person who had access to patient and participant information. All personal information was excluded from the study and shredded. Jacksonville State University and the participating facility will be the only ones who will access the information in the study; they will be the data keepers. Any data obtained by the author will be destroyed with the participating facility after a period of one year. The data were never taken out of the faculty.

Results

A total of 253 charts were reviewed as part of the pre-intervention assessment of education documentation, and an additional 325 charts were reviewed post-intervention, reflecting the patient documentation made by 10 physicians. The average pre-intervention

compliance for discharge education across all providers was 35%, and the overall post-intervention compliance was 61%. Appendix C shows the breakdown of individual provider compliance before and after the study. Most providers at least doubled their compliance by the end of the study. Some providers required frequent reeducation to maintain compliance during the study.

Appendix D illustrates each provider and their compliance every week. All providers demonstrated a marked improvement in documentation of discharge education after the intervention when compared to pre-intervention results. Appendix F shows overall compliance broken down by week. This allows for the evaluation of overall compliance and trends throughout the study. Finally, Appendix F details how many patients each provider saw every week. The tables Appendix D and E can be compared to understand why some weeks may have had lower compliance than previous weeks despite improving provider compliance. The weekly compliance seemed to directly correlate to what providers were on that week and how many patients they saw. Appendix B illustrates providers compliance with documentation pre and post study.

Discussion

This study demonstrated a marked increase in documentation of chest pain education and follow-up instructions across all patients being discharged after chest pain. Additionally, each provider demonstrated a significant increase in frequency of documentation of education in the medical record. However, later in the study, some providers' numbers began to decrease despite reeducation. Overall weekly compliance seemed to depend on the providers that worked that week and the number of chest pain patients they saw. Appendix E shows how many patients with chest pain each provider saw every week. Some providers did need additional education to

improve their compliance. This suggests that occasional evaluation and reeducation will be needed to maintain compliance.

Implications for Clinical Practice

The project's aim was met by demonstrating an increase in the documentation of education and follow-up instructions in patients arriving being discharged from the ED for chest pain and receiving a low HEART score. This study could reinforce existing evidence that providing direct education to staff on the importance of education and follow-up instructions increases compliance with delivery and documentation education and follow-up instructions.

Implications for Healthcare Policy

Delivery of chest pain education and follow-up instructions to patients discharged from the emergency department who have a heart score of 0 to3 is one of the measures the facility must improve on to maintain their heart certification. Therefore, this study correlated directly with the facility goals and provided a marked improvement in compliance with documentation of education and follow-up.

Implications for Quality/Safety

The quality improvement study demonstrated an overall improvement in compliance with documentation of chest pain education and follow-up instructions. These measures are quality marks provided by JCAHO. Sufficient education and provider follow-up after discharge from the ED are imperative for treating and preventing reoccurring chest pain regardless of the etiology. This study could be evidence for improvement in other units, such as chest pain observation and other cardiac units.

Implications for Education

The American Heart Association 2021 Guidelines for Diagnosis and Treatment of Chest Pain discuss the importance of education and provider follow-up (American Heart Association, 2016). This study will support that educating staff on these guidelines increases compliance in documentation and delivery of education and follow-up panning. Nurse educators can use this study as an example of effectiveness when providing future education on various topics.

Limitations

The main limitation of this study is the single ED setting. Compliance at some facilitates may differ from the results of this study. Additionally, there is a small sample size, and the study was only conducted over eight weeks. It is uncertain if compliance with documentation of chest pain education and follow-up instructions will decline over time without constant reinforcement. Not all staff were able to be educated before the study due to work schedules. All staff were not educated until approximately week four of the study. Another limitation can be the author's relationship shift with the faculty at the facility. The author knows many people in the facility as they serve as a charge nurse and nurse practitioner. Knowing the staff personally could affect compliance because they may be more inclined to participate at a favor, or more resistant to the education.

Dissemination

The finding of the research study will be disseminated through the three P's: poster, presentation, and paper. The DNP project will be presented via poster and presentation at the DNP Dissemination Day. Lastly, the DNP manuscript will be placed in the Jacksonville State University Library's Public Repository system. IRB approval was obtained, and CITI training was complete prior to completion of the manuscript (Appendix F and H).

Sustainability

The education implemented in this study did not end when the project concluded. There will continue to be education and reinforcement on providing chest pain education and follow-up instructions to patients with a heart score of 0-3. The monitoring for compliance with documentation of education and follow-up will be conducted and continued by the cardiology and education departments. This project could also be used to support future studies. This study could also be used to foresee limitations that could occur and perhaps identify ways to overcome them.

Plans for Future Scholarship

While this study adds to the existing data supporting the education on chest pain and follow-up care, further research is needed to continue to improve compliance. Future studies can examine barriers such as resistance to education and the need for frequent reinforcement. This study provided the author insight into how staff responds to education and approaches that should be used when providing education. Future studies may also wish to increase the length of the project in order to obtain more data. Additionally, future studies could examine multiple facilities or departments to assess compliance or other barriers that may present themselves in a different environment.

Conclusion

Chest pain is one of the most common diagnoses seen in the emergency department. The etiology of chest pain can vary from gastrointestinal, dermatological, trauma, musculoskeletal, respiratory, or cardiac origin. Regardless, chest pain education and follow up instructions are essential for all patients admitted for cheat pain Ideally, the more educated patients are, the more likely they will follow up or seek medical attention. It is the responsibility of the health care

provider to deliver and document the education and follow-up instructions so that patients are more informed and to identify signs and symptoms of chest pain. There are limitations to the study, including sample size, location, duration of the study, and change resistance.

Further research should be conducted to determine the impact of educating staff members on the AHA guidelines for diagnosing and treating chest pain. Implementing similar interventions in other facilities could help solidify this study's results or help identify additional barriers impacting results. Studies such as this one support the idea that providing direct education to staff does increase compliance with documentation and delivery of information to patients.

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Appendix A

Participant Consent Form

TITLE OF STUDY: Educating Emergency Department Staff on 2021 AHA Guidelines for Follow-up Education in Patients with Low Heart Scores
Principal Investigator: Daniel Burton MSN, RN,

This consent form is part of an informed consent process for a DNP student project, and it will provide information that will help you decide whether you wish to volunteer for this project. It will help you to understand what the study is about and what will happen during the project.

If you have questions at any time during the project, you should feel free to ask them and should expect to be given answers that you understand entirely.

After all your questions have been answered, you may complete the attached consent and participate in the educational session if you still wish to participate in the project. You are not giving up any of your legal rights by volunteering for this research project.

Why is this project being done?

This project is being conducted because there is currently no education being provided to patients that present to the hospital with chest pain and have a heart score of 0-3 as defined by the American Heart Association. Joint Commission has provided four measures and increasing education among patients with a low heart score is one of them.

What will you be asked to do if you take part in this research project?

You will be asked to provide a preassembled packet with chest pain education to patients that are being discharged and have a low heart score. After the education you will then document the education under the appropriate screen.

What are the risks or discomforts you might experience if you take part in this project?

No expected harm can occur from participating in this study. This project is voluntary. Upper management will be excused from participation and not provided any information regarding nurse participation in this project. Participation in this project is of no cost to you.

How will information about you be kept private or confidential?

All efforts will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed. Only a randomized ID code will be placed on your survey without the addition of any other personal identifiers. Surveys will remain within the emergency department staff, and information will not be removed from the premises until all identifiable information is removed.

What will happen if you do not wish to participate in the project or if you later decide not to stay in the project?

Participation in this project is voluntary. Suppose you do not want to enter the project or decide to stop participating. You may choose not to participate, or you may change your mind at any time. In that case, your relationship with the study staff will not change, and you may do so without penalty and without loss of benefits to which you are otherwise entitled.

You may also withdraw your consent for the use of data already collected about you, but you must do this in writing to Daniel Burton at dburton1@stu.jsu.edu

Who can you call if you have any questions?

If you have any questions about taking part in this project you can call the principal investigator:

Daniel Burton, MSA, BC-AGACNP
(256) 996-7565

AGREEMENT TO PARTICIPATE

1. Subject consent:

I have read this entire form, or it has been read to me, and I believe I understand what has been discussed. All of my questions about this form or this study have been answered. I agree to take part in this research study.

Subject Name:_____

Subject Signature:_____ Date:_____

2. Signature of Investigator/Individual Obtaining Consent:

To the best of my ability, I have explained and discussed the study's complete contents, including all of the information contained in this consent form. All questions of the research subject and those of their parent or legally authorized representative have been accurately answered.

Investigator/Person Obtaining Consent (printed name):_____

Signature:_____ Date: _____

Appendix B

Documented Education Pre- and Post-study

Provider #	Compliance before study	Compliance at the end of study
Provider 1	58%	100%
Provider 2	39%	64%
Provider 3	33%	100%
Provider 4	5%	80%
Provider 5	28%	50%
Provider 6	62%	100%
Provider 7	21%	66%
Provider 8	29%	50%
Provider 9	30%	50%

Appendix C

Education Documented by Provider by Week

Provider #	Week 1-2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Provider 1	55%	100%	100%	100%	100%	100%	n/a
Provider 2	55%	25%	88%	100%	67%	75%	64%
Provider 3	60%	100%	86%	100%	n/a	n/a	100%
Provider 4	50%	75%	100%	n/a	60%	100%	80%
Provider 5	25%	77%	60%	20%	100%	67%	50%
Provider 6	83%	100%	100%	100%	100%	100%	n/a
Provider 7	23%	0%	11%	66%	86%	0%	67%
Provider 8	0%	60%	0%	75%	50%	75%	50%
Provider 9	14%	50%	66%	60%	50%	60%	0%

Legend:
n/a=provider did not see any patients that week.

Appendix D

Number of Patient's Provider Saw per Week and Documented Education per Week (Post-Intervention Data)

Week #	Number of Patients all MD's saw	Number of patients that received Education and follow-up	%
Week 1-2	72	25	35%
Week 3	45	31	69%
Week 4	42	25	60%
Week 5	44	34	75%
Week 6	44	30	68%
Week 7	31	24	77%
Week 8	47	31	66%

Appendix E

Number of Patients by Provider Each Week of Study

# Of patients	Provider 1	Provider 2	Provider 3	Provider 4	Provider 5	Provider 6	Provider 7	Provider 8	Provider 9
Pre intervention	24	38	6	21	19	40	32	45	23
Week 1-2	9	11	5	6	4	12	13	10	7
Week 3	2	4	8	4	9	2	2	10	4
Week 4	2	8	7	2	10	1	9	2	3
Week 5	4	9	4	0	5	3	6	4	10
Week 6	3	12	0	5	3	6	7	4	4
Week 7	4	4	0	2	3	5	1	8	5
Week 8	0	14	8	5	4	0	3	12	1

Appendix F

IRB Approval

Institutional Review Board for the Protection of Human Subjects in Research
203 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

December 9, 2021

Daniel Burton
Jacksonville State University
Jacksonville, AL 36265

Dear Burton:

Your protocol for the project titled "Educating Emergency Department Staff on 2021 AHA Guidelines for Follow-up Education in Patients with Low Heart Scores" 120920201-09 has been granted exemption by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB). If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.
Best wishes for a successful research project.

Sincerely,

Lynn Garner
Associate Human Protections Administrator, Institutional Review Board

Appendix G

Project Timeline

Completion:	Pre-Design	Design	Implementation	Evaluation
Summer 2021	Define clinical problem. Develop the initial PICOt. Complete an initial Review of the Literature.			
Fall 2021	Finalized the PICOt Question. Communicated with University faculty about project ideas. Met with Preceptor and Stakeholders at Hospital. Review of Literature: Completed Table of Evidence on smoking cessation interventions on patient's intention to quit and the effect of an educational or training intervention on nurse's implementation of a smoking cessation program. Select Theoretical Methodology Complete CITI training	Began draft of Project Proposal Obtain PERC Approval Submit and obtain IRB Approval.		
Spring 2022			Implement DNP Project over eight weeks.	Data collection and statistical analysis Final project manuscript preparation.
Summer 2022				Final project manuscript submission, Project Dissemination, Poster Presentation and submit ePortfolio.

Appendix H

IRB Approval Letter

INSTITUTIONAL REVIEW BOARD
JACKSONVILLE STATE UNIVERSITY

Institutional Review Board for the Protection of Human Subjects in Research
203 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

December 9, 2021

Daniel Burton
Jacksonville State
University
Jacksonville, AL
36265

Dear Burton:

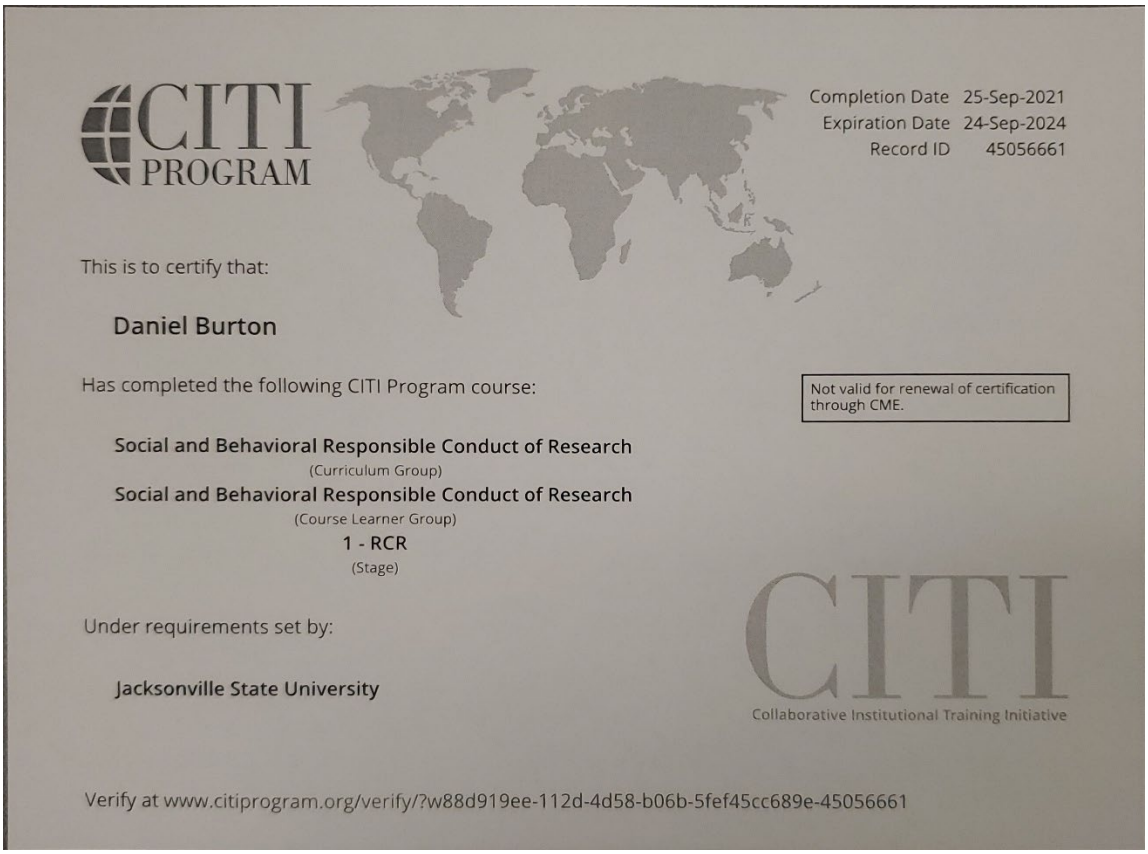
Your protocol for the project titled "Educating Emergency Department Staff on 2021 AHA Guidelines for Followup Education in Patients with Low Heart Scores" 120920201-09 has been granted exemption by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB). If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project. Best wishes for a successful research project.

Sincerely,

Lynn Garner
Associate Human Protections Administrator, Institutional Review Board Phone: 256-782-8144 • Fax: 256-782-8146 • www.jsu.edu • An Equal Opportunity Affirmative Action Employer

Appendix I

CITI Certificate



Appendix J

Chart Review Log

Provider	**Did the patient receive chest pain education Yes/No**	**Did they receive follow-up instructions Yes/No**	**Number of patients the provider has seen**