STOP-BANG and Postoperative Outcomes

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The DNP student MEGHANA HAMANA ACHA and the Scholarly Project STOP-BANG and Postoperative outcomes meet all the requirements for the degree of Doctor of Nursing Practice at University of Saint Francis-Fort Wayne, IN.

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Abstract

Problem Statement: Obstructive sleep apnea (OSA) is a sleep-associated breathing disorder that affects 14% of men and 4% of women in the United States, with an estimated 12 to 18 million adults having undiagnosed OSA (Deslate et al., 2021). Patients with OSA are at increased risk for peri- and postoperative complications; screening with the STOP-BANG questionnaire and utilizing its results in anesthesia care decrease these complications (Seet et al., 2015).

Purpose: The purpose of this project was to increase the documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery among anesthesia providers at Adams Memorial Hospital.

Inclusion criteria: The project participants were all full-time anesthesia providers, including an anesthesiologist and three CRNAs in the ambulatory care unit at Adams Memorial Hospital.

Methods: The main aim of the quality improvement (QI) project was to significantly increase providers usage and the documentation of the STOP-BANG assessment tool (questionnaire) on outpatient surgical patients at Adams Memorial Hospital. The interventions implemented were a ten-minute PowerPoint presentation and placement of laminated STOP-BANG questionnaire in each pre-operative room. A chart review was performed pre and post intervention to evaluate for improved practice changes

Results: Pre- to post- intervention chart reviews showed improvements in the completion and documentation of the STOP-BANG questionnaire in patients' charts. Anesthesia Providers at AMH documented the STOP-BANG questionnaire with a 700% documentation in patient charts during the four-week post-intervention period. Pre-implementation chart review had five charts

with completed STOP-BANG questionnaires, and a post-implementation chart review had 40 charts with completed STOP-BANG questionnaires, thus the 700% increase in the completion of the STOP-BANG questionnaire.

Implications: The anesthesia providers at AMH needed education on the completion and documentation of the STOP-BANG questionnaire. Future recommendations include episodic education to remind the anesthesia providers of the importance of completing and documenting a STOP-BANG questionnaire in future care practices.

Chapter 1: Introduction

Problem

Problem Statement

Obstructive sleep apnea (OSA) is a sleep-associated breathing disorder that affects 14% of men and 4% of women in the United States, with an estimated 12 to 18 million adults having undiagnosed OSA (Deslate et al., 2021). Patients with OSA are at increased risk for peri- and postoperative complications; screening with the STOP-BANG questionnaire and utilizing its results in anesthesia care decrease these complications (Seet et al., 2015). The prevalence of OSA is estimated to be 41.5% among patients presenting for outpatient surgery; this number increases up to 80% in the obese population, including those scheduled to receive bariatric surgery (Seet et al., 2015).

The STOP-BANG questionnaire is an eight-point scoring system that is routinely administered during the preoperative assessment to screen for OSA (Chung et al., 2008; Seet et al., 2015; Vasu et al., 2012). The acronym STOP-BANG stands for Snoring loudly, Tiredness in the daytime, Observed apnea during sleep, high Blood pressure, Body mass index > 35 kg/m^2 Age > 50 years, Neck circumference > 40 cm, and male Gender. STOP-BANG scores range from 0 to 8; a score of 3 means that the patient is at risk of OSA, while a score ≥ 5 indicates that the patient is at high risk of OSA (Chung et al., 2008; Seet et al., 2015; Vasu et al., 2012). The STOP-BANG questionnaire has high sensitivity and a negative predictive value, especially for patients with moderate to severe OSA. STOP-BANG scores are valuable information for the healthcare team, specifically for anesthesia professionals. However, the problem is that

anesthesia providers are not fully utilizing this screening tool, as evidence suggests it should be used.

Anesthesiologists and certified registered nurse anesthetists (CRNAs) may need to increase vigilance while caring for a patient with a STOP-BANG score of 3 or more, whereas a score of 5 or greater may prompt them to make alterations in a patient's intra-procedure care plan (Chung et al., 2008; Seet et al., 2015; Vasu et al., 2012). These changes include using regional anesthesia instead of general anesthesia to avoid airway manipulation, tracheal intubation, and prolonged hospitalization (Chung et al., 2008; Seet et al., 2015; Vasu et al., 2012).

Background of the Problem

The most common medical condition identified in the last 50 years is OSA (Nations & Mayo, 2016). The prevalence differs depending on the population studied and the diagnostic criteria used to define OSA. However, overall, the prevalence of OSA ranges from 2% to 26% in the general population, with more than 80% of undiagnosed patients (Nations & Mayo, 2016). Obstructive sleep apnea is characterized by recurrent and intermittent episodes of partial or complete upper airway obstruction during sleep, resulting in fragmented sleep and daytime sleepiness (Nations & Mayo, 2016).

OSA is associated with coronary artery disease, obesity, hypertension, and diabetes. (Nations & Mayo, 2016). Specific to surgical patients with OSA, sedation medications, anesthesia, and pain control may increase upper airway collapsibility by decreasing the genioglossus' muscle activity and worsening OSA (Nations & Mayo, 2016). The conjunction of comorbid diseases and sensitivity to medications used for anesthesia, sedation, and pain management creates the hazard of worsening the obstruction and resulting apnea. If the diagnosis of OSA is known or suspected, a different plan of care should be implemented (Nations & Mayo,

2016). For example, utilizing regional anesthesia, minimizing narcotics and sedatives, and preparing for additional monitoring and support in the postoperative period would be appropriate. Same-day surgery patients may need to be admitted overnight; procedural sedation in the outpatient clinic may not be appropriate. Continuous positive airway pressure (CPAP) machines may need to be brought in with the patient, and judicious use of patient-controlled analgesia and continuous respiratory monitoring may be required (Nations & Mayo, 2016).

PICOT Question

After supplemental education, will anesthesia providers at Adams Memorial Hospital improve documentation of the STOP-BANG Questionnaire in adult patients undergoing outpatient surgery to determine patients at risk for obstructive sleep apnea?

Needs Assessment/Practice/Knowledge Gap

While at Adams Memorial Hospital, the project manager noticed that CRNAs were not thoroughly screening patients for OSA when they came in for outpatient procedures; if the providers were screening for OSA, it often was not documented. The project manager noticed that there were significant airway challenges in these patients during monitored anesthesia care. According to Passineau (2008), each patient presenting for outpatient surgery should be evaluated for OSA (e.g., using the STOP-BANG questionnaire). When the disorder is identified, the healthcare provider should prominently note it in the patient's record. If OSA is suspected or confirmed, the provider must be very judicious in determining which medications may cause or exacerbate respiratory depression. In January of 2022, the project manager completed a random chart review of 50 charts, and only five of the patients had a completed OSA screening in their chart. The writer talked to CRNAs about the gap in practice and the importance of the

preoperative STOP-BANG assessment, and they were willing to work with the project manager to implement this DNP project.

DNP Project Overview

Scope of Project

The purpose of this project was to increase the documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery among anesthesia providers at Adams Memorial Hospital. According to Passineau (2008), each patient presenting for outpatient surgery should be evaluated for OSA (e.g., using the STOP-BANG questionnaire). In healthcare, the only way to ensure something has been done, such as an evaluation of OSA, is by having it formally documented in the patient chart.

CRNAs were encouraged to participate in and attend an education session about the importance of the STOP-BANG questionnaire as a tool for preoperative assessment of patients at risk for OSA and the potential anesthetic complications. The project manager completed a follow up analysis of how frequently the documented assessment of OSA appeared in the charts. Three CRNAs and an anesthesiologist participated in the project.

Stakeholders, Budget, and Resources

Stakeholders

The team consisted of Dr. Carla Mueller (DNP academic adviser); Dr. David Shepherd, CRNA at Adams Memorial Hospital (practice mentor); Dr. Gregory Louck (DNP CRNA program director); and Dr. Michael Cotrell, CRNA (Nurse anesthesia assistant program director). Other stakeholders included the anesthesia providers at Adams Memorial Hospital and the patients who received care from these healthcare providers.

Cost

The projected budget for direct and in-kind costs for the DNP project included printed material for the demographic survey delivered before the PowerPoint presentation, copies of the slideshow presentation for each provider, and laminated copies of the STOP-BANG questionnaire ($243). In-kind costs included a lunch to anesthesia providers during the PowerPoint ($100), and cost of travel to and from the facility by the project manager ($240). AMH provided a conference room for the PowerPoint presentation.

Description of Resources

AMH supplied multiple resources for the project including staff's time and use of a conference room. The project manager was responsible for the printing of all paper forms and obtaining access to excel to run statistical tests on project data.

Process and Outcomes

The goal of the DNP project was to improve the usage and documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery among anesthesia providers at Adams Memorial Hospital. Another expected project goal was to improve the number of outpatient surgery patients meeting phase two and post-anesthesia care discharge time.

General Timeline

Planning and timeline for the DNP project began with an initial literature review in January 2021. Initial DNP approval was in March 2021; informed consent was created in April 2021. The project manager was exempt from Adams IRB and had facility approval in writing to implement the DNP project. The DNP project received approval from the Institutional Review Board at the University of Saint Francis on October 25th, 2021. A copy of the IRB approval form

is attached in Appendix F. To comply with University of Saint Francis requirements, the project manager completed the Collaborative Institutional Training Initiative (CITI) Training in human subject protection. A copy of the CITI certification is attached in Appendix D. The DNP project was implemented in February 2022. A Gant chart is attached in Appendix A.

Setting and Target Population

Facility

The facility where this DNP Project took place was the ambulatory care unit at Adams Memorial Hospital in Decatur Indiana. Adams Memorial Hospital is a 25-bed, critical access hospital providing diagnostic, therapeutic, and preventative care that meets the physical, emotional, and spiritual needs of the people in Decatur Indiana (Adams Memorial Hospital, 2021). Adams Memorial Hospital offers acute care services (medical/surgical/intensive care unit); inpatient, ambulatory, and orthopedic surgery; cardiopulmonary care including sleep studies; laboratory services; and comprehensive radiology services including MRI, CT scan, ultrasound, mammography, and bone density testing (Adams Memorial Hospital, 2021). Procedures performed at this site include colonoscopies, colon and rectal surgeries, hernia repairs, laparoscopic procedures such as gallbladder removal, skin cancer surgeries and breast cancer related surgeries (Adams Memorial Hospital, 2021).

Population

The population was full-time anesthesia providers employed by AMH, including an anesthesiologist and three Certified Registered Nurse Anesthetists in the ambulatory care unit.

Expected Outcomes

An expected outcome was the completion of the STOP-BANG Questionnaire in the preoperative checklist as evidenced by documentation in the patient electronic health record (EHR) by all anesthesia providers at AMH. Another expected outcome was to improve the number of outpatient surgery patients meeting phase two and post-anesthesia care discharge time.

Risk Analysis

There were no identifiable immediate or long-term risks to the participants of this project. Participation was voluntary. Participants did not receive any compensation and were free to withdraw their participation at any time during the project. No deception was used and none of the participants were recorded.

Chapter 2: Synthesis of Supporting Evidence and Project Framework

Relevant Theory and Concepts

Frameworks/Models/Concepts/Theories

The Donabedian model, developed in 1966 by Avedis Donabedian, is a conceptual model that gives a framework for examining health services and evaluating health care quality. The Donabedian framework looks at three categories evaluating the quality of care received (Butts & Rich, 2018). The initial aspect of the Donabedian model is the physical structure where the care is received. For the writer's DNP project, the structure was at Adams Memorial Hospital, specifically the operating room's preoperative area.

The second category of the Donabedian framework is processes (Butts & Rich, 2018). It describes the care provided and the interactions between the healthcare professional and the patient which will happen intraoperatively and post-operatively.

The project manager implemented a STOP-BANG assessment tool for the CRNAs to use as their preoperative assessment so that documentation was not missed in the EHR. This preoperative checklist, which is part of the EHR, determined which patients were at moderate to high risk for OSA.

The last component of the Donabedian model is the outcome; outcomes refer to the endpoints related to the intervention that will be implemented (Butts & Rich, 2018). The project's primary outcome was to get the CRNAs to document the use of the STOP-BANG questionnaire to demonstrate screening for OSA.

Literature Review

A literature search was performed using CINAHL Plus at the University of Saint Francis to find articles relating to the STOP-BANG questionnaire, OSA, and anesthetic complications relating to OSA. Keywords used in the literature search were a combination of the following terms: obstructive sleep apnea, STOP-BANG, STOP-BANG questionnaire, perioperative, intraoperative, postoperative, screening, patient outcome, and sleep-disordered breathing. Of the 211 articles found using CINAHL Plus, articles not related to OSA, anesthetic complications, or STOP-BANG were excluded. Articles relating to OSA prevalence and its implications for anesthetists, and the STOP-BANG questionnaire and its use for preoperative screening were included in this evidence review.

Obstructive Sleep Apnea

One of the most common sleep breathing disorders is OSA (Chung et al., 2016; Nagappa et al., 2015; Vasu et al., 2012). Research estimates that about 70%-90% of patients presenting for elective surgery have undiagnosed obstructive sleep apnea, especially the bariatric population (Chung et al., 2016; Chung & Elsaid, 2009; Nagappa et al., 2015; Randle, 2018; Seet et al., 2015; Vasu et al., 2012). OSA is associated with the following comorbidities: cerebrovascular disease, cardiovascular disease, hypertension, diabetes, congestive heart failure, stroke, gastroesophageal reflux disease, and neurocognitive alterations (Chung & Elsaid, 2016; Chung et al., 2016; Randle, 2018; Vasu et al., 2012; Wolfe et al., 2016).

The majority of patients with OSA are undiagnosed because the disorder occurs during sleep, and thus, many people remain unaware of the condition (Vasu et al., 2012). Undiagnosed OSA has long-term deadly complications. With the increasing rates of obesity and the rising number of surgical procedures being performed, there will inevitably continue to be a rise in the number of patients presenting for elective surgery undiagnosed with OSA (Chung et al., 2016).

Patients diagnosed with OSA who are noncompliant with their treatment receive no benefit from the diagnosis. Continuous positive airway pressure (CPAP) is the proper treatment for obstructive sleep apnea (Chung et al., 2016).

Anesthetic Complications

Patients with OSA not previously diagnosed undergoing outpatient surgical procedures have a higher risk of complications (Randle, 2018; Seet et al., 2015; Vasu et al., 2012; Wolfe et al., 2016). These complications include respiratory failure, hypoxemia, cardiac arrhythmias reintubations, unanticipated ICU admissions, pneumonia, and pulmonary embolisms (Randle, 2018; Seet et al., 2015; Vasu et al., 2012; Wolfe et al., 2016). Because of the many detrimental effects anesthetic medications can have on a patient's airway, OSA presents a challenge to CRNAs.

Decreased dilator muscle function of the upper airway directly correlates to enormous doses of opioids and general anesthetics (Chung et al., 2008; Vasu et al., 2012; Wolfe et al., 2016). Airway obstruction occurs when the dilator muscles of the upper airway collapse. These dilator muscles collapse much more quickly in individuals with OSA. Multiple times, this collapsibility of the dilator muscles exacerbates symptoms associated with sleep apnea, leading to many postoperative complications such as arrhythmias, hypoxia, and significant cardiac and respiratory events (Vasu et al., 2012).

Outpatient surgical patients who have OSA are at a greater risk of physiological complications due to anesthetic medications utilized for sedation and pain control (Chung et al., 2008; Vasu et al., 2012; Wolfe et al., 2016). Due to these medications' adverse effects, patients with sleep apnea may demonstrate increased incidents of decreased ventilator response, diminished arousal response, and pharyngeal collapse (Chung et al., 2008; Vasu et al., 2012).

STOP-BANG Questionnaire

The STOP-BANG questionnaire has a high specificity, a negative predictive value, and sensitivity for moderate to severe obstructive sleep apnea (Vasu et al., 2012). Specificity indicates that the patient is not diagnosed with OSA and does not have OSA. The negative predictive value is similar to specificity but describes the percentage when the patient is not at risk for OSA and a negative STOP-BANG result. Sensitivity is the percentage of time the STOP-BANG result is positive, and the patient has OSA.

Specificity and sensitivity are characteristics of the STOP-BANG questionnaire. Simultaneously, the positive and negative predictive values are related to the disease's prevalence in the population being tested. The accuracy of the STOP-BANG questionnaire is measured according to the apnea-hypopnea index (AHI). AHI measures the number of times an individual is apneic in an hour. The STOP-BANG questionnaire had a sensitivity of 83.6% in individuals with an AHI greater than 5, 92.9% in patients with an AHI greater than 15, and 100% in patients with an AHI of 30 (Vasu et al., 2012). The negative predictive values were 60.8%, 90.2%, and 100%, respectively (Vasu et al., 2012).

Summary of Supportive Evidence

As the obesity prevalence among adults continues to increase, more patients are presenting for surgeries or procedures with undiagnosed OSA (Deslate et al., 2021). Knowing the risks associated with OSA, clinicians must be aware and prepared for possible perioperative complications. The STOP-BANG questionnaire provides ease, efficiency, and high sensitivity as an OSA screening tool in the preoperative setting. With this knowledge, the interdisciplinary

team can better plan risk mitigation strategies for high-risk patient groups and schedule a standard polysomnography (PSG) for these patients to confirm a diagnosis of OSA.

Strong evidence exists to support the use of the STOP-BANG assessment tool as a preoperative OSA screening instrument in surgical populations. The STOP-BANG assessment tool can identify patients at risk of moderate to severe OSA and perioperative complications. More quality improvement projects need to be done in specific clinical sites, such as the GI lab, to confidently associate high STOP-BANG scores with the need for increased vigilance to prevent intraprocedural and postprocedural complications (Deslate et al., 2021).

Chapter 3: Project Design

Methodology

The project manager- implemented a STOP-BANG assessment tool for the CRNAs to use as their preoperative assessment so that documentation was not missed in the EHR. This preoperative checklist, which is part of the EHR, determined which patients are at moderate to high risk for OSA.

Project Design

The project was a Quality Improvement (QI) project which was data-based and focused on improving a clinical process or outcome. QI is a collaborative effort on the part of everyone—healthcare professionals, patients and their families, researchers, and educators—to make the changes that will lead to better patient outcomes (Batalden et al., 2007). The project manager aimed to significantly improve patient outcome by improving providers' usage of the STOP-BANG assessment tool on outpatient surgical patients at Adams Memorial Hospital. The project manager utilized a comparative descriptive design which allows the comparison of patients' charts before and after the intervention in relation to changes in healthcare protocols, products, and their utilization (Gray et al., 2017, p. 204). The project manager implemented two interventions. The project manager developed an educational PowerPoint presentation which was presented to the anesthesia providers at AMH and also created a laminated STOP-BANG questionnaires which were placed in every preoperative room. In addition, the project manager performed a chart review pre and post implementation to evaluate for improved practice changes.

Ethical Considerations

The DNP project received approval from the Institutional Review Board at the University of Saint Francis on October 25th, 2021. A copy of the USF IRB approval is attached as Appendix F.

To comply with University of Saint Francis requirements, the project manager completed the Collaborative Institutional Training Initiative (CITI) Training in human subject protection. A copy of the completed CITI training certificates is attached as Appendix D. IRB Approval by AMH was not needed, as stated in the facility letter of support attached as Appendix C. There were no identifiable immediate or long-term risks to the participants of this project. Participation was voluntary; all participants signed an informed consent at the beginning of project implementation. Informed consent is attached as Appendix E. Participants did not receive any compensation and were free to withdraw their participation at any time during the project. No deception was used, and none of the participants were recorded. Data collected was password protected and only accessible to the project manager.

Project Schedule

Project implementation began in February 2022 and ended in March 2022. The final project presentation to University of Saint Francis (USF) faculty and peers occurred in June 2022. A copy of the project timeline is attached as Appendix A.

Implementation Methods

The project manager implemented two interventions at Adams Memorial Hospital in February 2022. One was a ten-minute PowerPoint presentation about the risk for OSA and the importance of utilizing the STOP-BANG questionnaire on all outpatient surgical patients. The project manager created the PowerPoint which was approved by Dr. Mueller, the project advisor, and Dr. Louck, the anesthesia program director, before the presentation. All anesthesia providers at Adams Memorial Hospital were encouraged to attend the presentation. An additional

intervention was the placement of laminated STOP-BANG questionnaires in every preoperative room. In addition, the project manager completed a chart review four weeks after the PowerPoint presentation to evaluate the usage of the STOP-BANG questionnaire. A total of 50 outpatient surgery charts were reviewed to identify if outpatient surgery patients had improved PACU and phase two discharge times.

Measures/Tools/Instruments

The project manager performed a pre/post-intervention chart review for data collection and analysis of usage and documentation of the STOP-BANG assessment tool among anesthesia providers at AMH on outpatient surgical patients. A data collection form created by the project manager was utilized. Tool validity has been established for the STOP-BANG questionnaire as part of a pre-operative assessment tool at AMH. A copy of the data collection form and STOP-BANG questionnaire are attached in Appendix B.

The project manager utilized quantitative measures in the DNP project. The quantitative method was chosen because it is a formal, objective, systematic study process that helps with the implementation of the QI project (Gray et al., 2017, p. 688).

The project manager utilized a comparative descriptive design which allowed the comparison of before and after states in relation to changes in healthcare protocols, products, and utilization (Gray et al., 2017, p. 204). The project manager measured results using percent change from pre/post educational presentation in SPSS (Grove & Cipher, 2016, p. 79).

Evaluation Plan

The project manager emailed the project mentor and the anesthesia providers at AMH, inviting them to participate in an educational session on STOP-BANG and postoperative outcomes. The ten-minute PowerPoint presentation was discussed on the risk for OSA and the importance of utilizing the STOP-BANG questionnaire on all outpatient surgical patients. Included in the PowerPoint presentation was risk reduction strategies for patients at risk for OSA to improve patient outcomes. A pre/ post chart review was done by the project manager utilizing the data collection form included in Appendix B.

Methods for Collection of Data

Data collection consisted of secondary data gathered through a chart review pre/post-intervention. Data was hand collected using a data collection form. The data collected was stored on the University of Saint Francis password-protected OneDrive and only the project manager had access to it. The data was saved on the project manager's personal, password-protected computer. Only aggregate data was disseminated to stakeholders, and data was destroyed post dissemination in summer 2022, using software designed to permanently delete data for privacy purposes.

Data Analysis Plan

The project manager was responsible for all data collection and verification of data completeness. During project implementation, electronic data was stored by the project manager on the University of Saint Francis password protected OneDrive. At the end of the data collection, the data was cleaned, and a statistical analysis was computed using Excel.

Dissemination Plan

At the completion of the project, the results were emailed to the Chief Nursing Officer (CNO) and the Chief of Anesthesia at AMH. An abstract of the completed manuscript was sent to all participants. Final dissemination of the completed DNP manuscript was presented to USF faculty and peers in June 2022, and a copy of the DNP project manuscript was placed in the USF DNP Project Repository.

Chapter 4: Results and Outcomes Analysis

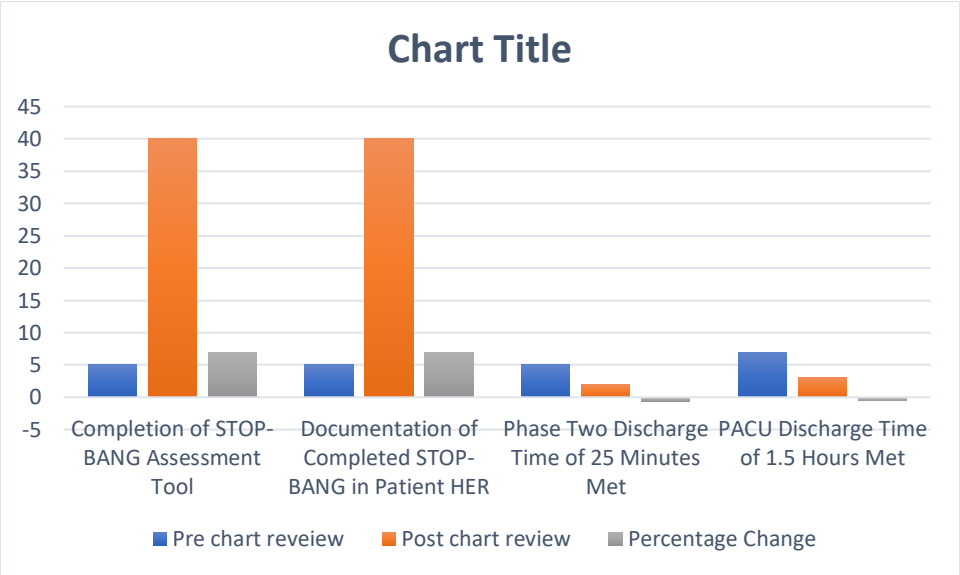
Data Collection Techniques

Data collection for the scholarly project was completed by doing an electronic chart review. A total of two CRNAs and one anesthesiologist participated during the implementation of the project, with a total of three anesthesia providers. In addition, all anesthesia providers at AMH attended a ten-minute PowerPoint presentation at Soul Pig restaurant about the risk of OSA and the importance of utilizing the STOP-BANG questionnaire on all outpatient surgical patients. The PowerPoint presentation happened on February 14, 2022, after an initial chart review was completed with the assistance of Dr. David Shepherd, the practice mentor.

Measures/Indicators

Measures and aims

Figure 1.1



Aim 1: Improve the usage and documentation of the STOP-BANG questionnaire for preoperative assessment of patients undergoing outpatient surgery among anesthesia providers at AMH.

Measure 1a: 50% of charts of outpatient surgery patients will have a STOP-BANG assessment completion in the chart.

Measure 1a was met with a 700 % increase in completed STOP-BANG assessment tools completed on post-implementation chart review, as demonstrated by the bar chart above. Pre-implementation chart review had five charts with completed STOP-BANG questionnaires, and a post-implementation chart review had 40 charts with completed STOP-BANG questionnaires, thus the 700% increase in the completion of the STOP-BANG questionnaire.

Measure 1b: Will see a significant increase of documented STOP-BANG assessment tools in patient charts.

Measure 1b: A 700% documentation of completed STOP-BANG assessment tools was met in patient charts demonstrated by the bar chart above. Pre-implementation chart review out of 50 charts reviewed, only five charts had a documented STOP-BANG questionnaire. Post-implementation chart review had 40 documented STOP-BANG questionnaires. Thus the 700% increase.

Aim 2: Increase the number of outpatient surgery patients meeting phase two and post-anesthesia care discharge time.

Measure 2a: Increase in number of phase two patients discharging in 25 minutes.

Measure 2a: was met by showing a significant decrease in the number of delayed discharges from phase two. On pre-implementation chart review, five patients exceeded phase two discharge time. Post-implementation chart review showed that only two patients exceeded phase two discharge times with a -60% improvement.

Measure 2b: Increase in the number of PACU patients discharging in 1.5 hours.

Measure 2b: was met, showing a significant decrease in delayed PACU discharges. On pre-implementation chart review, seven patients exceeded the 1.5-hour PACU discharge time, and post-implementation chart review had three patients exceeded the 1.5 PACU discharge time with a -57%.

Data Analysis Inferences

The data collected from the pre/post-chart review was analyzed for inferences.

Pre-intervention

The pre-intervention data showed that anesthesia providers were not completing or documenting a STOP-BANG questionnaire on pre-operative surgical patients. Therefore, a PowerPoint presentation on the importance of completing and documenting the STOP-BANG questionnaire was vital for improved patient outcomes.

Post-intervention

After interventions were in place, there was an improvement in all measured outcome indicators above project goals. For example, a post-implementation chart review showed a 700% improvement in completing and documenting the STOP-BANG questionnaire on outpatient

surgical patients. The improvement seen in the completion and documentation of the STOP-BANG assessment tool indicates successful project interventions.

Gaps

A gap during project implementation was participation only from three out of the four anesthesia providers at AMH due to termination of employment for one of the providers, making an already small sample size even smaller, thus inhibiting the generalization of project results.

Unanticipated Consequences

The only unanticipated consequence during project implementation was the termination of one of the anesthesia providers, making an already small sample size even smaller. Another unanticipated consequence was presenting the PowerPoint presentation at a restaurant instead of the hospital's conference room.

Expenditures

The project manager spent $55 on colored PowerPoint printed copies for anesthesia providers and laminated STOP-BANG questionnaires for each pre-operative room. A total cost of $25 was spent on buying donuts and coffee for AMH staff. Traveling to the project site and back for project implementation and fuel cost the project manager $100.

Chapter 5: Leadership and Management

Organizational Culture

Organizational culture is the shared values, beliefs, and norms within an organization and is the foundation from which strategy emerges (Grimm et al., 2005). For the strategy to receive sustained support, it must be aligned with organizational culture. QI initiatives are a component of an organization's strategy and sustaining them requires a culture supportive of change (Grimm et al., 2005). Evidence-based practice (EBP) is considered the "gold standard" for improving patient care and is based on embracing and sustaining change; therefore, it is crucial to understand the underlying assumptions embedded in an organization's culture and strategy (Grimm et al., 2005). The political culture of Adams Memorial Hospital (AMH) is that of service to the citizens of Decatur, Indiana.

Their vision and mission equal better healthcare to the community. The organization creates value through careful stewardship of resources while delivering the highest quality of care in a cost-effective environment. The organization creates a safe environment that influences high-quality outcomes and is vital to their success. AMH supports a team process in achieving goals through enthusiastic participation, encourages an open and honest exchange of information delivered with respect and compassion, and upholds the highest personal and professional ethics and integrity (Adams Memorial Hospital, 2021).

EBP is a problem-solving approach to clinical care that includes clinicians' expertise, the best available scientific evidence, and patients' values (Yoo et al., 2019). This leads to positive patient outcomes and safe patient care, reducing nursing time and medical costs through the standardization of nursing practice. It also improves job satisfaction, professional autonomy, and

clinical nurses, ultimately bringing potential benefits to patients, nurses, and the healthcare system (Yoo et al., 2019). While at AMH, the writer noticed that CRNAs were not thoroughly screening patients for OSA when they came in for outpatient procedures; if the providers were screening for OSA, it was not often documented. The writer noticed that there were significant airway challenges in these patients during monitored anesthesia care. According to Passineau (2008), each patient presenting for outpatient surgery should be evaluated for OSA (e.g., using the STOP-Bang questionnaire).

Institution and Organizational Assessment Model (IOA)

The IOA model is vital to all organizations, regardless of their nature, and can be used as a framework for external evaluations or a self-assessment tool (Institutional and Organizational Performance Assessment, 2021). In the IOA model, performance is defined in terms of the organization's effectiveness, efficiency, ongoing relevance, and financial viability. The model presents an approach to assessing the three underlying forces that drive performance: an organization's capacities, external environment, and internal context or motivation (Institutional and Organizational Performance Assessment, 2021). The IOA model is inherently problem-solving and forward-looking and helps structure capacity-building interventions. It is also flexible and can be easily adapted to different organizational contexts (Institutional and Organizational Performance Assessment, 2021). This model was very relevant to the author's project in that AMH's vision and mission equals better healthcare to the community of Decatur, Indiana. They create value through careful stewardship of their resources while delivering the highest quality of care in a cost-effective environment, provide a safe environment that influences high quality outcomes and is vital to their success, support a team process in the achievement of goals through enthusiastic participation, encourage open and honest exchange of

information delivered with respect and compassion, and uphold the highest level of personal and professional ethics and integrity (Adams Memorial Hospital, 2021).

Change Strategy

One of the critical concerns in health care management is the management of change. Health care professionals are required both to acquire and maintain the expertise needed to undertake their professional tasks. All are required to undertake only those tasks that are within their competence (Al-Abri, 2007). As the project manager, the author has acquired the training and skills to undertake and implement the project at AMH on STOP-BANG and postoperative outcomes (Adams Memorial Hospital, 2021).

Leaders should assist employees and stakeholders to build and structure effective teams by creating new organizational structures and developing a shared vision that focuses on authentic employees' output. Such leadership is crucial and essential for organizations to be successful. Monitoring and measuring outcomes of the change process are essential for recognizing whether or not the change process has fulfilled its purposes (Al-Abri, 2007).

Change Theory

Lewin’s (2020) influential theory was his model of the change process in human systems. He theorized a three-stage model of change known as the unfreezing-change-refreeze model that requires prior learning to be rejected and replaced (Lewin, 2020). Lewin's theory describes behavior as a dynamic balance of forces working in opposing directions (Lewin, 2020). The project manager worked with the anesthesia providers at AMH by unfreezing the lack of documentation for STOP-BANG assessments and improving the documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery. According to Passineau (2008), each patient presenting for outpatient surgery should be

evaluated for OSA (e.g., using the STOP-Bang questionnaire). In healthcare, the only way to ensure something has been done, such as an evaluation of OSA, is by having it formally documented in the patient chart.

The change theory consists of three distinct and vital stages: the first stage is unfreezing, which is the process that involves finding a method of making it possible for people to let go of an old pattern that was counterproductive in some way. Unfreezing is necessary to overcome the strains of individual resistance and group conformity. The use of three methods can achieve unfreezing. First, increase the driving forces that direct behavior away from the existing situation or status quo (Lewin, 2020). The second stage decreases the restraining forces that negatively affect the movement from the existing equilibrium. It is moving to a new level of change and movement. This stage involves a process of change in thoughts, feelings, behavior, or all three, which is more liberating or more productive (Lewin, 2020). The third stage is refreezing, which establishes the change as a new habit to become the standard operating procedure. Without this stage of refreezing, it is easy to go back to the old ways. It is pertinent that the driving and restraining forces must be analyzed before implementing a planned change (Lewin, 2020).

Leadership Style

Transformational Leadership

Transformational leadership (TL) is the leadership style used by the organization, the perioperative manager, and the project manager. It is a form of social influence with broad applicability in nursing (Ross et al., 2014). Transformational leadership is a leadership style that inspires and empowers followers to achieve extraordinary outcomes while transcending individual self-interests, aligning objectives and goals of the followers, the leader, groups, and

the organization (Ross et al., 2014). TL is a distinct model that provides an empirically supported approach to foster organizational and personal change (Ross et al., 2014). TL is effective in creating a highly engaged organizational culture (Ross et al., 2014). Transformational leaders support excellence in practice by appealing to the higher ideals and values of their followers. TL is associated with lower rates of burnout, a better sense of leader effectiveness, and better staff satisfaction. TLs can produce environments with higher rates of employee retention, productivity, and job satisfaction. Further, TL development leads to improved organizational strategies and better patient outcomes (Ross et al., 2014). As a facility and administration that are a proponent of TL, implementing this DNP project encountered minimal resistance for leadership and staff to improve patient outcomes.

Interprofessional Collaboration

Interprofessional collaboration is the collective involvement of various healthcare providers working with families, patients, communities, and caregivers to consider and communicate each other's unique perspectives in delivering the highest quality care (Moss et al., 2016). Incorporating the roles and responsibilities for collaborative practice is essential to optimal performance and facilitates project aims. The benefits of interprofessional collaboration for the doctoral project include making good use of all team members' expertise and knowledge, embracing the unique cultures and values of a population by appreciating the team's dynamic and diversity, and developing effective and efficient solutions to problems. In this project, the interprofessional team consisted of faculty members, program director, nurse leadership, anesthesia providers at AMH, the nurse educator, and the operating room staff.

Conflict Management

Conflict causes unnecessary tension in the workplace and often produces negative professional outcomes (Lipcamon et al., 2004). Conflict provides employees with crucial feedback on how things are going. When regarded in a positive context, even personality conflicts may provide information to the healthcare manager about what is not working in the organization (Lipcamon et al., 2004). If conflict is not directed and controlled, it can have damaging effects in the workplace, stifling the growth of departments and deflating employee morale (Lipcamon et al., 2004). Our job as healthcare managers is to deal with conflict so that it does not decrease productivity or detract from the provision of patient-centered care. There are four available sources for interpersonal conflict: personal differences, informational deficiency, role incompatibility, and environmental stress (Lipcamon et al., 2004). There are five common responses to dealing with conflict: forcing, accommodating, avoiding, compromising, and collaborating (Lipcamon et al., 2004).

During the planning and implementation phase, the project manager could not reach the project mentor, thus delaying project implementation. After IRB approval was obtained on October 21, 2021, the project manager sent out an email to the project mentor, asking for a good time to implement the project. The project mentor did not respond to the email. The project manager sent three additional emails, and the project mentor finally responded in January, with the entire team agreed upon a date for project implementation.

Chapter 6: Discussion

Impact of Project

This quality improvement project was implemented at Adams Memorial Hospital (AMH) to improve the usage and documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery among anesthesia providers at AMH. Another project aim was to improve the number of outpatient surgery patients meeting phase two and post-anesthesia care discharge time.

Conducting a ten-minute educational PowerPoint presentation about the risk for OSA and the importance of utilizing the STOP-BANG questionnaire on all outpatient surgical patients and placing laminated STOP-BANG questionnaires in every preoperative room were effective interventions to improve the usage and documentation of the STOP-BANG. As a result, the project met all measurable goals showing a 700% increase in the usage and documentation of the STOP-BANG questionnaire on all outpatient surgical patients.

Decisions and Recommendations

The project showed the need for supplemental education and increased access to the STOP-BANG questionnaire for anesthesia providers at AMH. Information on the importance of the completion and documentation of the STOP-BANG questionnaire should be included in the continuing education of anesthesia providers so they can stay up to date with practice changes. In addition, laminated copies of the STOP-BANG questionnaire should remain in each preoperative room, so the assessments are not missed.

Limitations of the Project

During the initial chart audit, AMH had four anesthesia providers; at the time of project implementation, they had lost one of their providers, making an already small sample size even

smaller. Even though all three anesthesia providers participated in the project, the project still had a small sample size which inhibited the generalization of the project results.

Application to Other Settings

This doctoral project design applies to a variety of settings. The utilization of evidence-based research to improve skills, knowledge, and access to resources is an effective strategy to institute a practice change in various settings.

This project will benefit both outpatient and inpatient surgery patients to prevent them from intraoperative complications from OSA and improve patient outcomes. OSA is associated with coronary artery disease, obesity, hypertension, and diabetes (Nations & Mayo, 2016).

The implementation of this project improved the utilization and documentation of the STOP-BANG assessment tool and decreased phase two and PACU discharge times, thus improving patient outcomes and preventing intraoperative complications.

Strategies for Maintaining and Sustaining

The project manager implemented several actions to improve the continued utilization of the STOP-BANG assessment tool among anesthesia providers at AMH. Anesthesia providers were given individual copies of the PowerPoint presentation with references. The provision of individual PowerPoint presentation copies allowed providers to review key learning objectives and evidence supporting the importance of the STOP-BANG assessment tool as a preoperative assessment tool for surgical patients. Anesthesia providers were also permitted to share the PowerPoint presentation with new providers at AMH. Sharing the PowerPoint with new hires will demonstrate the importance of the STOP-BANG assessment tool in preventing intraoperative complications. Another action to improve sustained use of the STOP-BANG

assessment tool is the placement of laminated STOP-BANG questionnaires in every preoperative room, thus improving its usage and documentation.

Lessons Learned

All eight DNP essentials were met with the completion of the doctoral project through the educational intervention. According to the AACN (2006), DNP essentials define the curricular elements that must be present in DNP programs, and essential for all Advanced Practice Registered Nurses (APRNs).

During project implementation, the project manager realized that interprofessional collaboration was vital to the success of the DNP project, fulfilling DNP essential VI. The project manager made good use of all team members' expertise and knowledge, embracing the unique cultures and values of all team members, hence developing effective and efficient solutions to problems. Interprofessional team consisted of faculty members, program director, nurse leadership, anesthesia providers at AMH, the nurse educator, and the operating room staff.

- **Essential I**: Scientific Underpinning for Practice (AACN, 2006). This project utilizes current scientific research regarding the STOP-BANG questionnaire and recognizes its validation through multiple studies.
- **Essential II**: Organizational and Systems Leadership for Quality Improvement and Systems Thinking (AACN, 2006). The project goal was to create systems change within a hospital to increase the usage of the STOP-BANG questionnaire, which would lead to better patient outcomes.
- **Essential III**: Clinical Scholarship and Analytical Methods for Evidence-Based Practice (AACN, 2006). This essential was met through a synthesis of the literature. In addition,

analytical methods were used to recognize desirable data and eliminate undesirable literature.

- **Essential IV:** Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care (AACN, 2006). This essential was met by bringing about a practice change in CRNAs to increase usage of the STOP-BANG questionnaire. The evidence for this project resulted from using technology to research the effectiveness of the STOP-BANG questionnaire.
- **Essential V**: Health Care Policy for Advocacy in Health Care (AACN, 2006). The increased usage of the STOP-BANG questionnaire among anesthesia providers would improve patient outcomes. In addition, this project could lead to future research and the development of a policy regarding implementing the STOP-BANG questionnaire in preoperative assessments.

· **Essential VI:** Interprofessional Collaboration for Improving Patient and Population Health Outcomes (AACN, 2006). The project manager relied on effective communication with the anesthesia providers participating in the project, which led to successful project implementation and improved patient outcomes.

- **Essential VII**: Clinical Prevention and Population Health for Improving the Nation's Health. Patients with OSA are at greater risk of intraoperative and postoperative adverse effects. Recognizing patients at high risk for OSA prior to providing anesthesia can decrease anesthesia-associated risks.
- **Essential VIII:** Advanced Nursing Practice VIII. Advanced Nursing Practice (AACN, 2006). This essential was met through analysis of evidence, the synthesis of data, the

presentation of the synthesized data, and the assessment of the impact of the information on the anesthesia providers.

Chapter 7: Conclusion

Potential Project Impact on Health Outcomes Beyond Implementation Site

This QI project could be used as a nationwide preoperative assessment by anesthesia providers. Instituting this practice change in every preoperative evaluation nationwide could significantly decrease intraoperative adverse patient events every year.

Health Policy Implications of Project

OSA is known to cause complications in anesthesia (Randle, 2018; Seet et al., 2015; Vasu et al., 2012; Wolfe et al., 2016). A questionnaire should be implemented as part of a pre-anesthetic assessment to help anesthesia professionals gauge the patient's risk for OSA. The STOP-Bang questionnaire is a validated tool used in this project (Randle, 2018; Seet et al., 2015; Vasu et al., 2012; Wolfe et al., 2016). Utilizing a questionnaire is an easy, inexpensive way to mitigate the increased risk that anesthesia providers face when anesthetizing patients with OSA

Proposed Future Direction for Practice

This project has shown that a large population of patients are at moderate to high risk for OSA (Randle, 2018; Seet et al., 2015; Vasu et al., 2012; Wolfe et al., 2016). These patients present for surgical procedures every day. With the data collected, the results support the need for the completion of a STOP-BANG questionnaire for all patients presenting for surgical procedures and will improve patient outcomes (Randle, 2018; Seet et al., 2015; Vasu et al., 2012; Wolfe et al., 2016).

The knowledge obtained from this project can be of great value to the field of anesthesia. Many anesthetists could benefit from up-to-date education about the anesthetic implications of OSA and education on the increasing incidence of OSA.

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Appendices

Appendix A

	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	June 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022
DNP Project Approval													
Meeting with DNP advisor	Ongoing												
Literature Review													
CITI Training													
Gap Analysis													
Informed Consent Creation													
Organizational Assessment													
SWOT Analysis													
Force Field Analysis													
Project Team Finalized													
Develop Power point													
Epic Modification													
Communication with AMH													
USF IRB application/approval													
AMH IRB application/approval													
Tool/Data selection													
Power Point Presentation at AMH													
DNP Project implementation													
Data Collection													
Compile/interpret data													
Final DNP Presentation													

Appendix B

Data Collection Form

Anesthesia provider ID	Date of case	Type of anesthesia used (all that applies) 1)Regional 2)MAC 3)General 4)Spinal 5)TIVA	Patient diagnosis of sleep apnea • Yes • No	Use of STOP-BANG assessment tool • Yes • No	Documentation of the STOP-BANG assessment tool • Yes • No	Phase 2 discharge time of 25 minutes • Yes • No	Time from admission to PACU to discharge 1.5 hours • Yes • No

STOP-Bang questionnaire

Please answer the following questions by checking "yes" or "no" for each one.

	Yes	No
Snoring (Do you snore loudly?)	❑	❑
Tiredness (Do you often feel tired, fatigued, or sleepy during the daytime?)	❑	❑
Observed Apnea (Has anyone observed that you stop breathing, or choke or gasp during your sleep?)	❑	❑
High Blood **P**ressure (Do you have or are you being treated for high blood pressure?)	❑	❑
BMI (Is your body mass index more than 35 kg per m^2?)	❑	❑
Age (Are you older than 50 years?)	❑	❑
Neck Circumference (Is your neck circumference greater than 40 cm [15.75 inches]?)	❑	❑
Gender (Are you male?)	❑	❑

Score 1 point for each positive response.

Scoring interpretation: 0 to 2 = low risk, 3 or 4 = intermediate risk, ≥5 = high risk.

Source: University Health Network, Toronto, Ontario, Canada (www.stopbang.ca/osa/screening/php). Used with permission from Sauk Prairie Healthcare.

Appendix C

MEMORIAL HOSPITAL

To the University of Saint Francis Institutional Review Board:

August 31, 2021

Member of Adams Health Network

This letter is being written in support of University of Saint Francis NAP/DNP Meghan Haman Achu Doctor of Nursing Practice Project Scholarly Project titled STOP-BANG and Postoperative Outcomes. I understand that the aims of the DNP Scholarly Project are to:

Improve the usage and documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery among anesthesia providers at Adams Memorial Hospital.

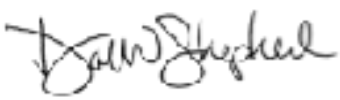
□

I understand and support the aims of the project. I am committed to provide opportunities for an educational presentation to anesthesia staff, allow distribution of surveys to staff, and allow access to electronic and paper medical records for collection of project compliance and outcomes data. This project does not involve variable treatment of human subjects and should not require an institutional review board (IRB).

Please feel free to contact me with any questions regarding my role with this scholarly project. Sincerely,

□

Improve the number of outpatient surgery patients meeting phase two and post-anesthesia care discharge time.



David W Shepherd DNP, CRNA
Maj, USA (Ret)

Staff CRNA, Student Preceptor
Clinical Instructor
260.820.1470
Primary email - dshep1964@me.com
Alternate email - david.shepherd@adamshealthnetwork.org

Appendix D

CITI PROGRAM

Completion Date 06-Feb-2021
Expiration Date 06-Feb-2024
Record ID 40835453

This is to certify that:

Meghan Haman Achu

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

GCP – Social and Behavioral Research Best Practices for Clinical Research
(Curriculum Group)
GCP – Social and Behavioral Research Best Practices for Clinical Research
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

University of Saint Francis

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wfbbcc8c4-f3c0-4649-8cbd-191ec6aeb47c-40835453

CITI PROGRAM

Completion Date 07-Feb-2021
Expiration Date 07-Feb-2024
Record ID 40835452

This is to certify that:

Meghan Haman Achu

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Responsible Conduct of Research for Engineers
(Curriculum Group)
Responsible Conduct of Research for Engineers
(Course Learner Group)
1 - RCR
(Stage)

Under requirements set by:

University of Saint Francis

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wa2b982cf-edc2-4a2d-a70e-358a98a9c6ed-40835452

CITI PROGRAM

Completion Date 07-Feb-2021
Expiration Date N/A
Record ID 40835451

This is to certify that:

Meghan Haman Achu

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

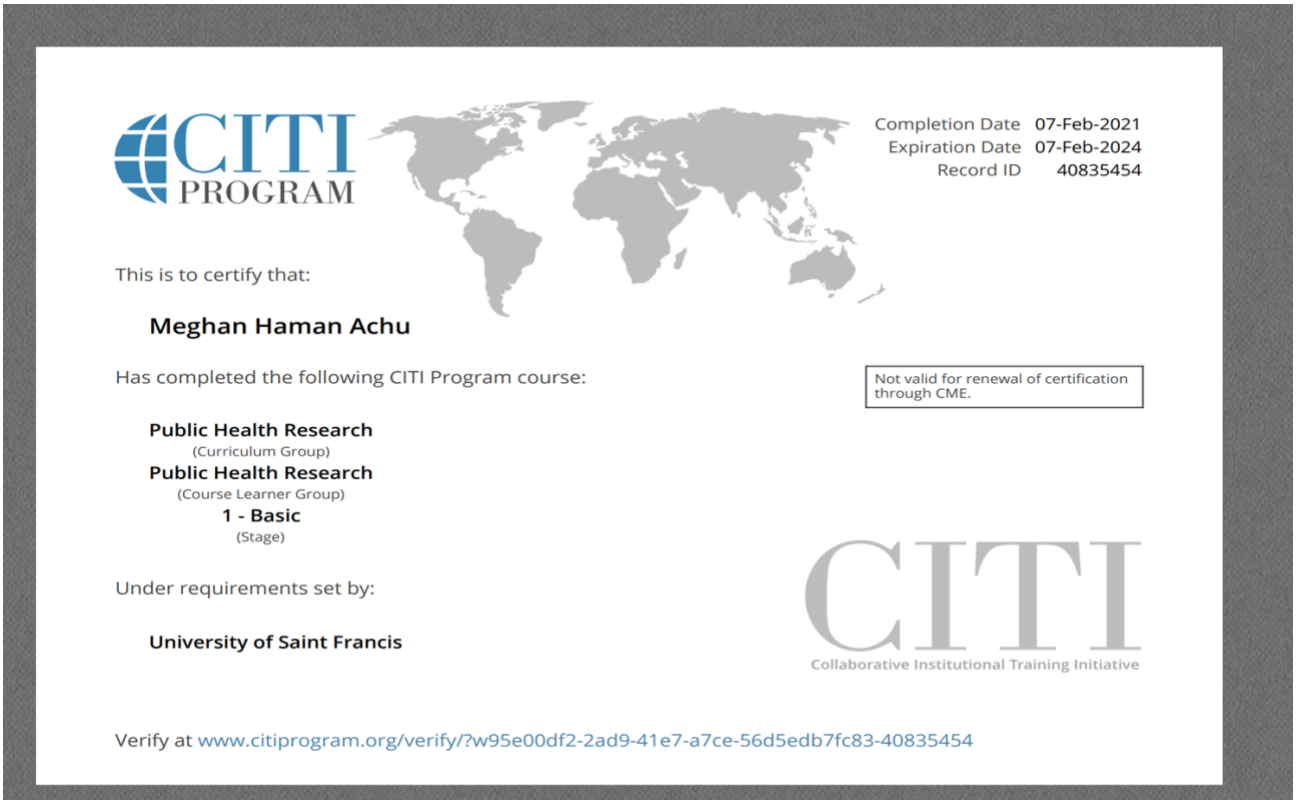
Information Privacy Security (IPS)
(Curriculum Group)
Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

University of Saint Francis

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wa6afa7c7-dcbe-40c7-8a0e-ecba414d0458-40835451



CITI PROGRAM

Completion Date 07-Feb-2021
Expiration Date 07-Feb-2024
Record ID 40835454

This is to certify that:

Meghan Haman Achu

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Public Health Research
(Curriculum Group)
Public Health Research
(Course Learner Group)
1 - Basic
(Stage)

Under requirements set by:

University of Saint Francis

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w95e00df2-2ad9-41e7-a7ce-56d5edb7fc83-40835454

CITI PROGRAM

Completion Date 09-Feb-2021
Expiration Date 09-Feb-2024
Record ID 40835450

This is to certify that:

Meghan Haman Achu

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Social & Behavioral Research - Basic/Refresher
(Curriculum Group)
Social & Behavioral Research
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

University of Saint Francis

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w97f511b1-ec0a-459b-8755-e7b05ea79529-40835450

Appendix E

STOP-BANG and Postoperative Outcomes

Importance of Documenting the STOP-BANG Assessment Tool in Patients Undergoing Outpatient Surgery

Introduction:

You are invited to participate in this Quality Improvement (QI) research project. My name is Meghan Haman Achu, a student registered nurse anesthetist in the Doctor of Nursing Practice Nurse Anesthesia Program at the University of Saint Francis Fort Wayne, Indiana. This DNP project will be overseen by Dr. Caitlin Krouse, DNP, FNP-BC, RN, a professor at the University of Saint Francis, Fort Wayne, Indiana.

This quality improvement project entails educating anesthesia providers regarding the importance of documenting a STOP-BANG assessment which can significantly improve intraoperative and postoperative patient outcomes. The project manager will provide supportive evidence that documentation of the STOP-BANG significantly improves postoperative patient outcomes.

Purpose of Research:

This project aims to improve the documentation of the STOP-BANG Questionnaire for preoperative assessment of patients undergoing outpatient surgery.

Procedures:

Anesthesia providers at Adams Memorial Hospital will be encouraged to participate in an educational session about the importance of the STOP-BANG questionnaire for preoperative assessment of patients at risk for obstructive sleep apnea and its potential anesthetic complications. Anesthesia providers would be required to complete a pre and post-test to determine if an educational presentation was sufficient to enhance provider knowledge on the benefits of documenting the stop-bang assessment in the EMR. A presentation on the importance of documenting the STOP-BANG assessment in the patient EMR will be conducted on completion of the pre-test. The duration of this project is 30 days.

Risk and Benefits of the Research:

The potential risk associated with this QI project will be a lack of time by the anesthesia provider to participate in the education session. This project will improve the completion of the STOP-BANG Questionnaire in the preoperative checklist as evidenced by documentation in the EMR.

Safeguards & Confidentiality:

Data collected from this project will be password protected, and participant identity will be anonymous. The project manager will collect data and enter it into the SPSS dataset for statistical analysis. The data will be password protected and only accessible to the project manager and project advisor.

Freedom to Withdraw:
Participant involvement in this project is not mandatory. Consent can be withdrawn at any time without repercussions. Participants can refuse to answer questions at any time.

Offer to Answer Inquiries:
Contact information for the QI project manager has been provided should participants have questions about the project. After the study, we would be glad to share the results with you and the facility. For the time being, if you have any questions, please contact me at:

Meghan Haman Achu
2715 Northgate Blvd.
Fort Wayne, IN 46835
651-210-0400
HamanM@cougars.sf.edu

At any time during the study, if you have any complaints about your treatment, please call or write:
IRB Chairperson University of Saint Francis
2701 Spring Street
Fort Wayne, Indiana 46808
(260) 399-7700
Administration email: irb@sf.edu

I have received an explanation of this study and agree to participate. I understand that my participation in this study is strictly voluntary.

Name _____ Date _____

This research project has been approved by the University of Saint Francis' Institutional Review Board for the Protection of Human Subjects for a one-year period.

** If your subjects are minors, you should obtain informed consent from the parents of the subjects and insert a second signature line for the minor subjects' assent.*

Appendix F

University of Saint Francis
Institutional Review Board
Human Subjects Review Committee/ACUC/IBC
Institutional Review Board Approval Form

Protocol Number: 16326855859
Reviewed by (underline one): HSRC ACUC IBC
Date Reviewed: Monday, October 25, 2021
Principal Investigator: Meghan Haman Achu
Faculty Advisor: Dr. Carla Mueller
Protocol Title: STOP-BANG and postoperataive outcomes
Study Site(s): University of Saint Francis, Main Campus

Type of Proposal:
☐Original research
☐ Replication or extension of previous research
☒Quality Improvement/Evidence-Based Practice Project

Items submitted for review:
☒CITI Certificate
☒Initial protocol
☒Abstract
☒Informed Consent Form (if applicable)
☒Approval letter from outside institution
☐Other – explain: Email request was made for waiver

Type of Review:
☒Full Review
☐Expedited Review
☐Exempt Review

Approval:
☒Approval granted on Monday, October 25, 2021 for a period of one year.
☐Conditional approval* granted on _____for a period of one year.
☐Not approved*
☐IRB approval is not required:
☐Other

*Comments:

The committee performing this review is duly constituted and operates in accordance and compliance with local and federal regulations and guidelines.

Michael P. Bechill, IRB Chair	Michael P. Bechill	2021.10.25
Printed Name (Chair or designee)	Signature	Date

Appendix G

Policy 4.15.1
Created June 2019

DNP Scholarly Project Proposal Initial Approval

TO: Caitlin Krouse, DNP, FNP-BC, RN
Assistant Professor and Graduate Nursing Program Director

FROM: Meghan Haman, BSN, RN, DNP-NAP Student

RE: DNP Project Proposal Review Council Endorsement

DATE: November 12, 2021

DNP Scholarly Project Title: STOP-BANG and Postoperative Outcomes

DNP Scholarly Project Review Council:

DNP Project Advisor Signature: Carla Mueller PhD, RN
Dr. Carla Mueller

DNP Project Proposal Review Council Member Signature: Susan Lown, DNP, RN, CNE
Dr. Susan Lown

DNP Project Proposal Review Council Member Signature: DNAP CRNA
Dr. Gregory Louck

Date of initial approval to implement: November 12, 2021

1 - Student File
3 - Attached to Proposal

6-2019. Rev. 11-2021

Tables

Figures

Figure 1.1