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Reducing the Risk of Central Line Associated Blood Stream Infection with Chlorhexidine Gluconate Education

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Reducing the Risk of Central Line Associated Blood Stream Infection with Chlorhexidine

Gluconate Education

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Nursing 653-02: Internship

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December 9, 2022

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Reducing the Risk of Central Line Associated Blood Stream Infection with Chlorhexidine Gluconate Education

Abstract

Problem: A nosocomial central line-associated bloodstream infection is a preventable infection that is costly and potentially fatal. In order to combat bloodstream infections chlorhexidine gluconate wipes have been used as antiseptic. Medical surgical units do not have accessible CHG for bathing purposes. In addition, the staff lacks knowledge of how to use CHG wipes. The current standard bathing practice on this unit consists of using soap and water or disposable washcloths spontaneously without a predetermined time. The aim of this quality improvement project is to educate the registered nurses (RNs) and certified nurse assistants (CNAs) on the benefits of daily CHG bathing and the method in which it is used.

Context: The quality improvement project takes place in an adult medical-surgical unit in a hospital in the San Francisco Bay Area including 274 beds. This microsystem has seven nurses working in each wing with a total of 14 on the unit. The target population is adults in a medical-surgical unit and families or caregivers.

Interventions: In order to provide staff education on the process and benefits of daily CHG bathing to reduce the risk of developing CLABSI, educational posters were used to convey the information.

Measures: In order to measure the existing knowledge of the staff, paper-based surveys were distributed in the medical-surgical unit. The staff was also given the option of an online survey via a QR code. A total of 16 nurses and one certified nursing assistant completed the paper survey. The questionnaire included a total of four multiple-choice questions and one open-ended question.

Results: The expected outcome of this quality improvement project is an increase in understanding surrounding the process of CHG bathing. Future recommendations include reinforcing education.

Conclusions: Additional educational programs should be implemented for staff to improve the use of CHG bathing in the medical-surgical unit and reduce the risk of CLABSI.

Keywords: chlorhexidine gluconate, clabsi, central line, medical-surgical, infectious disease, prevention, risk reduction, nursing education, chg bathing, quality improvement

Introduction

Hospital-acquired infections (HAI) are a significant issue in hospitals because they not only cost billions of dollars in the United States healthcare system but they cause thousands of preventable deaths each year (CDC, 2010). HAIs are nosocomial infections that develop during hospitalization. Some of these infections include Clostridium difficile infection, Methicillin-resistant Staphylococcus Aureus (MRSA), surgical site infections, catheter-associated urinary tract infections, surgical site infections, hospital-acquired pneumonia, and central line-associated bloodstream infections. Risk factors for developing HAI include immunosuppression, older age, length of stay in the hospital, multiple underlying comorbidities, frequent visits to healthcare facilities, mechanical ventilatory support, recent invasive procedures, indwelling devices, and stay in an intensive care unit (ICU) (Monegro, 2022). Patients who develop HAIs require a longer hospital stay and additional treatment.

Central line-associated bloodstream infections (CLABSIs) lead to approximately 28,000 deaths and about \$2.3 billion in the U.S. healthcare system each year (Reynolds et al, 2021) . CLABSIs occur when bacteria enter a patient's bloodstream. Central lines or central venous catheters are tubes placed by physicians into a large vein in the neck, chest, or groin when a patient may require long-term treatment. When a patient develops CLABSI they will have a fever and swelling around the central line. The patient may also report pain and discharge. The Centers for Disease Control and Prevention (CDC) developed a guideline for the prevention of intravascular catheter-associated bloodstream infections. This tool explains proper insertion practices as well as central line maintenance. Among the practices include performing hand hygiene, adhering to an aseptic technique, changing dressings that are wet or soiled, and bathing ICU patients over 2 months with chlorhexidine on a daily basis. It is important for the nursing

staff and certified nursing assistants to be equipped with the best practices to avoid CLABSIs from occurring.

Chlorhexidine gluconate (CHG) bathing is a preventative measure that is often used in the intensive care unit (ICU) for bloodstream infections. CHG is an antiseptic that is safe to use on the skin and should be used daily in lieu of soap and water. The CDC and Prevention and the Agency for Healthcare Research and Quality (AHRQ) have strongly recommended its use in the intensive care and bone marrow transplant settings to reduce CLABSIs (Reynolds et al., 2021). Although it has been shown to prevent CLABSI, the adoption of this intervention is not widely used among the different hospital departments. Thus, the staff on other floors who do not have access to CHG wipes may not know its benefits or the proper procedure.

Problem description

The quality improvement project takes place in an adult medical-surgical unit in a hospital in the San Francisco Bay Area. This microsystem has seven nurses working in each wing with a total of 14 on the unit. This hospital has 11 floors and 274 beds. It is part of a macrosystem which is one of the largest not-for-profit medical centers in California. This hospital system offers acute, post-acute, and outpatient hospital care, family support, and wellness treatments. RNs and CNAs on the medical surgical unit have indicated that they are aware of the benefits of using CHG and the prevention of CLABSI. The unit, however, does not have accessible CHG for bathing purposes. In addition, the staff lacks knowledge of how to use CHG wipes. The current bathing practice involves the use of disposable washcloths or soap and water at random times. The inconsistency in bathing can increase the risk of infection. The aim of this quality improvement project is to educate the registered nurses (RNs) and certified nurse assistants (CNAs) on the benefits of daily CHG bathing and the method in which it is used.

Available Knowledge

PICOT Question

The PICOT question presented in Appendix A, provided the framework for the investigation of daily CHG bathing for patients with a central line. The question asks, for the maintenance of the central line in Hospital A Medical Surgical unit, how does raising awareness among nurses and certified nurse assistants (CNAs) on using Chlorhexidine Gluconate (CHG) bathing daily compared to the current situation with a lack of understanding to reduce the rate of CLABSI over the course of 1 month?

Search Strategy

In researching this topic, several databases were used to build a comprehensive literature review. The databases include CINAHL, PubMed, and Google Scholar. The literature was limited by allowing articles published from 2019 to the present. All of the articles are peer-reviewed and are written in English. The articles support the use of chlorhexidine gluconate bathing to reduce the risk of central line-associated bloodstream infection.

Literature Review

The research conducted by Martinez et al. (2020), consisted of a retrospective cohort study in the pediatric surgical intensive care unit. This study was published in the Wiley Online Library. Their aim was to evaluate the impact of a 4% chlorhexidine bathing on the occurrence of central-line-associated bloodstream infection and to identify risk factors for CLABSI. The study included 775 hospitalized patients with central venous catheters (CVCs). This study showed a significant reduction in the incidence of CLABSI after the introduction of a targeted CHG4% bathing protocol. The researchers found that performing a CHG4% skin bathing procedure for patients with CVCs without changing the other CLABSI prevention

procedures significantly reduced the incidence rate of CLABSI. A limitation mentioned is that they did not do a bacteria culture test to know which bacteria are responsible for CLABSIs prior to the implementation which would confirm the effectiveness of the CHG bathing.

Another study conducted by Reynolds et al. (2021) involved the implementation of CHG bathing to improve nursing practices for the prevention of CLABSIs. This article was published in *Implementation Science*. Their goal for this study was to assess the effect of an implementation program on nursing staff's compliance with the CHG bathing process and electronic health record (EHR) documentation in critically ill patients. Additionally, they wanted to examine the effect of unit characteristics and cultural context, the intervention effect on nursing staff's knowledge and perceptions of CHG bathing, and the intervention effect on CLABSI rates. The researchers used a stepped-wedged cluster-randomized design. The implementation strategies consisted of educational outreach visits, audits, and feedback. Among the 14 clinical units that participated in the study were eight in a university setting and six in a community hospital setting. The research team found that intervention significantly improved CHG bathing compliance and the nursing staff's knowledge and perceptions of CHG bathing. They also found that the documentation for CHG bathing and CLABSI rates did not significantly improve but they saw a clinically significant 27.8% decrease in CLABSI rates. A few limitations are mentioned in the article. First, there was a low response rate for the CHG bathing knowledge and perceptions survey. Second, the documentation of CHG bathing in the EHR may not always be accurate. For future studies, this research states that using educational outreach visits, audits, and feedback implementation strategies can improve the adoption of evidence-based CHG bathing practices.

A study conducted by Knobloch et al. (2021) examines the implementation of CHG bathing in routine practice to reduce the risk of healthcare-associated infections. This article was published in the American Journal of Infection Control. They implemented this framework in non-ICU units in 4 Veterans Health Administration settings. The aim of this study was to assess the process of moving CHG bathing into routine practice using a human factors framework. The research team conducted focus groups and interviews to capture barriers and facilitators to daily CHG bathing. They found several barriers to daily CHG bathing including time, concern about increasing antibiotic resistance, workflow, and product concerns. They also found shortfalls in patient education, hand hygiene, and the use of CHG on tubes and drains. Limitations discussed in this study include that there may have been a bias in the interviews and focus groups due to convenience sampling. There may have also been a bias when the RNs and CNAs were observed during the bathing process. Finally, they concluded that a unit culture promoting shared responsibility is important for compliance with daily CHG bathing. Also, staff education is necessary for a successful implementation.

According to Pallotto et al. (2019), daily bathing with 4% CHG can significantly reduce HAI incidence in intensive care settings. This study consisted of a randomized controlled trial where all patients admitted to the ICU and to the post-operative cardiosurgical ICU were enrolled and randomized for the intervention arm (daily bathing with 4% CHG) or to the control (daily bathing with standard soap). They wanted to investigate whether daily bathing with a soap-like solution of 4% CHG followed by water rinsing would decrease the incidence of hospital-acquired infections (HAI) in intensive care settings. There were a total of 449 individuals were enrolled. Of those 226 received the intervention and 223 were in the control group. They found that the incidence of all bloodstream infections including CLABSI, was

significantly reduced in the intervention group and no differences were observed in the mortality between the two groups. The first limitation considered in this study was that the trial was single-blind meaning they were not able to blind the staff performing the bathing, the patients, and the ICU personnel. Also, they were not able to assess bathing adherence and CHG resistance was not monitored.

A study by Huang et al. (2019), explores the use of CHG in routine bathing to prevent bloodstream infections in medical and surgical units using the ABATE (active bathing elimination infection) trial. This study was a two-arm randomized trial involving 53 hospitals in the Hospital Corporation of American Healthcare system. They took baseline data for 1 year and implemented the intervention over a period of 21 months. During the baseline, there were 189,081 patients and 339,902 patients in the intervention period. Of the intervention group, 156,889 patients were in the routine care group and 183,013 patients were in the CHG decolonization. After the data analysis, they found that decolonization with universal CHG bathing did not reduce multidrug-resistant organisms or all-pathogen bloodstream infections in all non-critical care patients. However, they saw a 37% reduction in MRSA and VRE and 31% reduction in bloodstream infection in non-ICU patients with medical devices.

A prospective observational study conducted by Johnson et al. (2019) wanted to assess the impact of CHG bathing on the bacteria found on the skin in neonates. They measured the bacterial growth on the arm and groin skin in 40 CHG-exposed and non-exposed neonates admitted to the NICU. Exposed neonates received 2% CHG baths to prevent CLABSI or *Staphylococcus aureus* decolonization. Of the 40 participants in the study, 18 were exposed to CHG. They found that CHG was effective in decreasing skin bacteria but returned to baseline

after 72 hours. A limitation of this study was that the sample size was not big enough and it was not a randomized design.

The evidence presented provides support for the implementation of daily CHG bathing for the reduction of CLABSI. Using evidence-based data is crucial to provide effective care. This approach to reducing the risk of developing bloodstream infection has been used in a variety of settings including the adult ICU, non-ICU, and neonatal ICU. Enhancing staff education is also discussed as playing a crucial part in CHG bathing compliance.

Rationale

This quality improvement will use the three-step model developed by Kurt Lewin. Lewin created the change theory which is known as unfreezing-change-refreeze, to examine factors that influence a situation. This approach is commonly used as an approach for organizational change. According to Lewin, “behavior is the dynamic balance of forces working in opposing directions”. He notes that there are two types of forces, driving forces and restraining forces. Driving forces push in the direction of change while restraining forces hinder change. The first stage in this change theory is unfreezing. During this stage, the group or individual should let go of old patterns and overcome resistance. The second part of this stage is change. In this stage, the modifications are implemented. Lewin believes there are three actions that help this movement. First is encouraging others to see the problem from a new perspective. Second is working with others to find relevant information that can help the process. The third is connecting with stakeholders who support the change. This stage encourages community building and working as a team. The third part of the change theory is refreezing. This stage involves establishing the change as a new habit. The change is implemented as the new standard (Shirey, 2013).

In order to realize this change, Lewin's theory was used as a framework. During the first stage, the team communicated with the staff. This involved the unit assessment and the distribution of the surveys. Numerous staff members felt uncomfortable filling out the surveys and were hesitant to fill out the questionnaire. The next stages are the change and refreezing stage. In this stage, everyone involved in this process adjusts their thoughts, feelings, and behaviors. In the refreezing stage, the change becomes a habit, and productivity would increase.

Specific Project Aim

The aim of this evidence-based, quality improvement change project is to implement the use of daily CHG wipes for patients with a central line. In order to do so, the plan is to provide education to nurses and nursing assistants on the benefits of daily CHG bathing using an educational poster.

Methods

Microsystem Assessment

The approach of this quality improvement project was initiated with unit assessment. The unit culture was evaluated by talking directly with staff and asking if they used or knew about chlorhexidine gluconate wipes. The staff mentioned it was only used in the intensive care unit. Additionally, the supply room did not carry CHG wipes. In order to measure the existing knowledge of the staff, paper-based surveys as exhibited in Appendix G were distributed in the medical-surgical unit. The option of an online survey was also offered via a QR code. A total of 16 nurses and one certified nursing assistant completed the paper survey. The questionnaire included a total of four multiple-choice questions and one open-ended question. The surveys were an important part of the process because they provided a method to collect data. This method conveys a more comprehensive snapshot of the staff knowledge and perceived barriers.

Purpose

The purpose of this improvement project was to reduce the risk of a central line-associated bloodstream infection rate for adults in the medical-surgical unit. Providing CHG bathing instead of standard bathing procedures can be beneficial for this population and reduce the length of hospital stay.

Professionals

The professionals working on this unit include the RNs, CNAs, charge nurses, nurse managers, physicians, and surgical residents. In order to have this plan approved several stakeholders were contacted outside of the microsystem including the nurse educator, the nurse educator assistant, and the nursing director of all units. This unit consisted of a west and east wing. Each wing has a total of 7 nurses for a total of 14 nurses and 3 CNAs.

Patients

The patients in this microsystem were adults in a medical-surgical unit. Patients' families are also included in the population. They can receive education on bathing techniques and can be with the patient at the time of the bathing or patient education.

Process

The process for the daily CHG bathing initiates with patient assessment. If a patient has risk factors for CLABSI RNs and CNAs should have the knowledge and equipment available at their disposal. Risk factors for acquiring a bloodstream infection include compromised immunity, prolonged hospital stay, excessive device manipulation, poor catheter hub care, and a number of lumens. Once a patient is identified to be at risk the RN or CNA will gather the supplies. The patient's clothes and any medical attachments will be removed. A sponge bath with

soap and water to clean the patient thoroughly can be done first and once the skin is dry, the CHG bath can begin. After the CHG bath, the patient should wait to be fully dry.

Patterns

The patterns of bathing differ depending on each microsystem. CHG bathing should be conducted daily as it has been shown to keep bacteria off the skin for up to 24 hours (AHRQ, 2022). The current practice is to give patients baths using soap and water or disposable washcloths without a predetermined time. This practice does not reduce the risk of bloodstream infections in patients with central lines. Promoting personal hygiene and maintaining unsoiled skin is important to prevent infection. With staffing shortages, assisting patients in bathing may not be a priority. Thus, emphasizing the impact of CHG bathing can yield positive results in decreasing the risk of infection.

Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

In order to further investigate the microsystem, a SWOT analysis (see Appendix B) was created. This analysis examines the strengths, weaknesses, opportunities, and threats that may be encountered with the implementation of the quality improvement project. Strengths for this implementation include the existing data supporting the efficacy of daily bathing. Also, staff already know about the use of CHG for those in the ICU. Weaknesses in the microsystem include lack of management support, staffing shortage, patients' refusal of CHG bathing, resistance to change, and lack of knowledge among staff on how to do daily CHG baths. As for opportunities, staff can be educated on the benefits of CHG bathing, improve patient satisfaction and reduce the risk of CLABSIs. Finally, regarding threats, it may be more costly to implement daily CHG bathing, it may lead to dissatisfaction among staff and staff may be uncertain about the implementation of CHG bathing.

Root Cause Analysis

Another tool used to investigate this microsystem was the fishbone diagram which is done to identify the root cause analysis (see Appendix C). The diagram focuses on four categories including people, equipment, process, and environment. In this microsystem, the people involved in this quality improvement project are the staff. There are several reasons why the staff may have barriers to doing a CHG bath leading to a CLABSI such as staffing shortage, lack of knowledge, and burnout. In the process, using a regular wipe instead of a CHG wipe, lack of time and lack of training could be a hindrance to the daily CHG bathing. Since this is not implemented in the medical-surgical unit, there is also a lack of CHG wipes which is part of the equipment necessary to carry out the bathing process. In the environment, there are no guidelines about the use of CHG in the unit and there is a lack of encouragement from management to incorporate CHG baths. For example, the process of implementing the intervention presented various obstacles. Due to staffing shortage, it was difficult to contact key stakeholders. This led to a delay in the process of conducting the surveys and posting the educational flyers.

Intervention

Upon conducting the surveys, and following the PDSA cycle, the results revealed a need for staff education on the process and benefits of daily CHG bathing to reduce the risk of developing CLABSI. The staff training consisted of using educational posters conveying information regarding CHG bathing as demonstrated in Appendix F. This poster was developed in collaboration with key stakeholders including the nurse educators and nurse managers. A total of four posters were placed on the nurses' stations.

Measures

This quality improvement project followed the Plan, Do, Study, Act (PDSA) model (see Appendix D) while using Lewin's Theory of Change to identify measures reflecting the change. The first stage of this process was to plan, research and collaborate with stakeholders. This is crucial because staff may be hesitant to change. This stage consisted of conducting a literature review and establishing the goal for this project. The second phase is "Do" which consists of implementing the CHG bathing educational poster. During this stage, surveys were conducted to assess staff knowledge of CHG bathing and the use of CHG wipes. A total of seventeen surveys were conducted. Sixteen of those were registered nurses and one survey was completed by a CNA. After this, the team goes into the "Study" phase which examines the results and analyzes the data. In this stage, the team should compare the data collected to the predictions as well as summarize the results. The last phase is "Act" which is when the team discusses the next steps. The process can be repeated with modifications, abandoned, or implemented into standard practice. The timeline for this implementation project took place over a course of fifteen weeks. A GANTT chart was used to exhibit the timeline of the events that occurred throughout the project (see Appendix E).

Ethical Considerations

The America Nurses Association (ANA) is an organization that fosters high-standard nursing practice. They created the Code of Ethics (COE) which is used as a guideline for ethical analysis in various scenarios. The ANA COE has nine provisions focusing on the nursing practice at different levels. Provision 4.1 states that "in every role, nurses have vested authority, and are accountable and responsible for the quality of their practice" (ANA, 2015, pg. 15). High-quality care is prioritizing individualized care by using a safe and effective approach such

as the use of CHG bathing. This quality improvement project does not require approval from the Institutional Review Board (IRB) (see Appendix H). The data collected was anonymous. There was no funding received for this project.

Results

The expected outcome of this quality improvement project is an increase in understanding surrounding the process of CHG bathing. In the process of being rolled out, the first step in this process was to educate the RNs and CNAs. A predicted outcome for this improvement project would be an improvement in the perception of CHG baths with the implementation of the educational poster as well as literature review data made available and leadership support. The results of the surveys as displayed in Appendix I indicate there is a lack of awareness of CHG baths. Nine out of 17 of the staff members who took the survey believed CHG bathing should be done twice a week, twice a day, or did not know. Encouragement from management and reinforcing education is necessary to continue with the implementation of CHG bathing which can reduce the risk of bloodstream infections.

Discussion

Nursing Relevance

Enforcing the use of chlorhexidine gluconate wipes for daily bathing can have positive effects on CLABSI rates. While it is widely used in preoperative care and intensive care units, it has shown to be beneficial in medical-surgical units as well. As patient advocates, nurses should be aware of using best practices for each patient. Providing education can lead to a reduce the risk of CLABSI which can lead to job satisfaction among nurses and certified nursing assistants. Reducing the risk of CLABSI can also reduce the length of hospital stay which will also improve patient satisfaction scores.

Limitations

While the implementation of the chlorhexidine gluconate bathing educational poster was achieved, there were several limitations encountered. Initially, post-surveys were going to provide an additional source of data measurement. However, with shift changes, it would be difficult to ask the same staff members to fill out the survey. This would have led to invalid results. Additionally, due to inadequate staffing, it was difficult to communicate with key stakeholders such as nurse educators and nurse managers. Also, many nurses and certified nursing assistants were occupied and could not fill out the survey.

Conclusion

For future recommendations, implementing a comprehensive educational program with pre and post-surveys can provide better insight. Focus groups or interviews such as those conducted by Knoblock et al. (2021) can facilitate more conversations to understand the staff's point of view and understand how management can support them. Champion nurses can also be included in the unit as additional support for other RNs and CNAs on the unit who do not feel confident in performing a CHG bath.

Educating staff on the use of CHG is crucial for the implementation of the practice in the unit. While conducting paper-based surveys demonstrated current nursing knowledge, further investigation is needed to understand barriers to CHG bathing. Ultimately the goal is to reduce the risk of central line-associated bloodstream infections in patients in the medical-surgical unit.

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Appendices

Appendix A: PICOT Question

PICOT Question: For the maintenance of the central line for adults in Hospital A Medical Surgical unit (P), how does raising awareness among nurses and certified nurse assistants (CNAs) on using Chlorhexidine Gluconate (CHG) bathing daily (I) compared to the current situation with a lack of understanding (C) to reduce the rate of CLABSI (O) over the course of 1 month (T)?

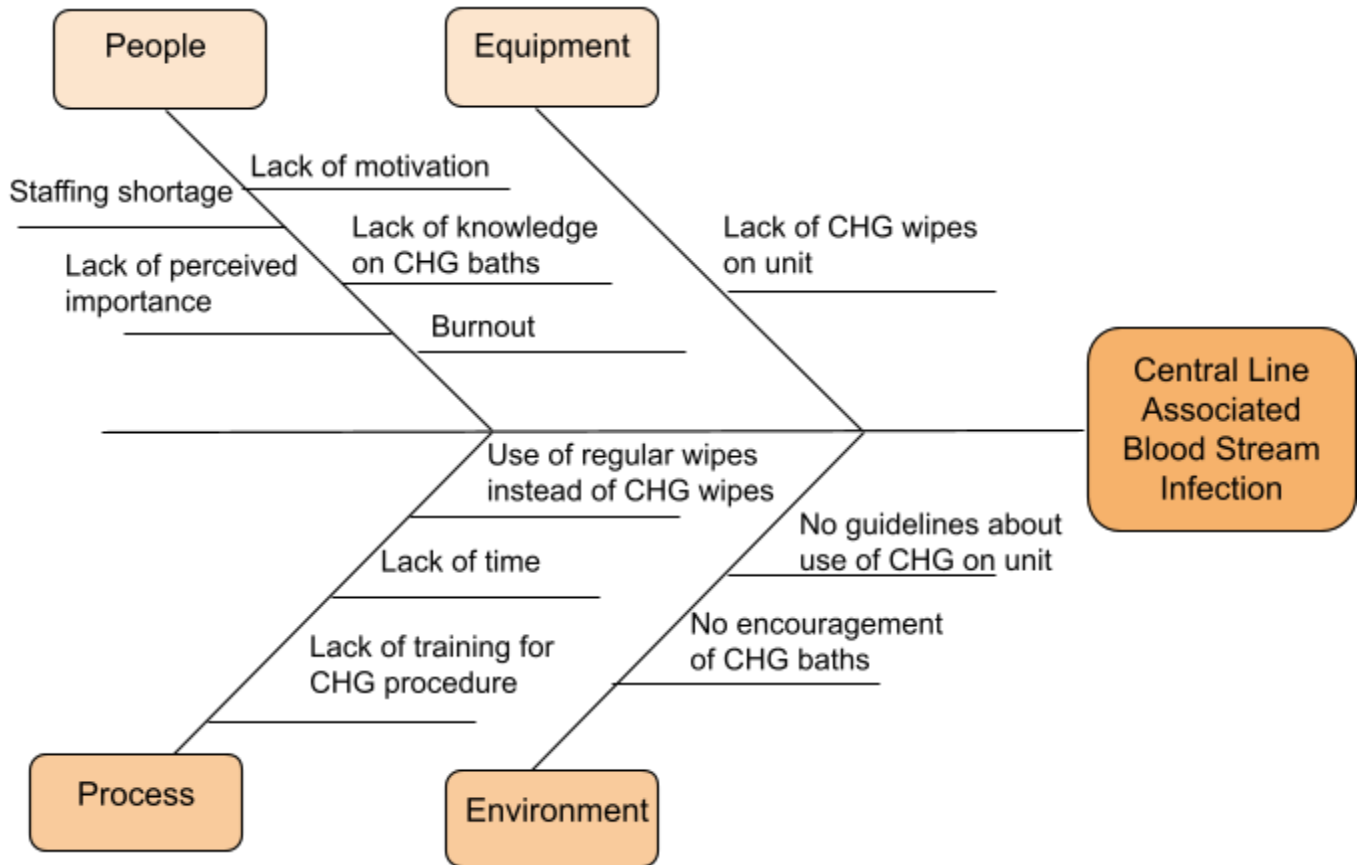
P	Patient, Population, Problem	Adults with a central line in Hospital A Medical Surgical unit
I	Intervention, Prognostic Factors or Exposure	Raising awareness among nurses and certified nurse assistants (CNAs) on using Chlorhexidine Gluconate (CHG) bathing daily
C	Comparison to Pre-Intervention	Current situation with a lack of understanding
O	Outcome	Reduce the rate of CLABSI
T	Time	Over the course of 1-month

Appendix B: SWOT Analysis

The following SWOT analysis indicates the strengths, weaknesses, opportunities, and threats in the microsystem.

Strengths	<ul style="list-style-type: none"> - Existing data supporting the efficacy of daily bathing - Existing knowledge of staff about the use of CHG for those in the ICU
Weaknesses	<ul style="list-style-type: none"> - Lack of management support - Staffing shortage - Patients' refusal of CHG bathing - Resistance to change - Lack of knowledge among staff on how to do daily CHG baths
Opportunities	<ul style="list-style-type: none"> - Staff can be educated on the benefits of CHG bathing - Improvement in patient satisfaction - Reduce the risk of CLABSIs.
Threats	<ul style="list-style-type: none"> - It may be more costly to implement daily CHG bathing - It may lead to dissatisfaction among staff - Staff may be uncertain about the implementation of CHG bathing.

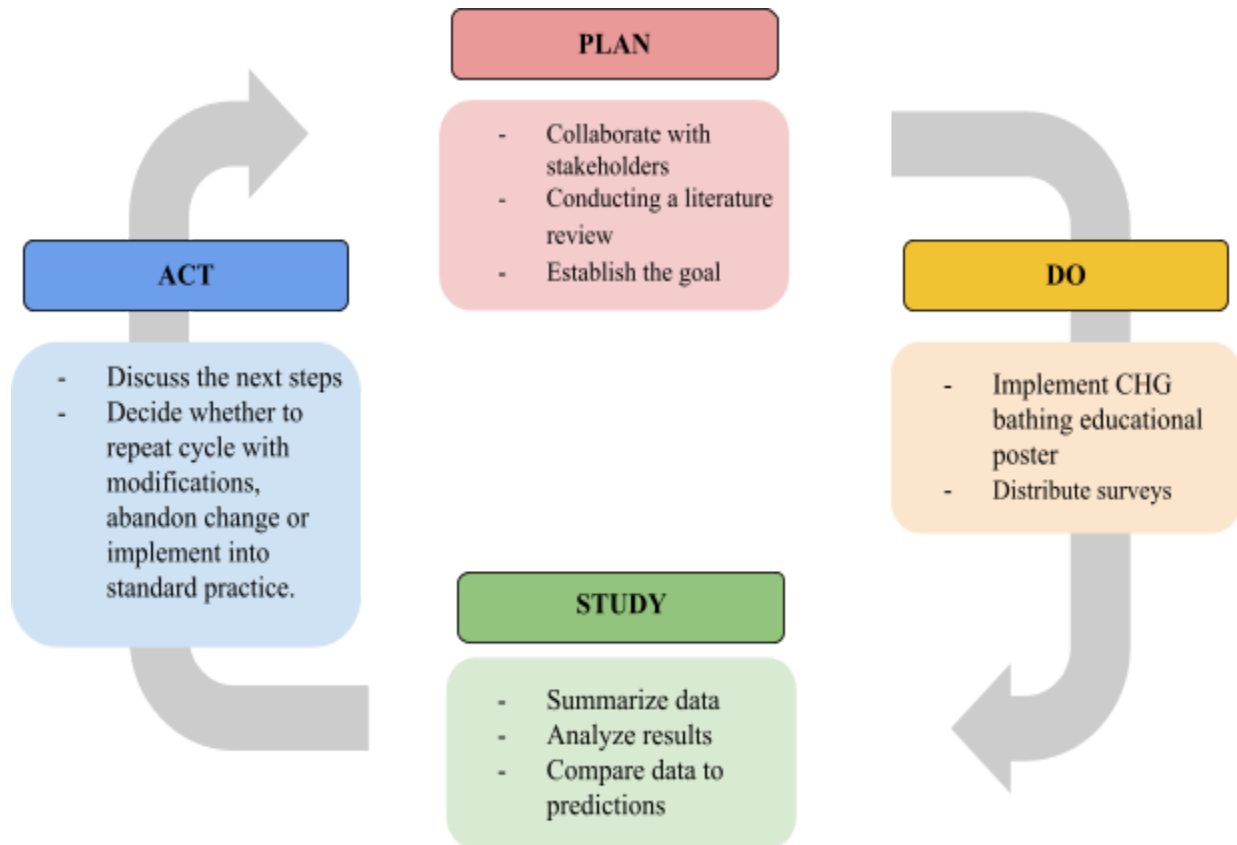
Appendix C: Root Cause Analysis Fishbone Diagram



Appendix D: Gantt Chart

	Aug		Sep				Oct				Nov					Dec	
	8/23	8/30	9/6	9/13	9/20	9/27	10/4	10/11	10/18	10/25	11/1	11/8	11/15	11/22	11/29	12/6	12/13
Unit Assessment																	
Create PICOT																	
Literary Review																	
Conduct Survey																	
Stakeholder Approval																	
Intervention																	
Data Analysis																	
Submit Summary of Findings																	

Appendix E: PDSA Cycle



Appendix F: Educational Poster**CHLORHEXIDINE GLUCONATE BATHING CAN
REDUCE THE RISK OF CLABSI**

- 01** Chlorhexidine gluconate (CHG) bathing daily can **significantly decrease** central line-associated bloodstream infection (CLABSI) compared to the current standard bathing wipe.
- 02** CHG bathing should be done at least **daily** for patients with a central line.
- 03** **Where and how to apply CHG wipes?**
Daily body baths can be used on **all areas below the chin** including **well-healed incisions**.

After the body bath, clean central lines within **6 inches** from the catheter's point of entry.
Safe to wipe over non-permeable dressings.

- 04** **Where should CHG baths not be used on the body?**
Open sores, mucous membranes, or inside of body orifices
- 05** A common barrier to applying CHG bathing is an allergic reaction. Skin tests and povidone-iodine is a suitable alternative.



Appendix G: Survey for Registered Nurses and Certified Nursing Assistants**Survey questions:**

1. Did you know chlorhexidine gluconate (CHG) bathing can decrease central line-associated bloodstream infection (CLABSI) compared to the current standard bathing wipe in Med-Surg unit?

Yes No

2. How often do you think the nurses should use chlorhexidine gluconate (CHG) bathing?

Twice a week daily twice a day

3. Where can CHG wipes be applied?

All areas below the chin

Whole body

Open cores, mucous membranes, or inside of body orifices

6 inches from the catheter's point of entry

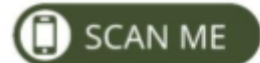
Well healed incisions

4. Any barrier to apply CHG bathing?



UNIVERSITY OF
SAN FRANCISCO

ME-MSN Quality Improvement Project



Appendix H: IRB Non-Research Determination Form

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST * STUDENT

NAME: Scarlett Ocon

DATE: 12/9/2022

SUPERVISING FACULTY: Scout E. Hebinck, MSN, RNC-OB

Instructions: Answer YES or NO to each of the following statements:

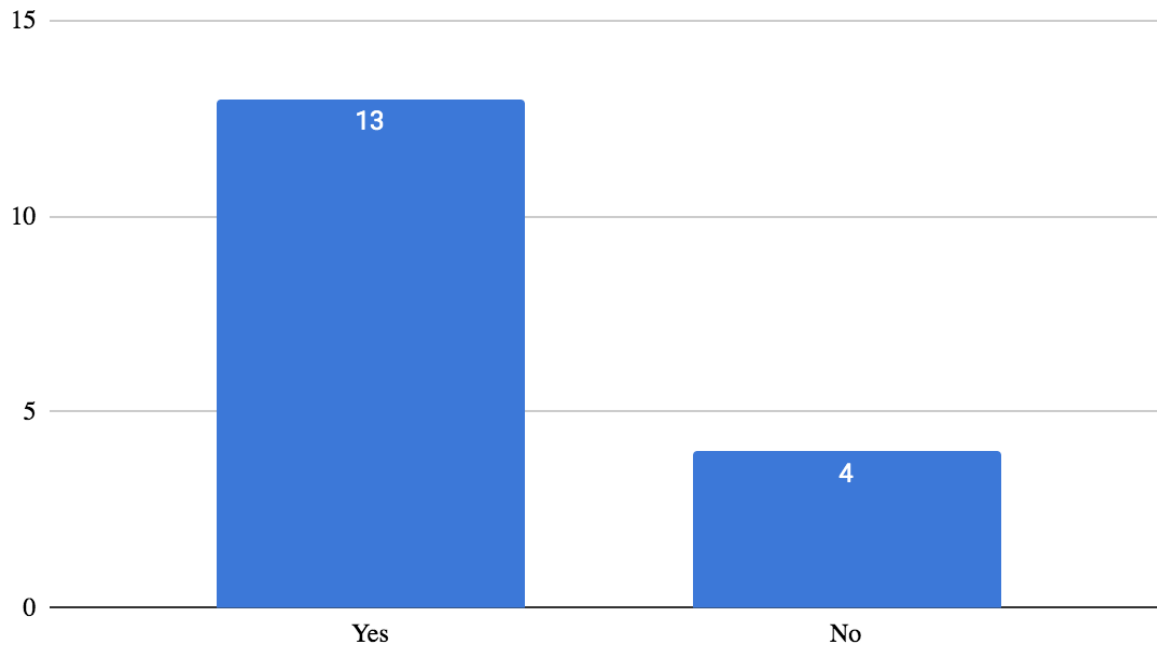
Project Title: Reduce the Risk of Central Line Associated Blood-Stream Infection with Daily Chlorhexidine Gluconate Staff Education	Y E S	N O
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care . ALL participants will receive standard of care.	X	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and agency oversight committee are comfortable with the following statement in your methods section.	X	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. IRB review is not required, except at Stanford Hospital. Keep a copy of this checklist in your files. If the answer to **ANY** of these questions is **NO**, you must submit for IRB approval.

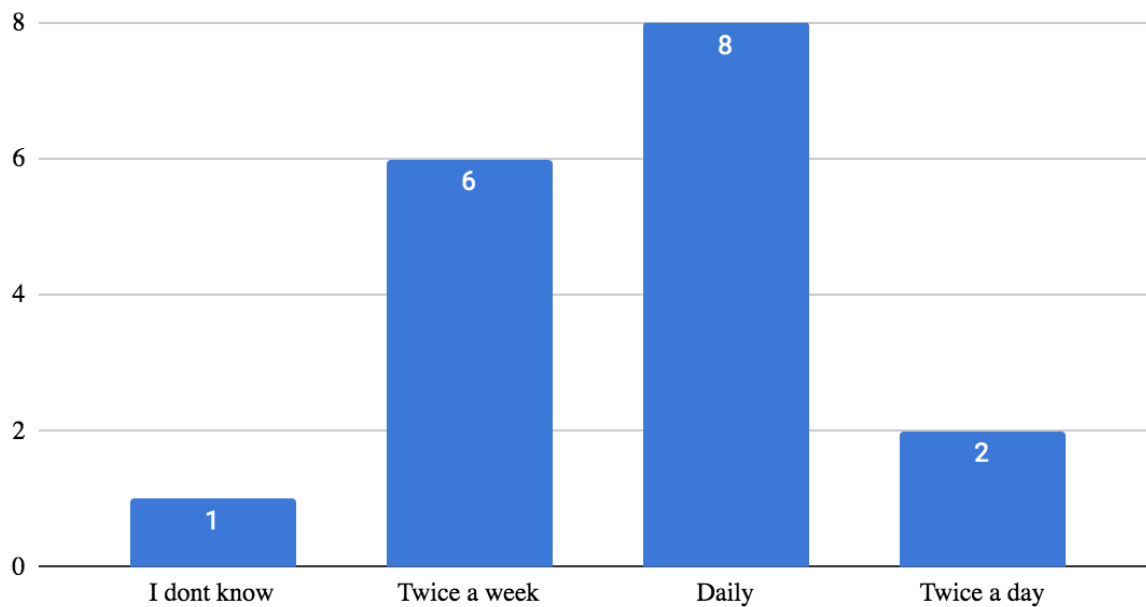
*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

Appendix I: Survey Results

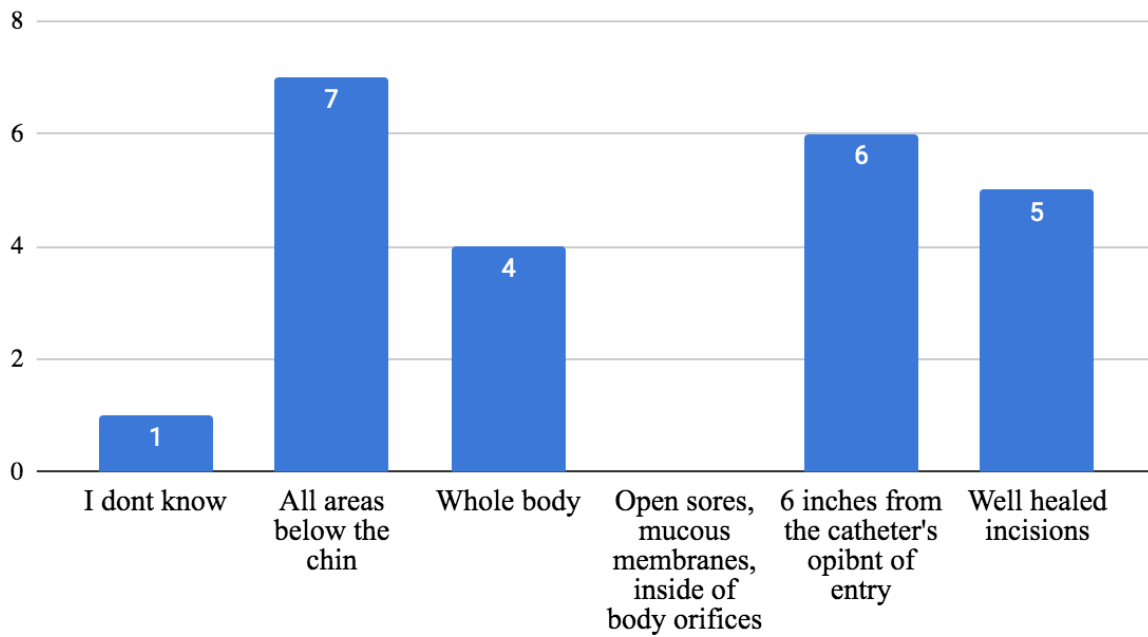
1. Do you know CHG bathing can reduce CLABSI?



2. How often do you think the nurses should use chlorhexidine gluconate (CHG) bathing?



3. Where can CHG wipes be applied?



4. Any barrier to apply CHG bathing?

