Increasing Chlorhexidine (CHG) Daily Bathing Compliance

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Increasing Chlorhexidine (CHG) Daily Bathing Compliance

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Clinical Leadership Theme

This practice improvement project looks at our ICU microsystem and focuses on Clinical Outcomes Management. The CNL role function is Outcomes manager and educator. As a CNL, I will be using data to change practice on our unit, and improve patient quality and outcomes. Working with my staff, I will be assessing and improving chlorhexidine (CHG) daily bathing compliance in our units to decrease our unit’s CLABSI rates and maintain a zero CAUTI rate.

Statement of the Problem

CHG daily bathing practices are an important way of decreasing central line associated bloodstream infections (CLABSIs) and catheter associated urinary tract infections (CAUTIs). Evidence has shown that daily CHG baths for acutely ill patients has effectively reduced the rates of CLABSI and CAUTIs. Hospital acquired infections pose detrimental morbidity and mortality rates in the hospital setting, and place huge financial burdens for many institutions. On the unit observed for this project, poor CHG compliance contribute to a higher CLABSI rate compared to the NDNQI average for academic teaching hospitals. The purpose of the project is to address the poor compliance of CHG daily bathing. Exploring and addressing the barriers of CHG daily bathing will increase compliance and decrease CLABSI infection rates as well as maintain a zero CAUTI infection rate.

Project Overview

To identify the needs and barriers to daily CHG bathing, a root-cause analysis was performed (Appendix A). Questionnaires to staff nurses and patient care technicians (PCTs), data from the microsystem assessment, communication assessment, and patient/family interviews were conducted to explore the reasons for poor CHG compliance in our ICU. According to the collected data, communication between staff, patient refusal, and documentation on the
INCREASING CHLORHEXIDINE (CHG) COMPLIANCE

Electronic health records were the three main culprits to the decreased CHG daily bathing. The focus of this project is to target these three areas to increase CHG daily bathing compliance on our unit.

My improvement theme looks at increasing CHG daily bathing compliance to decrease hospital acquired infections. Increasing staff education and compliance can assist with targeting a decrease in hospital infections, and consequently, improve patient outcomes, decrease lengths of stays, and decrease financial costs. Besides staff education, looking at improving patient education can also assist with decreasing patient refusals to CHG daily bathing. Lastly, looking at the documentation process in the electronic health record can also assist with improving compliance and documentation. By working on the process, we expect (1) to achieve 80% compliance on CHG usage (2) decrease CLABSIs infection rates by 50% in by the first quarter of 2017 (3) maintain zero CAUTIs rates in the first quarter of 2017 and (4) decrease financial costs and lengths of stay in our ICU by the first quarter of 2017. It is important to work on this now because we have identified the need to improve (1) our unit infection rates (2) quality and safety for our patients (3) decrease ICU lengths of stay secondary to hospital acquired infections.

Rationale

Hospital acquired infections (HAIs), including CAUTI and CLABSIs, are benchmarked with the use of the NDNQI data, and our hospital data is compared to the national benchmark (Simon, Klaus, & Dunton, 2009). According to the Leapfrog group as well as Medicare, new data shows that hospital acquired infection (HAI) rates continue to be too high, and prevention efforts still need additional work (Leapfrog, 2007). While our indwelling catheter and central line infection rates are comparable to the national benchmark, our institution continues to need work in decreasing hospital infection risks.
Hospital acquired infections can be a financial burden for all hospitals as an estimated $9.8 billion is spent annually treating hospital infections (Zimlichman et al., 2013). Hospital infections can increase a patient’s length of stay, increase financial costs, and decrease patient outcomes and quality in the acute hospital setting (Scott II, 2009). The decrease of infections can allow finances to be placed to better use, such as additional equipment, staffing, and supplies. Consequently, patient-family satisfaction can result from lessening hospital infection rates and decreased lengths of stay in the hospital (Kennedy, Tevis, & Kent, 2014). Finances, quality, and increased patient satisfaction all contribute to the needs assessment to decreasing central line and indwelling catheter related infections.

Looking at our hospital’s data, the entire hospital’s CHG compliance rate is at 62% for the 1st quarter of 2016. Our unit specific data shows CHG compliance at 57% for the same time period. For the 1st quarter of 2016, the hospital’s CLABSI rate stands at 0.70 per 1000 catheter days, while our CAUTI rates were 2.19. Our specific ICU data shows our CLABSI rate as 3.38 infections per 1000 catheter days for the same time period, while we had 0 CAUTIs in the 1st quarter of 2016. The elevated infection rates compared to the national benchmark as well as our unit’s poor CHG compliance make this project necessary.

**Literature Review**

Literature has shown that CLABSIs, a preventable hospital infection, are the eighth leading cause of death in the United States of America and the world. Excessive costs and significant morbidity and mortality, along with increases in lengths of stay account for an estimated additional $2 billion in healthcare costs (Latif, Halim, & Pronovost, 2015). Although CAUTIs are seen as causing less morbidity and mortality, they are the most prevalent hospital-acquired infection, accounting for over a third of all hospital infections. With a hospital score of
INCREASING CHLORHEXIDINE (CHG) COMPLIANCE

0.7 CLABSIs and 2.19 CAUTIs/1000 catheter days, the prevalence of CLABSIs and CAUTIs remains high in the ICU setting, and practice improvements can assist in reducing these infections (Simon, Klaus, & Dunton, 2009).

Chlorhexidine, a topical cationic polybiguanide antiseptic allows for disinfecting against gram-positive and gram-negative aerobes. Utilization of CHG daily bathing can assist with reducing multidrug resistance organisms (MDROs), CLABSIs, VAPs, CAUTIs, and surgical site infections (Abbas & Sastry, 2016). Milstone et al. (2013) illustrated that critically ill children receiving daily CHG bathing had a lower incidence of bacteremia compared to those receiving standard bathing with soap and water.

Evidence has shown that daily CHG bathing has been beneficial and associated with a reduction of healthcare-associated infections. Lopez (2011) concluded that her quality improvement saw a decrease in central line bloodstream infections with an ongoing compliance-tracking program with maximal barrier precautions and daily CHG bathing. Another study illustrated the effectiveness of CHG bathing with decreasing gram-negative bacteria infections in acute care (Cassir et al., 2015). Swan et al. (2016) concluded that CHG bathing every other day decreased the risk of acquiring infections by 44.5% in the surgical ICU compared to bathing with soap and water.

The literature review has also looked at patient refusal and the lack of communication and documentation as major barriers to daily CHG bathing (Hines et al., 2015). Other barriers to CHG compliance include staff stating the lack of time with added task as well as patients stating a hypersensitivity reaction to chlorhexidine (Wittczak, Dudek, Walusiak-Skorupa, Swierczynska-Machura, & Palczynski, 2013).
The prevalence of CAUTI and CLABSIs in the hospital setting contributes to the financial burden that hospitals endure. It is estimated that each CLABSI can cost up to $56,000 in management, while each CAUTI account for $800 to $1,500 (Latif, Halim, & Pronovost, 2015). In addition to medical treatment, the increased lengths of stay and mortality rate as well as liability also increase the financial costs. Topal et al. (2005) estimated that a reduction of CAUTI by 47% can cause an estimated savings of $234,000. Mian, Russell, Honeycutt, & Oldridge (2012) estimated that a decrease of CLABSIs by 68% resulted in an institutional savings of over $1 million dollars.

The drastic numbers illustrate the financial burden that is placed on acute hospitals due to infections. Using a cost-benefit analysis, looking at CHG supply costs and staff training costs will make up the majority of the costs in implementation of the CNL project. Staff training in hospital education and in-services averaged $210,412 and $0.95 per patient day based on a study in 1976 (Kase & Swenson, 1976). Although an older reference, this number illustrates that costs of in-services outweigh the infection risks. A one-hour educational in-service for 30 registered nurses with an average hourly pay scale of $43.68 will amount to $1310.40 (Bureau of Labor Statistics, 2011). In addition, an hour in-service for our 4 nurses’ aides with an average hourly salary of $11.10 totals $44.40. The total cost of an hour-long education session would cost approx. $1,400. Bethel (1990) proposes utilization of an “All-Day” concept for in-service education to maximize efficiency and costs compared to a “unit-based” process.

While quality improvements contain a cost component that can pricey, the reduction of hospital acquired infections can provide a savings benefit. Besides financial savings, it is hard to put a price on the improvement in healthcare. Reduction of infection rates, improvement of
hospital safety scores, and decreasing morbidity and mortality caused by infections can increase patient safety and quality while reducing costs.

**Methodology**

The site for this project takes place in an urban, academic teaching hospital in the southern California area. This institution resides in the downtown area that provides care to a multiculturally diverse population for all ages. The microsystem of focus for this quality improvement project is a 10-bed ICU unit with an occupancy rate of nearly 100% caring for both medical and surgical diagnoses. A patient’s average length of stay in our unit is approximately 4-6 days and the mean age of our patient population is 55 years old. Our unit does not provide care for pediatric patients, and our youngest patients are 21 years of age and over.

Our multicultural unit staff ranges from new graduates to experienced nurses. Their education levels range from associates to master’s degrees. Many of the nurses have nursing certifications including their critical care certification (CCRN), oncology nurse certification (ONS), certified emergency nursing (CEN), and certified post anesthesia nurse (CPAN). Along with nursing staff, our unit works with an interdiscipliary team of physicians, respiratory therapists, PT/OT, speech therapists, and dieticians. As an academic teaching institution, medical students and interns are also present on our units at all times. Our unit has multidisciplinary rounds daily at 10am with all disciplines to talk about the patient’s plan of care and daily goals.

Unit staff meetings and our unit practice council works on quality improvement projects as well as increasing staff satisfaction. Pending issues and problems, new updates on hospital policies, and practice improvement changes are discussed, implemented, and evaluated in unit council. Our unit practice council is open to all staff members, and distribution of meeting minutes are emailed and discussed in daily huddles. Communication regarding updates, special
patient needs for the shift, and patients who are high fall risks are performed during daily huddles at shift change. Handoff report and communication at change of shift is done at the patient’s bedside, with the charge nurses also providing their own handoff report.

Financially, our 10 bed ICU unit works on a HPPD budget that usually stays over 80% occupied. Our overall average brings about an even to positive variance on a monthly HPPD budget. The utilization of a resource nurse rather than an assistant nurse manager allows for better budgeted direct care and allows for more hands-on patient care in the unit setting. Close monitoring and surveillance of our hospital quality indicators and HCAHPS scores allow our institution to look at costs of hospital acquired infections and the need to improve patient outcomes and satisfaction.

At the beginning of the semester, research with our hospital’s system data analyst allowed for looking into CHG compliance on our unit as well as hospital-wide. Along with CHG compliance, looking at our unit’s CLABSI and CAUTI rates were also obtained with our data analyst.

The focus of CHG noncompliance was first brought up in our unit council practice meeting. A questionnaire was given to both day and night nurses and PCTs on the unit to obtain general knowledge of CHG and the reasons for daily CHG bathing. The questionnaire also asked questions on the barriers that staff faced with providing daily CHG baths to our patients. The results indicated that staff understood that CHG baths were beneficial in reducing infection risks. 75% of the staff was correct in identifying the need for CHG bathing once every 24 hours, but others thought that CHG was used on an as-needed basis. Staff were surprised to see that our unit’s CHG compliance was only 56% for the last quarter, and was under the impression that compliance was a lot higher. The results also indicated that a fallout in staff communication,
patient refusal, and where to document CHG bathing completion in the electronic chart were the main culprits of noncompliance.

The change theory utilized in this project is Rosswurm and Larrabee’s model of change to evidence-based practice (Appendix B). Rosswurm and Larrabee’s six steps of change theory allows me to implement and solidify change in improving CHG compliance and practices in our intensive care unit (Rosswurm & Larrabee, 1999). The six steps of Rosswurm and Larrabee’s theory (1999):

1. Assess need for change in practice
2. Link problem with interventions and outcomes
3. Synthesize the best evidence
4. Design the practice change
5. Implement and evaluate the change in practice
6. Integrate and maintain change in practice

This model allows for a systematic process that healthcare professionals can use to manage and change current practices. Utilization of this change theory can assist other units in our institution to adopt these positive interventions. Due to time constraints, step six could not be fully carried out.

The first step of the change theory identifies the problem and assesses the need for change. Review of the literature on CLABSIs and CAUTIs with the staff and multidisciplinary team illustrates the severity and costs of having even one hospital acquired infection on the unit. The incidences of CLABSIs on our unit illustrate the severity of the problem, and the need for practice change to decrease these infections is essential.

The second step looks at linking the problem with interventions and outcomes
The utilization of CHG daily bathing has shown effectiveness in reducing CLABSIs and CAUTIs in many studies. Review of literature on CHG daily bathing with all nursing staff illustrates the importance of using CHG daily bathing with our patients to improve patient outcomes and decrease infection rates is utilized in the third stage of the change theory. Besides looking at CHG effectiveness, providing staff with transparency on our unit’s CHG compliance as well as infection rates can provide solid data on the necessary reasons for change. Having the staff understand that CHG bathing is not an added intervention, but one that is essential to our patients’ wellbeing can assist with increased awareness and compliance.

The fourth step in the evidence-based model includes designing a practice change from current practice with goals of decreasing CLABSIs and maintaining zero CAUTIs in our critical care unit. The practice change includes the collaboration of nurses and nurses’ aides in developing increased effective communication on CHG bathing. The education and use of a CHG communication tool to be used by our staff can indicate reasons for whether CHG was performed (Appendix C). Along with the communication tool, the utilization of the whiteboards to communicate when last CHG bath was done was also implemented on our units (Tan, Evans, Braddock, & Shieh, 2013). Justice et al. (2016) concluded an increased in staff communication with the use of patient’s whiteboards to reduce fallouts in missing CHG bathing and documentation. Lastly, staff inservices on correct electronic documentation of CHG bathing and patient education careplans documentation were also performed (Appendix D).

Another focus on the quality improvement project was to decrease CHG noncompliance due to patient refusal. Working with our unit practice council, utilization of CHG handouts are now being placed in the welcome packets for all admitted patients into our ICU setting (Ortiz, Wang, Elayda, & Tolpin, 2015). Increasing patient education can assist with decreasing patient
refusal rates and ultimately increase compliance (Anderson, Ottum, Zerbel, Sethi, & Safdar, 2013). Patient education handouts are available in both English and Spanish, and placed conveniently for easy staff access for newly admitted patients (Appendix E& F).

The fifth step of the practice model includes looking at implementation and evaluation of the change in practice (Rosswurm & Larrabee, 1999). This step evaluates the process and outcomes of the practice change, and allows for decisions on whether to adapt, adopt, or reject this change. Looking at our unit’s CHG compliance data as well as our CLABSI and CAUTI rates with this practice change can allow for any modifications of change. Receiving staff feedback in the subsequent unit practice councils can also allow for staff input and engagement on improving practice (Day, 2014).

Although the sixth step of the process was not carried out, the integration and maintaining practice change can be achieved with educating unit champions to continue auditing CHG compliance after the implementation periods (Reed, Brock, & Anderson, 2014). Formation of a unit champion team can assist with sustainability as well as staff engagement in our current practice project.

**Timeline**

The project began in late August 2016, and will conclude in mid-November 2016 (Appendix G). One of the challenges with the timeline includes working with our unit practice council since the committee only meets once a month. Another challenge focused on gathering the pre-data with our systems data analyst. Lastly, getting in touch with other interdisciplinary committees and council chairpersons were a challenge in the initial phase of contact.

**Expected Results**

The nurses’ surveys illustrated that all staff understood the reasons for implementation
and compliance on CHG daily bathing. Multiple responses from the staff illustrated that certain staff thought it is night shift’s responsibility, while other staff thought the responsibility fell on the day shift. Communication between the nurse and their aide also posed fallout of who was performing and documenting the CHG daily bath.

My expected results are that increasing effective communication between staff members during shift and change of shift will help in addressing CHG compliance (Greenway, Wright, Willingham, Reynolds, & Haslam, 2015). The utilization of a communication tool during SBAR shift report can also assist staff on knowing when the last CHG daily bathing was performed, and alert staff to understand why a certain CHG bath was not done (Raymond & Harrison, 2014). The utilization of the whiteboards to indicate the last CHG bath also assisted with increasing CHG compliance. A review on how to document CHG bathing and patient education careplans were also beneficial in providing permanent and new-hired staff the correct ways to chart in our electronic health record.

Besides communication, utilization of patient handouts on CHG utilization was also beneficial in educating patients for daily CHG bathing. Including handouts in our unit’s welcome packet as well as placing them at a more convenient location has decreased barriers in supplying them to our patients. For our cognitive patients, staff has stated that more conversation regarding CHG bathing has occurred. For our cognitive impaired, intubated and sedated patients, the CHG handout allows additional information to families regarding our unit’s approach in decreasing infections.

Results on our CHG daily bathing data is currently being evaluated post-intervention with our systems analyst. The evaluation of our data will include looking at our unit’s CHG compliance and unit’s CLABSI and CAUTI rates after the implementation period. Along with
looking at these rates, we can also explore and extend the data analysis to see how our patient’s lengths of stay in the ICU setting have been decreased with reducing hospital acquired infection risks. Compliance results, as well as infection results are currently pending.

Evaluation

Increasing communication between staff members has improved CHG compliance, but it has also increased our staffs’ engagement in unit occurrences. Staff satisfaction and teamwork has resulted from increasing communication, and attendances in staff and unit practice council meetings have increased as a result. One of the results of the implementation process in our unit was the decision to not standardize a time for CHG bathing. Since we admit patients at all times of the day and night, patients admitted after the standardized CHG time would fall out.

Initially, the utilization of the whiteboards and the communication tool was seen as extra work for some of the staff members. However, after discussions and implementation of these interventions, the staff began to understand the usefulness of the use of whiteboards for provider communication (Tan, Evans, Braddock, & Shieh, 2013). It was also effective to let the staff know that our IT department is currently working on software updates to incorporate the communication tool into our electronic health record.

As a CNL, functioning as a care environment and team manager allows for partnership with the interdisciplinary team (AACN, 2015). Staff feedback included on collaboration with our nurse quality council, IT department, pharmacy, and patient experience teams. Collaboration with our IT department looked at improving our electronic health record to initiate a task-list worklist to notify staff that CHG bathing needs to be done. However, since this meant changing the entire electronic infrastructure, more committees need to be involved prior to making changes. Working with the pharmacy department on possibly making CHG wipes a scannable
MAR item, the push-back from pharmacy is that ancillary nurses’ aides are not authorized to have access to a patient’s MAR. Lastly, working with our patient experience department on making a patient education video on CHG education via the Skylight system is currently in progress.

**Nursing Relevance**

Improving hands-off communication and patient education can improve the process of CHG daily bathing. A simple intervention with CHG bathing can assist nurses with providing and improving patient quality care and decrease hospital acquired infection rates. Involving nurses and nurses’ aides in this process will encourage increasing collaboration and camaraderie between the team dynamic. This also places more responsibility and accountability for our nurses’ aides who are an integral part of the team.

With constant communication with staff, the monthly CHG compliance data is posted in the breakroom for all staff to see. With transparency with CHG compliance and CAUTI and CLABSI infection rates, staff engagement and empowerment can assist with making other necessary changes on the unit to improve the unit even more (Kachalia, 2013). Staff is able to use the data information, and compare their care with other units in the hospital. Increasing staff knowledge about how their care impacts patient quality will provide reasons for interventions which ultimately will increase compliance.

Exploring different avenues of patient education besides verbal education is necessary to provide optimal education to our patients and families. Utilization of handouts and audio/visual aids can benefit patient education, and having available information in the patients room as well as waiting rooms can impact education and learning (Seibert, Veazey, Leccese, & Druck, 2014).

Utilization of CHG handouts with our admission packet to the ICU can assist with ongoing
conversations and questions of CHG utilization with our patients, and decrease refusal rates.

**Summary**

Utilization of the PDSA model with Rosswurm and Larrabee’s model of change allowed for practice improvement implementation in our ICU. Assessing the need for change and increasing the awareness of CHG importance in bedside practice was reviewed with the staff. Literature review on the effectiveness of CHG daily bath in reducing CLABSI and CAUTI rates, and the enormous financial burdens that these infections have on our institution made this project an essential one. Staff communication, patient refusal, and documentation were the three main culprits of decreased CHG compliance in our unit. Implementation of white-boards communication, use of a communication tool, patient handout education with admissions packet, and education on how to document done was introduced and implemented to the staff. The study portion of the project looks at evaluation of CHG compliance post-implementation and asking for staff feedback. An increase of CHG compliance from 76% from 56% from the implementation phase, along with a zero CAUTI and CLABSI rate since project implementation was relayed to our staff (Appendix H). A second questionnaire was brought to unit council for staff to voice their feedback, and a likert scale showed that staff placed 8.5 out of 10 for satisfaction on addressing CHG compliance. The act portion of the project looks to modify additional changes, and integrate and maintain these changes in practice. Recognition of engaged staff members, innovators, and early adopters was really significant during staff education and in-services (Rogers, 1983). The inclusion of these enthusiastic staff members were asked to become unit champions for CHG compliance on our unit to continue the sustainability of the project. Having two unit champions on the day and night shifts can assist with sustained compliance of the project.
Conclusion

The increase of CHG compliance in our unit has also been associated with a decrease of CLABSIs and maintenance of zero CAUTIs during the short evaluation period. This project has allowed staff to see how a simple intervention can affect infection rates and patient quality outcomes. Updating staff on our monthly CHG compliances as well as unit infection rates allow staff to see first-hand the effect they have on direct patient care. Transparency between staff and management has also assisted in seeing hospital data with unit breakdowns.

As a CNL, the roles of educator, advocate, lateral integrator, outcomes manager, and systems analyst were all portrayed in this project. One of the major barriers to this project included working with other interdisciplinary teams to make the interventions easier for our staff members. Coordination with pharmacy, IT, and patient experience departments occurred, but change recommendations had to go through many hurdles even before being considered for implementation.

One of the challenges of the project was the time aspect from implementation to completion. Having a limited time of two-three months, it is difficult to assess, implement, evaluate, and sustain a project. With only a few weeks to evaluate the process, it is important to understand that this is a small sample size and time. With more available time, my approach will be to increase more time and education for the night shift. Often times, inservices and education occur during the day times, where night shift staff are either finishing a shift, or have to come into the hospital on their days off.

One observation that I’ve made during this project is that staff are often more receptive if they see their colleagues promoting the change process. Rather than seeing change implementation from management, it is more powerful to see effective change process
implementation from a staff member. Leading by example, building staff rapport, and respect are essential in successful implementation of change management.

This project has expanded my perspectives on the utilization of the CNL role. Coordination, education, and communication with staff and interdisciplinary teams are essential in building a rapport with all members of the team. Having staff buy-in and understanding of necessary interventions allow for increased engagement and sustainability. The bottom line is a teamwork mentality that allows all staff members to realize that all interventions are performed to better patient care and improve patient outcomes in the hospital setting.
References


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Appendix A: Root Cause Analysis Fishbone Diagram

- **Staff Communication**
  - Last CHG bath not reported off in SBAR
  - Hands-off report (day/night shift)
  - No communication between RNs and PCTs

- **Documentation**
  - Electronic health record documentation with confusing interface
  - No notification of next CHG bath due
  - CHG wipes not scannable in EHR
  - No place to document CHG refusal

- **Materials**
  - Not having CHG bathing wipes on unit
  - Warmer not refilled with CHG wipes

- **Patient Education**
  - Staff not aware of CHG pt education handouts
  - CHG handouts only in English & Spanish
  - No CHG patient education video available
  - Limited ways to educate patients in ICU setting

- **Decreased Chlorhexidine (CHG) daily bathing**
Appendix B: Rosswurm and Larrabee’s model for change to evidence-based practice
Appendix C: Communication Tool for CHG daily bathing

Does your patient have an indwelling catheter or central venous catheter?

- **YES**
  - Chlorhexidine (CHG) done?
    - **YES**
    - DATE/TIME
    - ____________
    - **NO**
    - REASON
    - ____________

- **NO**
  - CHG not indicated
Appendix D: CHG careplan documentation in EHR
FAQs about “2% Chlorhexidine Gluconate (CHG) Wipes”

What are 2% CHG wipes?
- CHG stands for Chlorhexidine Gluconate. 2% CHG wipes are antiseptic (germ killing) disposable cloths used to wipe the skin because they can kill 99% of the bacteria (germs) that collects on the skin. The 2% CHG wipe reduces bacteria for up to 24 hours, providing protection against potential infection.
- CHG stays on the skin and is not absorbed into the body.
- CHG is fast-acting, alcohol-free, and rinse-free; CHG is not to be wiped off.
- It contains moisturizers and skin emollients.

Why should I use CHG wipes?
- Literature supports the use of daily bathing with 2% CHG wipes in reducing the risk of acquiring a multi-drug resistant organism and C. Difficile infections. It can also reduce the incidence of Central Line-Associated Blood Stream Infection and Catheter-Associated Urinary Tract Infection.

What care should I expect with regards to CHG wipes?
- It is best practice at Keck Medical Center of USC to include the use of these wipes every 24 hours following daily soap and water bathing or showering.
- You have the right to refuse this treatment. Please communicate your wishes with your clinicians.
- Inform your clinician if you have known allergy to Chlorhexidine Gluconate (CHG).
- Your clinicians will perform CHG sensitivity testing on the interior aspect of your forearm prior to whole body wipe down with CHG wipes to determine if the product is appropriate for you.
- You are allowed to use CHG wipes independently if you are able to return demonstrate proper application method with your clinicians.

Where can CHG wipes be applied?
- All areas below the chin and 6 inches from your catheter’s point of entry into the body.
- Ok to use CHG wipes to clean well-healed incisions.
- Areas to avoid are: open sores, inside of body orifices or mucous membranes.

What are the potential adverse reactions of CHG wipes?
- Adverse events have been reported, but none were reported as serious.
- Allergy symptoms: mild itching, dry skin or rash (less than 1%).
- Please Do Not Use CHG with your home skin care products (lotions, moisturizers) as it might not be compatible with the product, making the CHG not as effective against bacteria.

What are the steps to CHG wipes application?
1. Bath or shower first; dry completely.
2. Remove CHG wipes from package. There are 2 wipes per package. You will need 3 individual packages.
3. Apply CHG wipes to the indicated skin sections below chin as shown on the figure.
4. Apply 1 wipe per section. There are total 6 wipes for 6 sections.
5. Allow the skin to air dry for at least 7 minutes.
6. Use soap and water to clean yourself if you need to bathe again.

DO NOT FLUSH
The CHG wipe in the toilet. Dispose of all wipes in the trash.
Preguntas frecuentes sobre las “toallitas húmedas con gluconato de clorhexidina al 2% (CHG)”

¿Qué son las toallitas húmedas con gluconato de clorhexidina al 2% (CHG)?
- La sigla CHG proviene de gluconato de clorhexidina. Las toallitas húmedas con CHG al 2% son paños desechables antibióticos (matan los gérmenes) que se utilizan para limpiar la piel, dado que matan el 99% de las bacterias (gérmenes) que se acumulan en la piel. Las toallitas húmedas con CHG al 2% reducen la presencia de bacterias hasta por 24 horas y proporcionan protección contra posibles infecciones.
- El CHG permanece en la piel y no se absorbe en el cuerpo.
- El CHG es de rápida acción, no contiene alcohol y no se enjuaga; El CHG no se debe quitar.
- Contiene humectantes y emolientes para la piel.

¿Por qué debo usar las toallitas húmedas con CHG?
- La bibliografía sostiene que la limpieza diaria con las toallitas húmedas con CHG al 2% reduce el riesgo de adquirir organismos resistentes a múltiples medicamentos e infecciones por C. difficile. También puede minimizar la incidencia de las infecciones del torrente sanguíneo asociadas a una vía central, así como las infecciones del tracto urinario asociadas al catéter central.

¿Qué debo esperar con respecto a las toallitas húmedas con CHG?
- En Keck Medical Center of USC, es costumbre incluir el uso de estas toallitas cada 24 horas, acompañado de un baño o una ducha diarios con agua y jabón.
- Usted tiene derecho a negarse a realizar este tratamiento. Comunique su voluntad a los clínicos.
- Informe a su clínico si tiene alguna alergia conocida al gluconato de clorhexidina (CHG).
- Sus clínicos llevarán a cabo una prueba de sensibilidad en la cara interior de su antebrazo antes de que se limpie todo el cuerpo con las toallitas húmedas con CHG, para determinar si el producto es adecuado para usted.
- Se le permite usar las toallitas húmedas con CHG independientemente de que si usted puede regresar para que los clínicos le muestren el método de aplicación correcto.

¿En qué partes se pueden aplicar las toallitas húmedas con CHG?
- Toda la zona debajo del mentón y un área de 6 pulgadas desde el punto de acceso del catéter en el cuerpo.
- Se permite el uso de las toallitas húmedas con CHG para limpiar incisiones que hayan curado bien.
- Debe evitar estas áreas: ampollas abiertas, la parte interna de los orificios corporales o las membranas mucosas.

¿Cuáles son las posibles reacciones adversas a las toallitas húmedas con CHG?
- Se han informado reacciones adversas, no obstante ninguna ha sido grave.
- Síntomas de alergia: picazón leve, piel seca o prurito (menos del 1%).
- Por favor, NO USE los productos para la piel que tenga en su hogar (loiones, humectantes) combinados con el CHG, ya que podrían no ser compatibles y reducir la eficacia que el CHG tiene contra las bacterias.

¿Cómo se utilizan las toallitas húmedas con CHG?
1. Primero debe húmede el cuarto de baño, suélese por completo.
3. Aplique las toallitas húmedas con CHG en las áreas de la piel que se indican, debajo del mentón, según la ilustración.
4. Aplique una toalla húmeda por sección de piel. Hay un total de 6 toallitas húmedas para las 6 secciones.
5. Deje que la piel se seque con el aire durante al menos 5 minutos.
6. Use agua y jabón para la lavarse si debe volver a húmede.

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NO ARROJE las toallitas húmedas con CHG al inodoro. Deseche las toallitas húmedas en el basurero.
Appendix G: Gantt Chart For CHG Project Timeline
Appendix H: Pre and Post-Implementation Compliance Data

**Pre-Intervention**
- 44% noncompliance
- 56% CHG compliance

**Post-Intervention**
- 24% CHG noncompliance
- 76% CHG compliance