**The effect of chlorhexidine baths on reducing CLABSI as compared to use of soap and water**

**Literature Review**

Central line-associated bloodstream infections are among the common Healthcare-related infections. These are infections that are acquired within the hospital settings during the hospital stay, and they were never present during the time of admission. Based on research conducted by Huang, Chen, & Wang, (2016) revealed that healthcare-related infections are among the leading infections that cause death among the inpatients. The article further indicates that seriously ill patients who have been hospitalized in intensive care units of various hospitals in the United States are at a threat to contract these infections. The sole reason for this observation is immunodeficiency and risk because of the catheter devices that are inserted into their bodies, and other related invasive objects like central line tubes and intravascular tubes (Huang et al., 2016). Additionally, CLABSI and other related hospital-acquired infection result in a prolonged hospital stay. However, these infections can be prevented by application of preventive measures including careful use of the guidelines of catheter tubes insertion protocols and hygiene to avoid entry of pathogens into the bloodstream. Use of chlorhexidine to prevent CLABSI is also effective as compared to the daily baths with the ordinary soap. According to O’Horo, L M Silva, Munoz-Price, & Safdar, (2012), chlorhexidine is effective in preventing CLABSI, and other healthcare-acquired infections among hospitalized patients. The research further elaborates that chlorhexidine has been commonly applied to prevent CLABSI in many hospitals because of its antiseptic nature and better antimicrobial functions as compared to the ordinary soap.

Research conducted by Seyman, et al., (2014) provides a contrast with other associated antiseptic agents, and it states that chlorhexidine is effective because its microbial functions are not affected by the body fluids including blood. In this case, this study supports that chlorhexidine baths are effective in the prevention of CLABSI as compared to the ordinary soap and water baths. However, recent study findings challenged this argument and approach claiming that daily baths using chlorhexidine did not decrease the rates of the hospital related infections like CLABSI and SSI as compared to the regular care. But Wang and Layon, (2017) provide opposes the prior study’s argument by stating that chlorhexidine has proved to be effective in the prevention of the healthcare-acquired infections in many hospitals as compared to the daily baths using soap. This is evident from the findings that were found during the study. It provides that about 721,820 healthcare-associated infections in the United States of America, which includes both SSI, CLAUTIS, VAP, and CLABSI. Out of this, 71,000 inpatients were found with CLABSI. It indicated that with the applications of chlorhexidine in daily baths proved a 50% decrease of the infections rates (Wang & Layon, 2017). The study further adds that chlorhexidine has decreased the morbidity and mortality rates that are associated with hospital-acquired infections by a significant percentage.

A study conducted by Huang et al., (2016) compared the costs of using chlorhexidine and ordinary soap in daily baths and presented that chlorhexidine is effective in the prevention of CLABSI, and other healthcare-acquired infections, but relatively expensive as compared to the ordinary soap. According to this study, chlorhexidine is only diluted in clean water which is relatively costly as compared to the cheap ordinary soap which has low microbial activities. However, the study further argues that the cost of bathing using chlorhexidine is not an issue of consideration but rather the prevention of the acquired infections. As such the study proposes that chlorhexidine baths should be conducted in all the intensive care units and other associated hospitalized patients in all healthcare systems (Huang et al., 2016). This is significant because it will ensure that the inpatients do not contract the associated healthcare infections like CLABSI.

A recent meta-analysis conducted by  Willett, (2015) indicated the effectiveness of daily baths using chlorhexidine in the prevention of healthcare-acquired infections. The study indicated an overwhelming efficacy in reducing the rates of the primary outcomes of HAIs more especially CLABSI. Despite that the study did not provide sufficient evidence, to support this approach of use of chlorhexidine, a single survey they conducted revealed that daily baths using chlorhexidine can prevent the hospital-acquired the infection. The study also adds that intensive care unit patients are at risk of contracting the associated health infections including CLABSI, VAP, and SSI (Willett, 2015). This is because of the invasive devices that are inserted into their body fluids and blood. In many times, it is this device like catheters, intravascular tubes and other related invasive objects which introduces pathogens into the bloodstream. However, use of chlorhexidine baths and clothes have indicated a significant HAIs decrease in many hospitals that have incorporated and authorized their patients to use the antiseptic substance.

A study conducted by Willett, (2015) presents that the association for professionals that are concerned with control and epidemiology of infections (APIC) has supported the use of the Evidence-based treatment and preventive measures to control healthcare-acquired infections, CLABSI included. With this regards, it has proposed the use of chlorhexidine baths to prevent HAIs because of their high microbial activities as compared to the ordinary baths using soap. In this case, they are supporting the zero tolerance for CLABSI and other related HAIs. This is in agreement with the study that was conducted by Seyman et al., (2014) who provides that the chlorhexidine baths has proved to be effective as compared to soap thus meeting the patient care bundle that are outlined by the Institute for Healthcare Improvements. I further provide that use of chlorhexidine is among the best evidence-based practices that have indicated improved patient outcomes. Additionally, all the healthcare systems that have implemented the preventive and evidence-based interventions including chlorhexidine have decreased the rates of CLABSI as well as eliminating its associated risks (Seyman et al., 2014). Despite the effect of chlorhexidine, the reduction of HAIs including CLABSI has remained an intangible in many hospitals inconsiderate of the increased awareness to adopt the evidence-based practice. Therefore many types of research must be conducted to reveal the reasons as to why a significant number of hospitals have not adopted the practice considering its effectiveness in preventing healthcare-acquired infections.

In summary, research that has been conducted indicates that chlorhexidine is effective in reducing the rates of healthcare-associated infections as compared to the ordinary soap. However, despite its effectiveness, many hospitals have not implemented this evidence-based practice. They should adopt the practice to provide high-quality patient and family-centered services which are evidence-based.

 **References**

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