Safety Improvement Plan-Resource Repository

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NURS-FPX4020

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September 30, 2019

For this assessment, I chose 12 articles related to prevention and reduction of central-line associated blood stream infections or CLABSIs. Throughout the course, my plan has been discussed to implement a team strategically for CLABSI reduction and prevention at the facility where I work. Any kind of infection is a patient safety risk, but central line associated infections are exceptionally harmful to anyone. That team will be dedicated to researching the most current and up-to-date practices to utilize in a maintenance bundle that is to be created. It will also allow for a clear set of guidelines and a policy to be followed. Each article was chosen due to a strict set of criteria. It had to be peer-reviewed, scholarly, and published within the last five years. This ensures that each piece of literature provides only the most relevant and reliable information. Since nurses will be using the literature, the articles had to be easy to understand and easily accessible to make the process easier. Using the Capella website, I searched for “CLABSI prevention and reduction” via Summon and chose only the best literature to aide in our plan to reduce and prevent CLABSIs.

1. Woodward, B., & Umberger, R. (2016). Review of Best Practices for CLABSI Prevention and the Impact of Recent Legislation on CLABSI Reporting. SAGE Open. Retrieved from <https://doi.org/10.1177/2158244016677747>
   * This article presents a review completed on healthcare-associated infections, mainly CLABSIs. It discusses how new and recent enacted legislation and mandatory reporting have not yet been closely studied in review of CLABSIs, but does talk about how nurses, healthcare providers, and special infection prevention personnel have led to a significant decrease in the numbers of CLABSIs. Results founded that from 2001 to 2009, nurses alone showed a 58% decrease in CLABSI rates. It also speaks about how CLABSIs work for and against hospital reimbursement. It shows and reinforces that education improves patient outcomes as well as staff compliance. This resource is likely more useful as a guide for ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
2. Wilder, K. A. , Wall, B. , Haggard, D. , Epperson, T. , Ikuta, L. & Zukowsky, K. (2016). CLABSI Reduction Strategy. *Advances in Neonatal Care, 16*(3), 170–177. Retrieved from <https://oce-ovid-com.library.capella.edu/article/00149525-201606000-00005/HTML>
   * This article presents a study completed on NICU patients. The study was completed to reduce CLABSI rates by at least 50%. The study itself utilized policies, protocols, competencies, specific team members, and techniques with a formal line-rounding and dressing change competency. Results founded that compliance with the competency and policy of daily line rounding and use of a 2-person sterile technique for dressing changes reduced the CLABSI rate by 92% overall. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
3. Noaman, A. Y., Ragab, A. H. M., Al-Abdullah, N., Jamjoom, A., Nadeem, F., & Ali, A. G. (2018). WMSS: A web-based multitiered surveillance system for predicting CLABSI. *BioMed Research International, 2018*, 11. Retrieved from <https://search-proquest-com.library.capella.edu/docview/2070131330?pq-origsite=summon>
   * This article presents a review of how multitiered web-based surveillance could improve prediction and reduction of CLABSIs in a hospital. This article discusses how CLABSIs are usually limited to ICUs and how manual surveillance is time-consuming. Results founded that this system can collect patient-related data and then utilize algorithms to predict an infection. If utilized correctly, it could reduce CLABSI rates and therefore costs. It shows and reinforces that education and a dedicated plan improve patient outcomes. With the appropriate technology, this could significantly decrease CLABSI rates and would therefore be beneficial when designing a plan. This resource is likely more useful as a guide for the bundle component. It is suggested that this resource be reviewed prior to creating the CLABSI bundle in a health care facility.
4. Jones, C. M. , Stewart, C. & Roszell, S. S. (2015). Beyond Best Practice. Journal of Nursing Care Quality, 30(1), 24–30. Retrieved from <https://oce-ovid-com.library.capella.edu/article/00001786-201501000-00006/HTML>
   * This article presents a project that was successfully completed in an orthopedic and trauma surgical hospital unit. It discusses how improvement of patient outcomes and reduction of CLABSIs is targeted with the use of central line maintenance. Initially they were above the national rate and were actually climbing instead of reducing rates. It discusses how maintenance is the main priority of that unit since the catheters are inserted outside of the unit. There were a total of 4 PDSA cycles and results founded that compliance with the required maintenance bundle led to a significant decrease in infection rate for that period. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
5. Latif, A., Halim, M. S., & Pronovost, P. J. (2015). Eliminating infections in the ICU: CLABSI. *Current Infectious Disease Reports, 17*(7), 1-9. Retrieved from <https://search-proquest-com.library.capella.edu/docview/1684914218?pq-origsite=summon>
   * This article presents a study completed on ICU patients. In this study, it was discussed that maintaining current evidence-based practice and effective implementation is what is necessary to prevent CLABSIs. By utilizing their 5 prevention strategies—appropriate hand hygiene, skin prep, use of full barrier precautions, avoidance of femoral site when possible, and removal of unnecessary lines—it was founded that CLABSI rates were significantly reduced. Overall, they founded that use of evidence-based practices for both insertion and maintenance and the alignment of provider behaviors are the best multifaceted approach to reduce infection. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
6. Nainan Myatra, S. (2019). Improving hand hygiene practices to reduce CLABSI rates: Nurses education integral for success. Indian Journal of Critical Care Medicine: Peer-Reviewed, Official Publication of Indian Society of Critical Care Medicine, 23(7), 291-293. Retrieved from <https://www-ncbi-nlm-nih-gov.library.capella.edu/pmc/articles/PMC6686579/?tool=pmcentrez&report=abstract>
   * This article presents a study completed on ICU patients. This study speaks about the importance of a central line bundle which includes those same 5 important practices to prevent infection but focuses mainly on hand hygiene. It is discussed that the risk for infection can happen during insertion or with maintenance of CVCs. Results founded that compliance with the bundle led to a significant decrease in the infection rate for that period. Knowing that nurses are the frontline and that they have the most direct and continuous roles in handling CVCs, the decrease in infection was noted with a larger compliance in hang hygiene. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
7. Douglas, M. (2015). 25. the journey to zero CLABSI: Impact of unit-based CLABSI prevention program. *Journal of the Saudi Heart Association, 27*(4), 309-309. Retrieved from <https://doaj.org/article/cfaca495f227416ab2fce75048fb01a9>
   * This article discusses how a unit-based prevention program impacts the number of CLABSIs. It discusses how CLABSIs are an inevitable contributing factor in increased morbidity and mortality of ICU patients around the world. It also speaks about how the CDC has allotted a minimum number of CLABSIs. The unit-based program took place on a pediatric cardiology ICU. After reviewing evidence-based practices they determined a successful set of prevention strategies. Results founded that compliance with the education and bundle led to a zero percent infection rate for that period. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
8. DeVries, M. (2019). Revisiting CLABSI prevention strategies: Part 1: Follow the basics to keep your patients safe. *American Nurse Today*, *14*(5), 17–19. Retrieved from <http://search.ebscohost.com.library.capella.edu/login.aspx?direct=true&db=ccm&AN=136584602&site=ehost-live&scope=site>
   * This article presents a review of CLABSI prevention strategies and focuses mainly on indications for central lines and insertion—two of the three categories for CLABSI prevention strategies. The majority of information shared in this article discusses whether a central line is clinically indicated and if it is, which type is best for that specific case. It discusses the CDCs role in device selection as well as a patient’s need for access. It discusses the importance of sterile insertion as well as maintenance bundles and again, results founded that compliance with the bundle led to a significant decrease in infection rate. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
9. Humphrey, J. S. (2015). Improving registered nurses' knowledge of evidence-based practice guidelines to decrease the incidence of central line-associated bloodstream infections: An educational intervention. *Journal of the Association for Vascular Access, 20*(3), 143-149. Retrieved from <https://search-proquest-com.library.capella.edu/docview/1709240243?pq-origsite=summon>
   * This article presents a study completed with improving nurses’ knowledge of evidence-based practice guidelines to decrease CLABSIs. They utilized a pretest and posttest with an education session on nursing management of central lines in between. They selected a specific group of RNs for the study. Results founded that knowledge of central line care and maintenance significantly improved after the education was provided. It shows and reinforces that education is essential to improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to planning education and monitoring compliance in a health care facility.
10. Yamaguchi, R. S., Noritomi, D. T., Degaspare, N. V., Muñoz, G. O., Cisternas, Porto, A. P., . . . Ranzani, O. T. (2017). Peripherally inserted central catheters are associated with lower risk of bloodstream infection compared with central venous catheters in paediatric intensive care patients: A propensity-adjusted analysis. *Intensive Care Medicine, 43*(8), 1097-1104. Retrieved from <https://search-proquest-com.library.capella.edu/docview/1906465279?pq-origsite=summon&http://library.capella.edu/login?url=accountid=27965>
    * This article presents a study completed on PICU patients. CLABSIs are considered an important cause of complications in PICU patients and since PICC lines can be an alternative to CVCs, this article focuses on a study completed to see the effect of PICCs versus CVCs and CLABSI prevention. The aim was to evaluate whether PICCs had a less likely chance of CLABSI than CVCs. It shows and reinforces that education and a dedicated plan improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.
11. Ibrahim, A. S., Kabara, H. S., Adeyinka, A., & Pierre, L. (2017). Awareness of ventilator and central venous catheter bundles among critical care providers in Nigeria. CONNECT: The World of Critical Care Nursing, 11(3), 55–58. Retrieved from <https://connect.springerpub.com/content/sgrwfccn/11/3/55>
    * This article presents a study completed in ICUs in Nigeria. It was found that low implementation rates of patient safety practices was found to be a global problem. This project was used to explore the level of awareness of both ventilator care as well as CVC bundles. The goal was to determine gaps in implementation. It was found that there is a low level of awareness in Nigeria about the implementation of these bundles and their impact on patient safety. It shows and reinforces that education is essential for staff compliance which will improve patient safety and outcomes. This resource is likely more useful as a guide for the essentials to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to planning education and monitoring compliance in a health care facility.
12. Hakko, E., Guvenc, S., Karaman, I., Cakmak, A., Erdem, T., & Cakmakci, M. (2015). Long-term sustainability of zero central-line associated bloodstream infections is possible with high compliance with care bundle elements. Eastern Mediterranean Health Journal, 21(4), 293–298. Retrieved from <http://search.ebscohost.com.library.capella.edu/login.aspx?direct=true&db=ccm&AN=109805419&site=ehost-live&scope=site>
    * This article presents a study completed on ICU patients in a Turkey hospital. From the third quarter of 2010 until June 2013, compliance rates with the use of a special care bundle for CLABSI prevention were measured. Results founded that compliance with the bundle led to a zero percent infection rate for that period as well as 38 months after. It shows and reinforces that education and a dedicated plan/bundle improve patient outcomes as well as staff compliance. This resource is likely more useful as a guide for the bundle components as well as ways to educate and maintain staff compliance. It is suggested that this resource be reviewed prior to creating the CLABSI bundle as well as planning education and monitoring compliance in a health care facility.