

# Transforming Patient Safety: The Impact of Targeted Education on Chlorhexidine Gluconate (CHG) Treatment Adherence and Infection Rates

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Chlorhexidine gluconate (CHG) treatments have become a cornerstone in the prevention of hospital-acquired infections, significantly impacting patient safety and overall care quality. Despite their importance, adherence to CHG protocols has historically been inconsistent, leading to varying infection rates across healthcare settings. This project aimed to address this issue by implementing a targeted educational initiative designed to enhance patient understanding and compliance with CHG treatments.

The initiative was implemented at The Ohio State Wexner Medical Center, an academic medical center with over 1,400 beds in Columbus, Ohio. The pilot unit was a 16-bed general adult medical surgical unit, primarily staffed by Registered Nurses with an average tenure of 3 years. RN-to-patient ratios on this unit were on average 4:1. The nursing team consisted of 72% Bachelor of Science in Nursing (BSN)-educated nurses, 16% Associate Degree in Nursing (ADN)-educated nurses, and 12% Master of Science in Nursing (MSN)-educated nurses. The initiative was developed and led by the unit's leadership council, comprised of staff nurses and patient care associates (PCAs), and supported by the unit's nurse manager.

Destine et al. (2023) found that targeted patient education explaining the benefits of CHG treatment led to an increase in compliance. Through a multi-faceted educational program, the Ohio State Wexner project team engaged

with patients to elucidate the critical role of CHG in preventing infections, specifically central line-associated bloodstream infections (CLABSIs) and catheter-associated urinary tract infections (CAUTIs). The educational efforts included one-on-one patient education and informative materials, tailored to address the common misconception that CHG treatments are equivalent to a bath and reinforce the importance of compliance with CHG protocols. On admission, patients were provided with CHG treatments, educated on the process, and the care team set the expectation that patients would be required to complete daily treatments while admitted. Vanhoozer et al. (2019) reported that one in five self-care patients could verbalize the correct method for using CHG products, and when they could recall education, CHG treatment compliance significantly improved. In order to improve this recall, the Ohio State team placed visual guides on the mirrors of patient rooms, so that patients independently completing the treatment could complete it appropriately.

These comprehensive educational strategies resulted in a notable increase in patient adherence to CHG protocols. Following project implementation in February 2024, daily audits were completed by the charge nurse. Unit compliance of CHG treatments increased by 3.43% in the first month, 8.57% in the second month 10.41% in the third month, and 3.53% in the final month of the project. This was an overall increase

of 25.94%. Improved compliance directly correlated with a significant reduction in infection rates within the unit. For the fiscal year 2024, the unit achieved zero reported cases of CLABSIs and CAUTIs. This remarkable outcome underscores the effectiveness of patient education in enhancing compliance and, subsequently, in improving patient safety by reducing healthcare-associated infections.

Healthcare interventions frequently focus on educating healthcare employees regarding providing patient care tasks; however, this innovative project focused education on the patient instead. The project's success highlights the crucial role of patient education in infection prevention and demonstrates that informed patients are more likely to adhere to necessary treatments. Future initiatives will build on these findings to further integrate educational practices into infection control protocols, aiming to sustain and extend these positive results. ■

## References

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