**Chlorhexidine Bathing and Health Care–Associated InfectionsA Randomized Clinical Trial**

**Importance**  Daily bathing of critically ill patients with the broad-spectrum, topical antimicrobial agent chlorhexidine is widely performed and may reduce health care–associated infections.

**Objective**  To determine if daily bathing of critically ill patients with chlorhexidine decreases the incidence of health care–associated infections.

**Design, Setting, and Participants**  A pragmatic cluster randomized, crossover study of 9340 patients admitted to 5 adult intensive care units of a tertiary medical center in Nashville, Tennessee, from July 2012 through July 2013.

**Interventions**  Units performed once-daily bathing of all patients with disposable cloths impregnated with 2% chlorhexidine or nonantimicrobial cloths as a control. Bathing treatments were performed for a 10-week period followed by a 2-week washout period during which patients were bathed with nonantimicrobial disposable cloths, before crossover to the alternate bathing treatment for 10 weeks. Each unit crossed over between bathing assignments 3 times during the study.

**Main Outcomes and Measures**  The primary prespecified outcome was a composite of central line–associated bloodstream infections (CLABSIs), catheter-associated urinary tract infections (CAUTIs), ventilator-associated pneumonia (VAP), and *Clostridium difficile* infections. Secondary outcomes included rates of clinical cultures that tested positive for multidrug-resistant organisms, blood culture contamination, health care–associated bloodstream infections, and rates of the primary outcome by ICU.

**Results**  During the chlorhexidine bathing period, 55 infections occurred: 4 CLABSI, 21 CAUTI, 17 VAP, and 13 *C difficile*. During the control bathing period, 60 infections occurred: 4 CLABSI, 32 CAUTI, 8 VAP, and 16 *C difficile*. The primary outcome rate was 2.86 per 1000 patient-days during the chlorhexidine and 2.90 per 1000 patient-days during the control bathing periods (rate difference, −0.04; 95% CI, −1.10 to 1.01;*P* = .95). After adjusting for baseline variables, no difference between groups in the rate of the primary outcome was detected. Chlorhexidine bathing did not change rates of infection-related secondary outcomes including hospital-acquired bloodstream infections, blood culture contamination, or clinical cultures yielding multidrug-resistant organisms. In a prespecified subgroup analysis, no difference in the primary outcome was detected in any individual intensive care unit.

**Conclusion and Relevance**  In this pragmatic trial, daily bathing with chlorhexidine did not reduce the incidence of health care–associated infections including CLABSIs, CAUTIs, VAP, or *C difficile*. These findings do not support daily bathing of critically ill patients with chlorhexidine.

**Trial Registration**  clinicaltrials.gov Identifier: [NCT02033187](http://clinicaltrials.gov/show/NCT02033187)