BACKGROUND: Chlorhexidine gluconate (CHG) bathing has been reported to decrease bloodstream infections and colonisation of multidrug-resistant organisms (MROs) in intensive care units (ICUs). However, its effectiveness in an Australian setting has not been assessed.

OBJECTIVE: To test whether the introduction of ICU-wide CHG bathing in place of triclosan would affect rates of the primary outcome of central line-associated bloodstream infections (CLABSI), or the secondary outcomes of ICU-acquired positive blood cultures or other clinical specimens, and MRO colonisation including methicillin-resistant Staphylococcus aureus (MRSA) and vancomycin-resistant enterococci (VRE).

METHODS: We conducted a single-centre, sequential, before-and-after observational study. Patient microbiological and clinical data were compared in the 12 months before and after the introduction of CHG bathing in the ICU.

RESULTS: A total of 4262 ICU admissions were studied, 2117 before and 2145 during the CHG-bathing period. There were no significant changes in the rates of CLABSI (from 1.69/1000 central venous catheter-days [95% CI, 0.68-3.48] to 1.33 [95% CI, 0.49-2.90]; P = 0.68), or ICU-acquired positive blood cultures (from 5.14/1000 patient-days [95% CI, 3.45-7.39] to 4.45 [95% CI, 3.00-6.36]; P = 0.58). However, we observed a lower incidence of MRSA acquisition during the CHG-bathing period (mean difference, -2.13 [95% CI, -3.65 to -0.60] per 1000 patient-days; P = 0.007). There was no difference in the rate of isolates involving other pathogens including VRE.

CONCLUSIONS: In a tertiary Australian ICU, routine CHG bathing compared with triclosan did not affect the rates of ICU-acquired CLABSI or positive blood cultures. However, it significantly decreased the incidence of MRSA acquisition.
Reference: