We employed a mathematical model to assess the impact of CHG patient bathing on central line-associated bloodstream infections (CLABSIs), catheter-associated urinary tract infections (CAUTIs), and hospital-onset Clostridium difficile (C diff) infections and the associated costs” Reagan et al 92019).

Abstract:

BACKGROUND: Multiple studies have shown that bathing with chlorhexidine gluconate (CHG) wipes reduces hospital-acquired infections (HAIs). We employed a mathematical model to assess the impact of CHG patient bathing on central line-associated bloodstream infections (CLABSIs), catheter-associated urinary tract infections (CAUTIs), and hospital-onset Clostridium difficile (C diff) infections and the associated costs.

METHODS: Using a Markov chain, we examined the effect of CHG bathing compliance on HAI outcomes and the associated costs. Using estimates from 2 different studies on CHG bathing effectiveness for CLABSI, CAUTI, and C diff, the number of HAIs per year were estimated along with associated costs. The simulations were conducted, assuming CHG bathing at varying compliance rates.

RESULTS: At 32% reduction in HAI incidence, increasing CHG bathing compliance from 60% to 90% results in 20 averted infections and $815,301.75 saved cost.

CONCLUSIONS: As CHG bathing compliance increases, yearly HAIs decrease, and the overall cost associated with the HAIs also decreases.

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Reference:

Reagan, K.A., Chan, D.M., Vanhoozer, G., Stevens, M.P., Doll, M., Godbout, E.J., Cooper, K.,