

Appendix 2b: Studies on chlorhexidine-impregnated cloths

Author, year, reference	Design, scope, setting, population	Objective	SSI definition	Type of surgery	Study methods	Intervention	Results
Graling, 2013 ²⁶	<p>Prospective cohort study</p> <p>USA</p> <p>619 adult patients</p> <p>Exclusion criteria: patients with missing records or who did not receive a CHG bath.</p>	To determine the effectiveness of a CHG 2% no-rinse cloth bath for patients within 3 hours of scheduled surgery for the reduction of SSI.	CDC criteria	General, vascular and orthopaedic surgical procedures	<p>Inclusion criteria included patients older than 18 years who were scheduled for surgery in the main operating room suite, including inpatient, urgent, and same-day admission status. Patients meeting inclusion criteria were sent a follow-up letter regarding their status to their physician's office for completion at 30 days after surgery. Control data was extracted from the institution's national surgical quality improvement programme database as a baseline comparison. The</p>	<p>CHG 4% solution group: patients instructed to shower 2 times with a CHG 4% antiseptic solution before admission to hospital.</p> <p>CHG 2% cloths group: patients were given warmed packages of CHG 2% cloths and instructions on how to apply the "bath" before changing into clean hospital gowns prior to surgery.</p>	<p>CHG 4% solution group SSI: 18/284</p> <p>CHG 2% cloths group SSI: 7/335</p> <p><i>P</i>=0.01</p>

					comparison group was chosen from the corresponding time frame one year before the project began.		
Johnson, 2010 ²⁷	Prospective cohort record review USA 1054 adult patients Exclusion criteria: patients of surgeons who did not perform at least 20 hip arthroplasties each year.	To evaluate the effectiveness of an advance, at-home CHG-impregnated skin preparation cloth in decreasing the incidence of deep periprosthetic hip arthroplasty infections.	Not stated	Orthopaedic (hip arthroplasty)	Prospectively collected infection-tracking database of all patients undergoing hip arthroplasty was reviewed. All surgeons at the institution were asked to have patients perform an at-home application of a CHG cloth (instructions given), while "non-compliant" patients received only standard perioperative site preparation with DuraPrep™ (0.7% povidone iodine + 74% isopropyl alcohol; 3M, St Paul, MN, USA) paint.	Patients were instructed to use a pack of CHG 2% cloths in 2 applications (6 wipes each). One on the night before surgery and one on the morning of surgery. One cloth applied to head and trunk, one to each arm, one to each leg and one to the surgical site.	Not compliant with CHG cloth bathing protocol: 714/897 CHG cloth group: 0/157 <i>P</i> =0.231

<p>Johnson, 2013 28</p>	<p>Prospective cohort record review</p> <p>USA</p> <p>2213 adult patients</p> <p>Exclusion criteria: none specified</p>	<p>To evaluate the incidence of SSI in total knee arthroplasty patients with a preadmission cutaneous skin preparation protocol compared with a cohort of patients undergoing standard in-hospital perioperative preparation only.</p>	<p>CDC criteria</p>	<p>Orthopaedic (knee arthroplasty)</p>	<p>Infection-tracking database of all patients undergoing knee arthroplasty was reviewed. All surgeons at the institution were asked to have patients perform an at-home application of CHG cloths (instructions given), while "non-compliant" patients received only standard perioperative site preparation with DuraPrep™ paint.</p>	<p>Patients were instructed to use a pack of CHG 2% cloths in 2 applications (6 wipes each; each cloth contained 500 mg CHG) on the night before surgery and one in the morning of surgery. One cloth applied to head and trunk, one to each arm, one to each leg and one to the surgical site.</p>	<p>Not compliant with CHG cloth bathing protocol: 38/1735</p> <p>CHG cloths group: 3/478</p> <p><i>P</i>=0.021</p>
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SSI: surgical site infection; CHG: chlorhexidine gluconate; ASEPSIS (score): A=additional treatment; S=serous discharge; E=erythema; P=purulent system score; exudate; S=separations of deep tissue; I=isolation of bacteria; S=stay in hospital prolonged >14 days; NS: not significant; RCT: randomized controlled trial; CFU: colony-forming units.