



Device Related Infections:

In a major effort to lower CLABSI and CAUTI rates, Cornerstone Specialty Hospital replaced daily soap and water bathing with Hibiclens skin cleansing. Implementing bathing standardization, staff education, consistent root cause analysis for events, and reinforcement of evidence-based strategies led to a significant decrease in infections. CLABSI rates decreased 100% and CAUTI rates 67% in the 8 months post intervention. **(Model for Enhancement, Advancement and Improvement used to Lower HAIs, Kiacee Farmer, BSN,RN, MHA,HACP, Toi Grimm, RN. IHI Forum 2020)**

Good Samaritan Hospital Medical Center focused on CAUTI prevention strategies. EBP interventions included a nurse driven protocol for urinary catheters, soap and water peri care, expanding Hibiclens patient bathing using HUBS cloths beyond the ICU to housewide and increased monitoring. Overall CAUTI reduction over was 90%, with the Med-Surg units reaching 100% reduction. In addition, CRE lab ID events decreased 50%. **(A Multidisciplinary Approach Leads to a Significant Reduction in Hospital Acquired Infections, Kathy DiBenedetto, MSN,RN,CIC, Jeannine Sesack, BS,MT(ASCP)CIC, IHI Forum 2020)**

To address an increase in healthcare acquired infections, CarolinaEast Medical Center performed audits and identified specific bundle elements to target for increased compliance including Hibiclens daily patient bathing, Foley catheter maintenance and central line dressing care. Following an increase to almost 90% compliance, there was a 92% reduction in CLABSI and CAUTIs. **(Owned and Operated by Engaged Staff - How to Reach Zero, (Kathryn Buck, MSN, RN, CEN, AGCNS-BC, Cathy Fischer, RN, MSN, CIC, Vizient Education Summit, 2019)**

Following an increase in Healthcare Associated Infections (HAIs) in the Oncology unit, St. Joseph Health Hospital presented a business case to leadership demonstrating a significant Return on Investment (ROI) to expand Hibiclens patient bathing beyond ICU and post- surgical patients to all patients house-wide. Results included a CLABSI reduction of 65% and other HAI decreases from 28%-100% resulting in a \$514,739 cost avoidance. **(Utilizing a Business Case to Link Reduction in Infections to Reduction in Costs, Pearl Lavalette, RN, MSN, CIC, Debra Steves, RN, BSN, RNC, Poster Presentation, APIC 2019)**

Abilene Regional Medical Center lowered CLABSIs by 67.8% and significantly raised HCAHPS scores after effectively addressing barriers to CHG use by staff and patients. To increase patient satisfaction and gain compliance, they assessed gentleness and ease of use, ultimately choosing the Hibiclens/HUBS bathing system. **(Reducing Infections and Increasing Patient Satisfaction: One Hospital's Journey, Paulina Rodriquez, Abilene Regional Medical Center, Infection Control Today, June 2018)**

Oncology patients are particularly susceptible to infection. Stanford Health Care used Hibiclens as part of an infection reduction bundle and lowered CLABSIs 63%. **(Central Line-Associated Bloodstream Infections and Mucosal Barrier Injury Laboratory-Confirmed Bloodstream Infections: Results from a Quality-Improvement Project in a Hematology-Oncology Unit, May M. Riley, RN, MSN, et al, APIC Poster Presentation, 2018)**

To address CAUTIs, The Yale-New Haven Hospital MICU implemented a multidisciplinary bundle for reduction that included all patients bathed daily with Hibiclens. Among other strategies, bath basins were changed daily, dated and marked for "bath use only" to prevent contamination. MICU CAUTIs reduced from 9 to zero. **(Zero Catheter Associated Urinary Tract Infections in the Medical Intensive Care Unit at Yale-New Haven Hospital (YNHH), Laura DeVaux, Harry Byrne, et al. Poster Presentation Critical Care Nurses, 2013)**



Multiple Drug Resistant Organisms (MDROs):

Maine General Medical Center implemented universal decolonization using Hibiclens skin cleanser to standardize the bathing process, decrease routine contact precautions costs and free staff time for direct patient care. Hospital spend for gowns lowered 49.9% from \$226,727.68 to \$113,445.12 in one year, a savings of \$113,282.56. In addition, there was a 50% decrease in CLABSI and no transmission increase in MRSA or VRE. **(Bathe the Patient, Get Rid of the Gown, Troy Cutler, RN, CIC, IHI Forum 2020)**

Jackson Health System was experiencing higher than expected HO MRSA bacteremia. In response, universal decolonization was implemented in 4 phases. Phase 1: AST and CHG wipes, contact precautions; Phase 2: AST, switch to Hibiclens for daily bathing, nasal Mupirocin, contact precautions discontinued; Phase 3: No AST, continued Hibiclens bathing, nasal decolonization changed to alcohol-based sanitizer; Phase 4: Added distributing hand sanitizer wipes to patients. HO MRSA bacteremia SIR decreased from 3.66 to 0.97. The largest decrease in cases was attained after daily Hibiclens bathing, nasal sanitizer and patient hand wipes were implemented. **(Reduction of Hospital-Onset Methicillin Resistant *Staphylococcus aureus* (MRSA) Bacteremia in an Acute Care Hospital. Impact of Bundles and Universal Decolonization, Adriana Jimenez, Kathleen Sposato, et al, ID Week 2019 Poster presentation)**

Clostridium difficile is recognized as a top challenge in hospitals. One acute care hospital lowered CDI rates by 88%, with only one hospital onset CDI in 100 days. As part of a multi-pronged approach, the facility attributed a change in patient bathing to Hibiclens for a significant part of the decrease. **(A Bundled Approach to Clostridium difficile Infection Reduction, Kimberly Candray, CIC, BS, MT(ASCP), Infection Control Today, October 2018)**

Moffitt Cancer Center replaced CHG impregnated wipes with Hibiclens daily patient bathing in response to low patient compliance. Following implementation of the protocol, patients reported greater satisfaction and compliance rose to 84%. VRE acquisition rate showed a 39% reduction from baseline and the hospital realized a cost savings switching from CHG wipes to Hibiclens. **(Cancer Center's Experience Converting from Chlorhexidine Gluconate Impregnated Wipes to Chlorhexidine Gluconate Shower on Inpatient Blood and Marrow Transplant Unit, Stephanie Carraway, BS, et al, Lee Moffitt Cancer Center, APIC Poster presentation, June 2015)**

Nebraska Medical Center reported a 70% decline in CDIs using Hibiclens for patient bathing in the intensive care units. Because HIBICLENS was applied via a traditional bed bath, physical removal of spores from the skin may have occurred and resulted in decreased environmental contamination. **(Effect of Hospital-wide Chlorhexidine Patient Bathing on Healthcare-Associated Infections, Rupp ME, et al. Infection Control and Hospital Epidemiology, November 2012)**

Nebraska Medical Center suspended routine contact isolation precautions house wide for endemic MRSA and VRE. Hand hygiene, environmental cleaning/disinfection and Hibiclens bathing protocols were implemented and compliance monitored. Rates were compared from the 12 months before and 12 months after contact isolation precautions were discontinued and showed no change in acquisition or infection rates for endemic MRSA and VRE. **(Cessation of Contact Isolation for Endemic MRSA and VRE is Not Associated with Increased Infections, Mark E Rupp, MD, et al, Poster Abstract Session: HAI: MSSA, MRSA, and other Gram-Positives, Infectious Disease Week, October 27, 2016)**



Upstate Medical Center sought a CHG product to lower infections that would be well tolerated in the BMT population. Following low patient compliance and complaints, wipes were eliminated and Hibiclens foam was used daily in place of the soap in the shower. Compliance increased and a significant cost savings was noted when the facility converted to the use of the foam. There was not a statistically significant increase in the number of skin complications for the patients. (**Chlorhexidine Gluconate Bathing Tolerance in Bone Marrow Transplant and Leukemic Patients**, Holly Briere RN, BSN, OCN; Bonnie Chapman RN, MPH, Bone Marrow Transplant Unit, University Hospital at SUNY Upstate Medical University, Syracuse, NY, Oncology Nursing Society Annual Congress: Clinical/Evidence-Based Practice Abstracts, 2013)

In a multicenter trial, daily bathing with Hibiclens demonstrated that the implementation of daily patient bathing with Hibiclens significantly reduced the acquisition of VRE and MRSA and healthcare-associated bacteremias across several large university-affiliated ICUs. Results were a 32% reduction in the MRSA incidence rate and a 50% reduction in the VRE incidence rate. There was also a significant reduction in the number of VRE bacteremias. (**The effect of daily bathing with chlorhexidine on the acquisition of methicillin-resistant *Staphylococcus aureus*, vancomycin-resistant *Enterococcus*, and healthcare-associated bloodstream infections: Results of a quasi-experimental multicenter trial**, Michael W. Climo, et al, Critical Care Medicine, 2009)

Surgical Site Infections (SSIs):

Tucson Medical Center developed an SSI Reduction Pathway incorporating both current and newly implemented strategies to address SSIs in their C- section patient population. Among additions were Hibiclens pre-operative showering, standardized wound care instructions and a decision tree for Mepilex Border Post op AG use by surgeons. SSI rates decreased from 18 in 2018 to 2 year to date (October) in 2019: an 88% decrease. (**Working together, The Power of Teamwork in Preventing C-section SSI's**, Stacie Wood, RN and Dr. Gina Connelly, Perinatal Leadership Forum Poster Presentation, 2019, AORN poster presentation, 2020)

Mercy Hospital noted an opportunity with total hip and knee arthroplasty as well as spinal fusion infection rates. Several elements were added to the current strategies bundle including Hibiclens bathing prior to surgery. To gain compliance with infection reduction strategies, a standardized audit tool was developed to follow the patient from preadmission to discharge. Since audit tool implementation, compliance of best practice elements have been higher than hospital goals and there has been an average 31.5% decrease in SSIs across all audit tool surgical procedures, with decreases ranging from 15.5% to 60.6% per surgery type. (**Coordinating the Spectrum of Care for Surgical Patient Safety**, Antoinette F. Kanne, RN, MS, CNOR, APRN BC, Sean Balagna RN-BSN CIC, AORN poster presentation, 2020)

A spike in C section superficial surgical site infections (SSIs) at Maine General Medical Center was addressed with a focused postoperative infection reduction strategy implementation. Along with patient and staff education, Hibiclens was used for post- operative showering and wound cleansing after dressing removal. Rates lowered by 65% over 8 months. (**Post-Operative Strategies for Reducing Surgical Site Infection after Cesarean Section**, Tracey Shaw, Infection Control Today, Jan.-Feb. 2020)

Faced with increasing patient readmissions for Surgical Site and MDRO infections, CarolinaEast Medical Center educated skilled nursing facilities on evidence- based infection prevention strategies in use at the acute care hospital. Several practice changes were implemented, including Hibiclens patient bathing for post- surgery patients and those with MDROs. 8 months after full implementation of several practice changes, there was a 90% reduction in MDRO infections and zero-transmission was reached. There have been no further readmissions with surgical site infections. (**Hospital and Skilled Nursing Facility Collaboration Reduces Infections**, Cathy Fischer, MSN, RN, CIC, and Jaime Drake, RN, CMSRN, American Nurse Today, September 2019)



CarolinaEast Medical Center Infection Prevention (IP) partnered with the local Pruitt Health IP to reduce readmissions due to SSIs and multidrug resistant organisms. Among other strategies, Hibiclens daily bathing was implemented for all post-operative patients as well as patients with MDROs. SSI readmissions lowered to zero and the MDRO outbreak in both facilities halted. **(Partnering with Skilled Nursing Facilities - Your How-to Manual**, Cathy Fischer, RN, MSN, CIC, Jaime Drake, RN, Vizient Education Summit, 2019)

Massachusetts General Hospital sought to lower SSIs among colorectal surgery patients. To improve compliance, patients were provided with a Surgical Site Infection Prevention Kit (SSIPK) containing Hibiclens as the preoperative bathing product as one part of a bundle including instructions, carbohydrate drink and bowel prep. Compliance increased, the SSI rate lowered from 11.4% to 5.9% and unplanned readmissions reduced from 14.6% vs. 5.9%. **(Colorectal Surgical Site Infection Prevention Kits Prior to Elective Colectomy Improve Outcomes**, Sarah E. Deery, MD, MPH, et al, Annals of Surgery, January 24, 2019)

Indiana University implemented a preoperative, patient-centered wellness bundle which included Hibiclens and showed statistically significant reductions in postoperative infectious complications. The program was associated with fewer SSI, CDI and CAUTI. Colon and abdominal hysterectomy rates reduced from 9.4 per 100 surgical cases preintervention to 4.9 postintervention. **(Impact of a Novel Preoperative Patient-centered Surgical Wellness Program**, Kristen E. Kelley, MPH, RN, CIC, et al, Annals of Surgery, October 2018)

Memorial Sloan Kettering Cancer Center implemented a multidisciplinary SSI bundle including Hibiclens for pre-operative showering for colorectal and hepatic surgery patients. The results included a reduced rate of SSI for combined colorectal and liver resection by 61%, including 81% and 48% reductions in superficial/deep and organ space SSI, respectively. **(A Perioperative Multidisciplinary Care Bundle Reduces Surgical Site Infections in Patients Undergoing Synchronous Colorectal and Liver Resection**, Lauren S. Tufts, et al, <https://doi.org/10.1016/j.hpb.2018.07.001>, HPB (Oxford). 2018)

The University of Alabama Birmingham Hospital used Hibiclens for pre-op and post-op showering as part of an interdisciplinary approach to lower SSIs in C-section patients. The strategies resulted in a decrease in SSI rates from 5.9% in 2015 to 0.6% in the first two quarters of 2017 along with improved patient outcomes, less readmissions and cost avoidance for the institution. **(Creating a Surgical Site Infection Prevention Bundle for Patients Undergoing Cesarean Delivery**, Laura Money, MSN, RN, et al, AORN Journal, October 2018)

Rochester Methodist Hospital used Hibiclens for pre and postoperative showering as part of an SSI reduction protocol for colorectal patients. They also sent Hibiclens home for post-operative wound cleansing. The overall ACS NSQIP infection rate had been 9.8%. After implementation of the SSI bundle, there was a significant decline in both overall SSIs to 4.0% and in superficial SSIs from 4.9% to 1.5%. Organ space infections also declined. **(Colorectal Surgery Surgical Site Infection Reduction Program: A National Surgical Quality Improvement Program Driven Multidisciplinary Single-Institution Experience**, Robert Cima, MD, et al.; on behalf of the Colorectal Surgical Site Infection Reduction Team, Mayo Clinic, 2013)

Rochester Methodist Hospital, part of the Mayo Clinic, implemented an SSI reduction bundle for cases of open uterine cancer, ovarian cancer without bowel resection, and ovarian cancer with bowel resection. Hibiclens was used as part of an overall bundle for pre and post -op showering and post -operative wound cleansing. Results showed a relative risk reduction in surgical site infections of 82.4%. **(Using Bundled Interventions to Reduce Surgical Site Infection After Major Gynecologic Cancer Surgery**, Megan P. Johnson, PA-C, et al, Obstetrics and Gynecology, 2016)



Antibiotic Stewardship:

Madonna Rehabilitation Hospital utilized HIBICLENS for bathing residents in order to lower the microbial counts on the skin and decrease the occurrence of symptoms of infection and antibiotic use. There was a decrease in antibiotic treated symptoms and a decrease in antibiotic costs and number of return visits to acute care for the residents in the trial. (**Utilizing Chlorhexidine Gluconate Bathing to Decrease Symptoms of Infection and Antibiotic Use in Residents on a Post-Acute Ventilator/ Special Needs Unit**, Kristina K. Felix BA, RN, CRRN, CIC, et al. Poster Abstracts / American Journal of Infection Control 42, 2014)

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