

Prevention Period	Evidence Based Recommendations	Best Practice Recs
<p style="text-align: center; font-size: 24pt; font-weight: bold;">Pre-Operative</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; color: red; font-weight: bold;"> <p><i>Greatest opportunity to impact patient risk factors.</i></p> </div>	<ul style="list-style-type: none"> ● EDUCATION: <ul style="list-style-type: none"> ○ SSI prevention (CHG bathing instructions, hand washing, clean linens) [16] ○ CHG pre-op cleanse, following the product instructions [16, 9] ○ Cessation of smoking at least 30 days pre-operatively [11, 22] ○ Hand hygiene – Staff, patients, and family [16, 9] ● MRSA/MSSA SCREENING: Recommend screening of nares for Staphylococcus aureus (MSSA, MRSA) using a method that your facility determines is optimal for the population you serve [2] <ul style="list-style-type: none"> ○ If positive for MRSA, use this result to guide selection of pre-op antibiotic prophylaxis. ● MRSA/MSSA DECOLONIZATION: For those found to be colonized with Staphylococcus aureus (MRSA, MSSA or both), treat as follows per product instructions and facility-specific policy: [2] <ul style="list-style-type: none"> ○ Nasal Decolonization: <ul style="list-style-type: none"> ▪ Apply Intranasal Mupirocin for 5 days beginning ≥ 2 days prior to day of surgery and continue for full 5 days OR ▪ Intranasal Povidone-Iodine Solution of at least 5%, 2 applications ≥ 1 hour prior to incision ○ Body Cleanse - CHG 2% [9, 8, 14, 20] <ul style="list-style-type: none"> ▪ DO NOT use CHG on face, hair or genital area. Apply from chin to toes. ▪ If using CHG liquid soap, shower or bathe at least the night before and morning of procedure ▪ If using CHG cloth, use at least 1 application the night before or day of procedure. ▪ If sensitive to CHG, use any antimicrobial or regular soap. ● ANTIBIOTICS: Select appropriate antibiotic prophylaxis according to guidelines: [1, 12, 10] <ul style="list-style-type: none"> ○ Cefazolin for all patients except those with Cefazolin allergies ○ Daptomycin or Vancomycin for those with Cefazolin allergies (use weight-based dosing) ○ Both Cefazolin and Vancomycin for MRSA positive ○ Administer pre-op antibiotics consistent with National Guidelines (Within 1-hour pre-incision and 2 hours when using Vancomycin) [1, 12] ○ Use weight-based dosing and repeat doses during prolonged procedures per national guidelines and facility-specific policy. ● HAIR REMOVAL: Do not remove hair unless absolutely necessary [8, 6] <ul style="list-style-type: none"> ○ If removing, use clippers or depilatory creams, not a razor. ○ Preferably remove hair in pre-operative area 	<ul style="list-style-type: none"> ● Clean pajamas worn by everyone in your bed, keep pets out of the bed from night before surgery through post-operative period ● Optimize treatment/management of medical co-morbidities ● Counsel patient on nutrition and weight management. ● Treat remote infections prior to surgery or delay the case (Microbial colonization without infection should not be treated with antimicrobials, except with Staph Aureus nasal colonization) ● If MRSA positive, follow facility-specific policy for isolation and/or refer to HICPAC/CDC Isolation Guidelines; 2017 [7] ● Instruct patient not to use razor around the affected joint for 1-2 weeks prior to scheduled surgery. Rationale is to avoid any abrasions on skin near planned surgical site.

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<p style="text-align: center; font-size: 1.2em;">Intra-Operative</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; color: red; font-weight: bold;"> <p>Many surgical site infections are seeded during surgery.</p> </div>	<ul style="list-style-type: none"> • Intra-op re-dosing of antibiotics is recommended per policy [12] • Prep with an alcohol-based agent, unless contraindicated [9, 7] <ul style="list-style-type: none"> ○ Follow product instructions ○ Ensure compatibility if using incise drape ○ Ensure competency of peri-operative staff on hire and annually per facility specific policy • Open trays/ containers of sterile surgical instruments and implants as close to the start of the surgical procedure as possible. [8] • Minimize intraoperative foot traffic, door opening and total personnel in room [3, 7, 17] • Use banners or signs at points of entry to Operating Room • e.g. "DO NOT ENTER except for emergency; JOINT REPLACEMENT underway". • Maintain HVAC parameters consistent with ASHRAE 170 standard [4, 7] • Maintain perioperative normothermia [9] • Consider implementing perioperative glycemic control; blood glucose target <200mg/dL [9] • Scrub team to follow your facility's policy for attire and hand hygiene [7, 19] • Recommended irrigant – Normal saline <ul style="list-style-type: none"> ○ MARCQI does not recommend the use of antibiotic or antiseptic irrigation solution as it has not proven to lower the risk for infection in MARCQI data. • MARCQI does not recommend the use of antibiotic powder in the joint capsule as it has not proven to lower the risk for infection in MARCQI data. 	<ul style="list-style-type: none"> • Consider routine use of pre-incision checklist such as the WHO Surgical Safety Checklist or your institution's checklist.
<p style="text-align: center; font-size: 1.2em;">Post-Operative</p>	<ul style="list-style-type: none"> • Discontinue antibiotic prophylaxis within 24 hrs after closure of incision. [3, 12, 21] • Use of occlusive dressing can reduce the risk of PJI [13, 15] • MARCQI recommends against the use of an indwelling urinary catheter [5, 18, 19] <ul style="list-style-type: none"> ○ If used, remove ASAP and < 24 hours after placement [5, 18] 	<ul style="list-style-type: none"> • Apply sterile dressing and ensure it stays clean/dry/intact for at least 24-48 hrs post operatively
<p style="text-align: center; font-size: 1.2em;">Additional Strategies</p>	<ul style="list-style-type: none"> • Share SSI rates with surgeons and perioperative team [7, 17] • Ensure ongoing education with staff on hire and annually thereafter to prevent SSI's [7] • Collaborate with Quality Leadership to improve compliance with the above strategies. <ul style="list-style-type: none"> ○ Create processes to monitor and analyze the evidence based and best practice recommendations in this toolkit [7] 	

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