

PROCEDURE GUIDELINES

⇒ Prophylactic Antibiotic Use Peri-Op

Commonly used

Type of Surgery	Recommended	Alternate recommendation
OTHER Surgery		
Foreign body – clean case	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
Pacemaker	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision) or Vancomycin 1000 mg IV (within 1 hr prior to incision)
Gastro-Duodenal	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
Biliary tract	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
Back surgery	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
Neck surgery	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
Appendectomy	Cefotetan 2gm IV or Cefoxitin 2 gm IV (within 1 hr prior to incision)	Gentamicin (1.5mg/kg) with Metronidazole 500mg if PCN allergy (within 1 hr prior to incision) (within 1 hr prior to incision)
Colorectal	<i>PREOP Home: Mechanical prep and PO Neomycin 1gm and Erythromycin 1gm (4pm, 5pm, MN)</i> Cefoxitin 1gm IV	PREOP: Mechanical prep and PO Neomycin 1gm and Erythromycin 1gm (4pm, 5pm, MN) Clindamycin 600mg IV and Gentamicin 1.7mg/kg IV (within 1 hr prior to incision)
Bone Marrow Biopsy	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
GYN	Cefazolin 1gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)
Orthopedics	Cefazolin 1gm IV (within 1 hr) if < 60 kg Cefazolin 2gm IV (within 1 hr) if 60 to 120 kg Cefazolin 3gm IV (within 1 hr) if > 120 kg	Clindamycin 600mg IV (within 1 hr prior to incision)
Bariatric Surgery		
Sleeve/ LB,RYGB, BPDS-DS	Cefazolin 2gm IV (within 1 hr prior to incision)	Clindamycin 600mg IV (within 1 hr prior to incision)

Strength of evidence based Prophylactic Antibiotic Use

1. Bariatric Surgery

Type of Procedure	Recommended Agents	Alternative Agents in Pts With b-Lactam Allergy	Strength of Evidence
Gastroduodenale Procedures involving entry into lumen of gastrointestinal tract (bariatric, pancreaticoduodenectomy) Procedures without entry into gastrointestinal tract (antireflux, highly selective vagotomy) for high-risk patients	Cefazolin	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone	A
	Cefazolin	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone	A
Biliary tract Open procedure	Cefazolin, cefoxitin, cefotetan, ceftriaxone, ampicillin–sulbactam	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	A
Laparoscopic procedure Elective, low-risk Elective, high-risk	None Cefazolin, cefoxitin, cefotetan, ceftriaxone, ampicillin–sulbactam	None Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	A
Appendectomy for uncomplicated appendicitis	Cefoxitin, cefotetan, cefazolin + metronidazole	Clindamycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	A
Small intestine Nonobstructed Obstructed	Cefazolin Cefazolin + metronidazole, cefoxitin, cefotetan	Clindamycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	C
Hernia repair (hernioplasty and herniorrhaphy)	Cefazolin	Clindamycin, vancomycin	A
Colorectal	Cefazolin + metronidazole, cefoxitin, cefotetan, ampicillin–sulbactam, ceftriaxone + metronidazole, ertapenem	Clindamycin + aminoglycoside or aztreonam or fluoroquinolone, metronidazole + aminoglycoside or fluoroquinolone	A

2. NeuroSurgery / Chronic Pain Management

Type of Procedure	Recommended Agents	Alternative Agents in Pts With b-Lactam Allergy	Strength of Evidence
Neurosurgery:			
Elective craniotomy and cerebrospinal fluid-shunting procedures	Cefazolin	Clindamycin or vancomycin	A
Implantation of intrathecal pumps	Cefazolin	Clindamycin or vancomycin	C
<p>Summary of acceptable SCIP measures for vancomycin pre-operative use: Vancomycin may be used for pre-operative antibiotics IF the following is documented in the patient's chart:</p> <ol style="list-style-type: none"> 1) Documentation of beta-lactam (PCN or cephalosporin) allergy. 2) Documentation of MRSA infection or colonization. 3) Documentation of patient being at high risk for MRSA due to acute inpatient hospitalization with the last year. 4) Documentation of patient being high risk due to nursing home or extended care facility within the last year. 5) Documentation of chronic wound care or dialysis. 6) Documentation of continuous inpatient stay more than 24 hours prior to the principle procedure. 7) Documentation of patient undergoing valve surgery 8) Documentation of patient being transferred from another inpatient hospitalization after a 3 day stay. <p><i>Reference: SCIP 1-440, version 3.0, Specifications Manual for National Hospital Inpatient Quality Measures Discharges 01-01-13 (113) through 12-31-13 (4Q13).</i></p>			

3. Cardiac

Type of Procedure	Recommended Agents	Alternative Agents in Pts With b-Lactam Allergy	Strength of Evidence
Cardiac			
Coronary artery bypass	Cefazolin, cefuroxime	Clindamycin or vancomycin	A
Cardiac device insertion procedures (e.g., pacemaker implantation)	Cefazolin, cefuroxime	Clindamycin or vancomycin	A
Ventricular assist devices	Cefazolin, cefuroxime	Clindamycin or vancomycin	C
Thoracic			
Noncardiac procedures, including lobectomy, pneumonectomy, lung resection	Cefazolin ampicillin - sulbactam	Clindamycin or vancomycin	A
Heart, lung, heart-lung transplantation			
Heart transplantation	Cefazolin	Clindamycin or vancomycin	A (based on cardiac procedures)
Lung and heart-lung transplantation,	Cefazolin	Clindamycin or vancomycin	A
<p>Summary of acceptable SCIP measures for vancomycin pre-operative use: Vancomycin may be used for pre-operative antibiotics IF the following is documented in the patient's chart:</p> <ol style="list-style-type: none"> 1) Documentation of beta-lactam (PCN or cephalosporin) allergy. 2) Documentation of MRSA infection or colonization. 3) Documentation of patient being at high risk for MRSA due to acute inpatient hospitalization with the last year. 4) Documentation of patient being high risk due to nursing home or extended care facility within the last year. 5) Documentation of chronic wound care or dialysis. 6) Documentation of continuous inpatient stay more than 24 hours prior to the principle procedure. 7) Documentation of patient undergoing valve surgery 8) Documentation of patient being transferred from another inpatient hospitalization after a 3 day stay. <p><i>Reference: SCIP 1-440, version 3.0, Specifications Manual for National Hospital Inpatient Quality Measures Discharges 01-01-13 (113) through 12-31-13 (4Q13).</i></p>			

4. General Surgery / Head & Neck / Urologic / Plastic Surgery

Type of Procedure	Recommended Agents ^{a,b}	Alternative Agents in Pts With b-Lactam Allergy	Strength of Evidence ^c
Gastroduodenale Procedures involving entry into lumen of gastrointestinal tract (bariatric, pancreaticoduodenectomy)	Cefazolin	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone	A
Procedures without entry into gastrointestinal tract (antireflux, highly selective vagotomy) for high-risk patients	Cefazolin	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone	A
Biliary tract Open procedure	Cefazolin, cefoxitin, cefotetan, ceftriaxone, ampicillin-sulbactam	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone	A
Laparoscopic procedure Elective, low-risk	None	None	A
Elective, high-risk	Cefazolin, cefoxitin, cefotetan, ceftriaxone, ampicillin-sulbactam	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	A
Appendectomy for uncomplicated appendicitis	Cefoxitin, cefotetan, cefazolin + metronidazole	Clindamycin + aminoglycoside or aztreonam or fluoroquinolone, Metronidazole + aminoglycoside or fluoroquinolone	A
Small intestine Nonobstructed	Cefazolin	Clindamycin + aminoglycoside or aztreonam or fluoroquinolone	C
Obstructed	Cefazolin + metronidazole, cefoxitin, cefotetan	Metronidazole + aminoglycoside or fluoroquinolone	C
Hernia repair (hemioplasty and herniorrhaphy)	Cefazolin	Clindamycin or vancomycin	A
Colorectal^m	Cefazolin + metronidazole, cefoxitin, cefotetan, ampicillin-sulbactam, ceftriaxone + metronidazole, ertapenem	Clindamycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	A
Head and neck Clean	None	None	B
Clean with placement of prosthesis (excludes tympanostomy tubes)	Cefazolin, cefuroxime	Clindamycin	C
Clean-contaminated cancer surgery	Cefazolin + metronidazole, cefuroxime + metronidazole, ampicillin-sulbactam	Clindamycin	A
Other clean-contaminated procedures with the exception of tonsillectomy and functional endoscopic sinus procedures	Cefazolin + metronidazole, cefuroxime + metronidazole, ampicillin-sulbactam	Clindamycin	B
Urologic Lower tract instrumentation with risk factors for infection (includes transrectal prostate biopsy)	Fluoroquinolone, trimethoprim-sulfamethoxazole, cefazolin	Aminoglycoside with or without clindamycin or vancomycin +	A
Clean without entry into urinary tract	Cefazolin (the addition of a single dose of an aminoglycoside may be recommended for placement of prosthetic material [e.g., penile prosthesis])	Clindamycin or vancomycin	A
Involving implanted prosthesis	Cefazolin ± aminoglycoside, cefazolin ± aztreonam, ampicillin-sulbactam	Clindamycin ± aminoglycoside or aztreonam, vancomycin ± aminoglycoside or aztreonam	A
Clean with entry into urinary tract	Cefazolin (the addition of a single dose of an aminoglycoside may be recommended for placement of prosthetic material [e.g., penile prosthesis])	Fluoroquinolone, aminoglycoside + with or without clindamycin	A
Clean contaminated	Cefazolin + metronidazole, cefoxitin	Fluoroquinolone, aminoglycoside + metronidazole, or clindamycin	A
Cesarean delivery	Cefazolin	Clindamycin ± aminoglycoside	A
Hysterectomy (vaginal or abdominal)	Cefazolin, cefotetan, cefoxitin, ampicillin-sulbactam	Clindamycin or vancomycin + aminoglycoside or aztreonam or fluoroquinolone Metronidazole + aminoglycoside or fluoroquinolone	A
Plastic Surgery Clean with risk factors or	Cefazolin, ampicillin-sulbactam	Clindamycin, vancomycin	C

5. Orthopedics

Type of Procedure	Recommended Agents ^{a,b}	Alternative Agents in Pts With b-Lactam Allergy	Strength of Evidence ^c
Orthopedic			
Clean operations involving hand, knee, or foot and not involving implantation of foreign materials	None	None	C
Spinal procedures with and without instrumentation	Cefazolin	Clindamycin, vancomycin	A
Hip fracture repair	Cefazolin	Clindamycin, vancomycin	A
Implantation of internal fixation devices (e.g., nails, screws, plates, wires)	Cefazolin	Clindamycin, vancomycin	C
Total joint replacement	Cefazolin	Clindamycin, vancomycin	A
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