TABLE 170-5 DRUG INDICATIONS FOR SPECIFIC INFECTIONS, ASSOCIATED PATHOGENS, AND SAMPLE SUSCEPTIBILITY RATES

Antimicrobial(s)	Infections	Common Pathogens (% Susceptible); Resistance as Noted[a]
Penicillin G	Syphilis; yaws; leptospirosis; streptococcal infections; pneumococcal infections; actinomycosis; oral and periodontal infections; meningococcal meningitis and meningococcemia; viridans streptococcal endocarditis; clostridial myonecrosis; tetanus; rat-bite fever; *Pasteurella multocida* infections; erysipeloid (*Erysipelothrix rhusiopathiae*)	*Neisseria meningitidis*; viridans streptococci (73%); *Streptococcus pneumoniae* (92% nonmeningitis; 65% meningitis)
Ampicillin, amoxicillin	Salmonellosis; acute otitis media; *Haemophilus influenzae* meningitis and epiglottitis; *Listeria monocytogenes* meningitis; *Enterococcus faecalis* UTI	*Escherichia coli* (52%); *H. influenzae* (70%); *Salmonella* spp. (91%)
Nafcillin, oxacillin	MSSA bacteremia and endocarditis	*Staphylococcus aureus* (68%); coagulase-negative staphylococci (47%)
Piperacillin-tazobactam	Intraabdominal infections (facultative enteric gram-negative bacilli and obligate anaerobes); infections caused by mixed flora (aspiration pneumonia, diabetic foot ulcers); infections caused by *Pseudomonas aeruginosa*	*P. aeruginosa* (88%)[b]
Cefazolin	*E. coli* UTI; surgical prophylaxis; MSSA bacteremia and endocarditis	*E. coli* (85%)
Cefoxitin, cefotetan	Intraabdominal infections and pelvic inflammatory disease	*Bacteroides fragilis* (60%)[c]
Ceftriaxone	Gonococcal infections; pneumococcal meningitis; viridans streptococcal endocarditis; salmonellosis and typhoid fever; hospital-acquired infections caused by nonpseudomonal facultative gram-negative enteric bacilli	*S. pneumoniae* (93%);[d] *E. coli* (93%); *Klebsiella pneumoniae* (89%)
Ceftazidime, cefepime	Hospital-acquired infections caused by facultative gram-negative bacilli and *Pseudomonas* spp.	*P. aeruginosa* (89%)
Ceftaroline	CAP caused by *S. pneumoniae*, MSSA, *H. influenzae, K. pneumoniae, Klebsiella oxytoca*, and *E. coli*; acute bacterial skin and skin-structure infections caused by MSSA, MRSA, *Streptococcus pyogenes, Streptococcus agalactiae, E. coli, K. pneumoniae*, and *K. oxytoca*	Mostly susceptible; four strains of MRSA with ceftaroline MICs >4 μg/mL reported in isolates from a single Greek hospital[e]
Imipenem, meropenem	Intraabdominal infections, infections caused by *Enterobacter* spp. and ESBL-producing gram-negative bacilli	*P. aeruginosa* (76% and 83%); *Acinetobacter calcoaceticus-baumannii* complex (81% and 82%)
Ertapenem	CAP; complicated UTIs, including pyelonephritis; acute pelvic infections; complicated intraabdominal infections; complicated skin and skin-structure infections, excluding diabetic foot infections accompanied by osteomyelitis or caused by *P. aeruginosa*	*Enterobacter cloacae* (87%); *K. pneumoniae* (97%)
Aztreonam	HAIs caused by facultative gram-negative bacilli and *Pseudomonas* in penicillin-allergic patients	*P. aeruginosa* (76%)
Vancomycin	Bacteremia, endocarditis, and other invasive disease caused by MRSA; pneumococcal meningitis; oral formulation for CDAD	*S. aureus* (100%); *E. faecalis* (89%); *E. faecium* (24%)
Telavancin	Hospital- and ventilator-associated pneumonia or skin and soft tissue infections caused by MRSA	*S. aureus* (100%)
Dalbavancin, oritavancin	Complicated skin and soft tissue infections	*S. aureus* (100%)
Daptomycin	VRE infections; MRSA bacteremia	*E. faecalis* (99.9%);[f] *E. faecium* (99.7%);[f] *S. aureus* (99.9%)[f]
Gentamicin, tobramycin, amikacin	Combined with penicillin for staphylococcal, enterococcal, or streptococcal endocarditis; combined with β-lactam for gram-negative bacteremia; pyelonephritis	*E. coli* (gentamicin, 91%); *P. aeruginosa* (amikacin, 87%; gentamicin, 81%); *A. calcoaceticus-baumannii* complex (amikacin, 68%; gentamicin, 83%)
Azithromycin, clarithromycin, erythromycin	*Legionella, Campylobacter*, and *Mycoplasma* infections; CAP; GAS pharyngitis in penicillin-allergic patients; bacillary angiomatosis; gastric infections due to *Helicobacter pylori*; MAI infections	*S. pneumoniae* (59%); group A streptococci (78%); *H. pylori* (75%)[g]
Clindamycin	Severe, invasive GAS infections (with β-lactam); infections caused by obligate anaerobes; infections caused by susceptible staphylococci	*S. aureus* (67%)
Doxycycline, minocycline	Acute bacterial exacerbations of chronic bronchitis; granuloma inguinale; brucellosis (with streptomycin); tularemia; glanders; melioidosis; spirochetal infections caused by *Borrelia* (Lyme disease and relapsing fever; doxycycline); infections caused by *Vibrio vulnificus*; some *Aeromonas* infections; infections due to *Stenotrophomonas* (minocycline); plague; ehrlichiosis; chlamydial infections (doxycycline); granulomatous infections due to *Mycobacterium marinum* (minocycline); rickettsial infections; mild CAP; skin and soft tissue infections caused by gram-positive cocci (e.g., CA-MRSA infections); leptospirosis; syphilis; and actinomycosis in the penicillin-allergic patient	*S. pneumoniae* (75%); *S. aureus* (94%)
Tigecycline	CAP caused by *S. pneumoniae, H. influenzae*, or *Legionella pneumophila*; complicated skin infections caused by *E. coli*, MRSA, MSSA, *S. pyogenes, Streptococcus anginosus, S. agalactiae, B. fragilis*; complicated intraabdominal infections caused by *E. coli*, vancomycin-susceptible *E. faecalis, Citrobacter freundii, Enterobacter cloacae, K. pneumoniae, K. oxytoca, Bacteroides* spp., *Clostridium perfringens*, and *Peptostreptococcus* spp.	Mostly susceptible, though case reports of resistance in *A. baumannii* and *K. pneumoniae*

(*Continued*)