

Site of Infection	Usual Infectious Agents	Empiric Antibiotic Coverage
Febrile Shock of Unknown Etiology	Bacteremia with aerobic gram – bacilli or gram + cocci Neutropenic: consider Aspergillus or Candida	Carbapenem OR Meropenem + Vancomycin . Use Linezolid if suspect VRE. If fever and neutropenia persists after 5 days of above therapy suspect Candida or Aspergillus - Voriconazole
Meningitis (bacterial, acute)	Strep pneumoniae, Nisseria meningitidis, H. influenza (now rare), Encephalitis-HSV	Ceftriaxone +/- Ampicillin +/- Acyclovir (for encephalitis)
Hospital Acquired Pneumonia	Depends on Clinical Setting - Post CVA aspiration: Strep pneumonia, Anaerobes MODS: Enterics, Mech Ventilation: Coliforms, Pseudomonas, Staph Aureus, Airway Obstruction : Anaerobes	Carbapenem. Add respiratory Quinolone if suspect Legionella. Add Vancomycin if suspect MRSA
Hospital Acquired Pneumonia with low Neutrophils or treatment failure with above	PCP, Fungi (Aspergillus, Candida)	For PCP: Petamidine OR TMP/SMX (Septra). Fluconazole or Voriconazole for fungi. *No Amphoterin B unless increased likelihood of fungal infection.
Infected Endocarditis (prosthetic valve)	Staph epidermis, Staph aureus, Enterobacteriaceae, Enterococci, Fungi	Vancomycin + Rifampin + Gentamicin. Device may need to be removed.
Infective Endocarditis (native valve)	Strep viridans (or other strep infections), Enterococcus, Staph aureus	Pen G or Ampicillin + Gentamicin + Oxacillin. Add Vancomycin if suspect MRSA
Sepsis with suspected urinary source	Enterobacteriaceae (usually e. coli), Pseudomonas + Enterococci	Ampicillin + Gentamicin OR Pip/Tazo OR Timentin OR Carbapenem
Sepsis with IVDU	Staph Aureus	Vancomycin
Intra-abdominal Sepsis +/- Bowel Perforation	Enterics, Enterococci, Strep pneumonia, Bacteriodes, Anaerobes	Cefotaxime OR Ceftriaxone OR Timentin OR Pip/Tazo If bowel perforation use a Carbapenem. Surgical intervention necessary to remove source of infection
Burn Wound Sepsis	Strep pyogenes, Enterococci, Staph aureus, Staph epidermis, Enterics	Vancomycin + Amikacin +Piperacillin.
Post-op wound infection with febrile sepsis	Staph aureus, Group A Strep, Enterobacteriaceae	Timentin OR Pip/Tazo + Vancomycin
Post-op wound infection involving GI or GU tract	MRSA/MSSA; Coliforms (enterics) + Anaerobes	Pip/Tazo OR 3 rd generation Cephalosporin (eg. Ceftriaxone) OR Carbapenem + Vanco
Central Line infections	Usually Staph Epidermis, sometimes Staph aureus	Vancomycin or Linezolid. Remove CVC
Specific Bacteria Common to the ICU	Preferred Antibiotic Treatment	
Staphylococcus Aureus (Gram + Cocci) HIGHLY RESISTANT	MSSA: Oxacillin/ Nafticillin OR 1st Generation Cephalosporin eg Cefazolin. MRSA: Vancomycin or Linezolid. Community Acquired MRSA: Septra OR Clindamycin for moderate infection Vanco or Linezolid for serious infection.	
Streptococcus Pneumonia (Gram + Cocci)	Penicillin sensitive: Pen G. Penicillin resistant: Carbapenems, Fluroquinolones, Vancomycin	
Streptococcus Viridans (Gram + Cocci)	Pen G + Gentamicin OR Ceftriaxone.	
Clostridium Difficile (Gram + Bacilli)	Flagyl po or iv Vancomycin NG or PR (not effective IV)	
Neisseria Meningitidis (Gram – Cocci)	Penicillin G or 3 rd generation cephalosporin	
Haemophilus Influenzae (Gram – Bacilli)	Life threatening Infection meningitis, epiglottitis: 3 rd generation cephalosporin	
Staphylococcus Epidermis (Gram + Cocci)	Vancomycin	
Pseudomonas Aeruginosa (Enteric) HIGHLY RESISTANT (Gram – Bacilli)	3 rd Gen Cephalosporin OR Carbapenem OR AP Penicillin. If resistant to above use Cipro OR Aminoglycoside. For serious infections use AP Penicillin +Cipro.	
Enterococcus faecalis HIGHLY RESISTANT (Gram + Cocci)	Vancomycin + Gentamycin. If resistant to Vanco use Pen G or Ampicillin/Subactam (Unasyn)	
Enterococcus Faecium HIGHLY RESISTANT (Gram + Cocci)	Vancomycin + Gentamycin. If resistant to these use Pen G or Ampicillin. If resistant to all of these use Linezolid. May be susceptible to combos of Fluroquinolones, Rimifampin, Doxycycline	
E. coli/ Klebsiella (Enteric, Gram – Bacilli)	All generations of Cephalosporins, most Aminoglycosides	