

# Antibiotic Protocol

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Empirical Therapy		(Send cultures before starting antibiotics)	
	TYPE 1 (CAI)	TYPE 2 (HAI)	TYPE 3 (NI)
<b>Blood</b>	IV Amoxicillin / clavulanate If IVDU: IV Cloxacillin	IV Piperacillin / tazobactam ± Amikacin	If patient in severe sepsis / septic shock: IV Imipenem / Meropenem + Vancomycin Otherwise use IV Piperacillin / tazobactam ± Vancomycin if MRSA is strongly suspected use Vancomycin
<b>Lung</b>	IV Amoxicillin / clavulanate + IV Azithromycin if severe CAP : Ceftriaxone + Azithromycin	Piperacillin / tazobactam OR Cefepime ± Amikacin	If patient in severe sepsis / septic shock: Imipenem / Meropenem + Vancomycin Otherwise use Piperacillin / tazobactam OR Cefepime ± Amikacin ± Vancomycin
<b>Urine</b>	IV Amoxicillin / clavulanate OR Nitrofurantoin* if CrCL >50 *NOT for pyelonephritis	Nitrofurantoin* if CrCL>50 OR Ertapenem if CrCL<50 *NOT for pyelonephritis	If patient in severe sepsis / septic shock: Imipenem / Meropenem Otherwise use Nitrofurantoin* if CrCL >50 *NOT for pyelonephritis
<b>Soft and Skin tissue</b>	Amoxicillin / clavulanate	Amoxicillin / clavulanate + Gentamicin	If patient in severe sepsis / septic shock: Imipenem / Meropenem + Vancomycin Otherwise use Piperacillin / tazobactam ± Amikacin if MRSA is strongly suspected use Vancomycin
<b>Continuing Treatment</b>	If the pathogen is sensitive or culture is negative & patient responds clinically; Consider ORAL switch if 1. T < 38 °C for >24 hours with clinical improvement AND 2. Orally tolerated, AND 3. No sign of sepsis AND 4. No high risk / deep seated infection.	De escalate to narrowest spectrum antimicrobials If culture negative and clinically stable, consider 5-7 days duration (*strongly recommended for ID consult)	

- Type 1** → No contact with health care system in the last 90 days AND no prior antibiotic treatment in the last 90 days AND young patient with no or few co-morbid conditions
- Type 2** → Contact with health care system in past 3 months or < 1 week in the hospital or < 48hrs in ICU (eg. admission in hospital or nursing home), invasive procedure OR recent antibiotic therapy in last 3 months OR old patient (> 65 years) with few co-morbidities
- Type 3** → Hospitalization > 5-7 days ± infections following major invasive procedures OR recent & multiple antibiotic therapies OR old patient (> 65 years) + multiple co-morbidities (eg. structural lung disease, immunodeficiency)

## TOP 5 Pathogens (MEDICAL) 2015

Blood Stream Infection (BSI) (N=229 [Top 5 is 60%])
Staphylococcus aureus [n= 54; MRSA 22 (41%)]
Escherichia coli [n= 28; ESBL 5 (18%), CRE 1 (4%)]
Klebsiella spp [n= 23; ESBL 8 (35%), CRE 1 (4%)]
Burkholderia cepacia [n=21 (9%)]
Pseudomonas aeruginosa [n=12 (5%)]

Urine Infection (N=237 [Top 5 is 86%])
Escherichia coli [n= 82; ESBL 30 (37%); CRE 3 (4%)]
Klebsiella spp [n=58; ESBL 31 (53%); CRE 1(1%)]
Enterococcus spp [n=26; VRE 6 (23%)]
Pseudomonas aeruginosa [n=25(11%)]
Acinetobacter spp [n=12 (5%)]

Respiratory Infection (N=187 [Top 5 is 86%])
Klebsiella spp [n=56; ESBL 27 (48%)]
Staphylococcus aureus [n=44; MRSA 14 (32%)]
Pseudomonas aeruginosa [n=43 (23%)]
Enterobacter spp [n=9; ESBL 2 (22%)]
Stenotrophomonas maltophilia [n=8 (4%)]

Skin and Soft Tissue Infections (SSTI) (N=242 [Top 5 is 76%])
Pseudomonas aeruginosa [n=58 (24%)]
Staphylococcus aureus [n=55; MRSA 18 (33%)]
Escherichia coli [n=27; ESBL 10 (37%); CRE 1 (3%)]
Klebsiella spp [n=24; ESBL 12 (50%); CRE 1(4%)]
Proteus spp [n=19; ESBL 2 (11%); CRE 1 (5%)]

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