Antibiotics in patients with Cystic Fibrosis (CF)

(If patient not responding on appropriate therapy, consider consulting ASP)

Drug	Suggested Dose	Usual Max Dose	Other Information
***Pseudomonas* (usually 2 antipseudomonal agents):** Tobramycin + Ceftazidime ***Pseudomonas* + *MSSA* :** Tobramycin + Cefepime			
Amikacin	30 mg/kg/dose IV q24h	Consider avoiding doses > 35 mg/kg/day	Requires Therapeutic Drug Monitoring Peak range: 35 to 45 mcg/mL Trough: < 5 mcg/mL
Aztreonam	50 mg/kg/dose IV q6h	2000 mg IV q6h	
Cefepime	50 mg/kg/dose IV q8h	2000 mg IV q8h	
Ceftazidime	50 mg/kg/dose IV q8h	2000 mg IV q8h	
Ciprofloxacin	10 mg/kg/dose IV q8h	400 mg IV q8h	
Piperacillin/Tazobactam (Zosyn®)	100 mg/kg/dose (piperacillin component) IV q6h	4000 mg (piperacillin component) IV q6h	
Meropenem	40 mg/kg/dose IV q8h	2000 mg IV q8h	
Tobramycin	10 mg/kg/dose IV q24h	Consider avoiding doses >15 mg/kg/dose	Requires Therapeutic Drug Monitoring Peak range: 20 to 35 mcg/mL Trough: < 1 mcg/mL
***Stenotrophomonas maltophilia*:**			
TMP/SMX IV/PO (Bactrim®, Septra®)	5 mg/kg/dose (TMP component) IV/PO tid/q8h	Enteral: 320 mg TMP/dose IV: 480 mg TMP/dose	Oral route preferred, if possible
***Staphylococcus aureus*:** The role of staph including MRSA is difficult to assess when a patient is also infected with pseudomonas, but it is often treated if present on recent or current cultures.			
Cefazolin	50 mg/kg/dose IV q8h	2000 mg IV q8h	

Doxycycline	5 mg/kg/day IV/PO bid/q12h	200 mg IV/PO bid/q12h	Oral route preferred, if possible
TMP/SMX IV/PO (Bactrim®, Septra®)	5 mg/kg/dose (TMP component) IV/PO tid/q8h	Enteral: 320 mg TMP/dose IV: 480 mg TMP/dose	Oral route preferred, if possible
Vancomycin **(Reserved for MRSA)** Oak: contact pharm for dosing adjustments SF: dosing per pharm	3 mo to < 12 yo: 17.5 mg/kg/dose IV q6h >= 12 yo to < 15 yo: 15 mg/kg/dose IV q6h >= 15 yo: 15 mg/kg/dose IV q8h	Initial Max 1000 mg/dose	Requires Therapeutic Drug Monitoring

G.) ***Antibiotic Therapeutic Drug Monitoring:***

Tobramycin

Extended-interval Dosing: Obtain post dose serum concentrations after the 1st dose

Renal Function	When to obtain level	After which dose?
CrCl > 50 or CRRT	Post dose levels 2 and 6 hours after end of infusion	1st dose
CrCl < 50	Post dose levels 2 and 12 hours after end of infusion	1st dose
HD or PD	Level obtained prior to the hemodialysis treatment is recommended to guide dosing	1st dose