Expected Practice Document
Multiple clinical trials have demonstrated shorter courses of antibiotics are equally effective to longer courses for many common infections. Shorter courses reduce antibiotic selective pressure, decrease the rate of development of resistant bacteria, and lower the risk of adverse effects. Recommended durations below are based on randomized control trials, full reference list available upon request. In addition to evidence-based durations, clinical judgement is important to ensure that the diagnosis and treatment are appropriate for the disease and patient. Deviations from these durations of antibiotics should be clinically justified as longer courses have not been proven to be more effective for typical cases.

Condition	Evidence-based duration of antibiotics (days)	Comment
Community-acquired pneumonia (CAP)	5	See HAP duration for ICU level or ventilated patients.
Hospital-acquired pneumonia (HAP)	7	Includes ICU and/or ventilated patients.
Acute bronchitis	0	Viral causes common, routine treatment w/ abx should be avoided.
Acute exacerbation of chronic bronchitis or COPD	< 5	Abx indicated w/ increased sputum volume and purulence.
Acute Otitis Media	5-7 10	Shorter course preferred for ages ≥2 years w/ intact TM and no h/o recurrence. Ten days preferred for ages <2 years and children (any age) w/ TM perforation or h/o of recurrence.
Acute bacterial sinusitis	5	Viral causes common, symptoms should be present for 7-10 days before consideration of abx.
Pharyngitis (Strep throat)	3-6	Shorter durations w/ equal efficacy to 10 day duration for children in areas w/ low rates of rheumatic heart disease.
Intra-abdominal Infection (including diverticulitis)	4-7 *4 days is appropriate after source control achieved.* Consider bowel rest and watchful waiting prior to abx for diverticulitis.	Durations >7 days have not correlated to improved outcomes. For diverticulitis, consider stopping abx therapy early if patient is tolerating a diet.
Cellulitis and skin abscesses	5-6	In conjunction w/ drainage of any abscess.
Uncomplicated UTI	1-5 Duration relates to agent chosen: Beta-lactams: 3-7* Aminoglycosides: 1 Fosfomycin: 1 Bactrim: 3 Nitrofurantoin: 5 *consider 3 day course with rapid clinical improvement	Amoxicillin/Ampicillin are not good empiric agents (unless h/o Enterococcus). Fosfomycin has lower efficacy compared to alternative regimens, but may be an appropriate option when available (3g x1 dose). Additionally, this is a restricted antibiotic for inpatient use. Diagnosis is clinical supported by lab findings.
Complicated UTI, catheter-associated UTI, or pyelonephritis	5-7 Levofloxacin: 5 Ciprofloxacin: 7 Cefuroxime (or other beta-lactam): 7*	Fluoroquinolones have high efficacy, 5-7 days may be appropriate w/ good clinical response. *Beta-lactams do not have enough evidence to suggest shorter durations, consider 7-14 days.
Asymptomatic bacteriuria	0	Strong recommendation against treating outside of pregnancy or planned urology procedures.

Specialist consultations recommended with subacute/chronic infections or recurrent acute infections.

Sensitivity results are from all specimens tested by SPH Laboratory (both inpatient and outpatient).

Staphylococcus aureus: The rate of MRSA was 24% in 2022 compared to 26% in 2021.

Restricted Agents: Certain antimicrobial agents are restricted and require approval by the Antimicrobial Stewardship team prior to use based on best-practice criteria. Such agents include **Linezolid, Daptomycin, Meropenem, Ertapenem, Ceftaroline, Oritavancin, Fosfomycin, Tigecycline, IV Bactrim, Fidaxomicin, Voriconazole, Anidulafungin, and fecal microbiota transplant.**

Antibiotic Allergy Assessment
Antimicrobial stewardship is able to perform antibiotic allergy assessment with evaluation for test dosing or penicillin skin testing. Studies show that patients with no history of anaphylaxis to penicillins in most cases will tolerate penicillins and cephalosporins. Upon request, pharmacist will complete screening to review patient's antibiotic allergies and appropriateness for test dosing or skin testing. An order for allergy evaluation can be placed using "Pharmacy Allergy Clarification" under Medications.

AMS Pharmacist Extension: 447-2450

St. Peter's Health

Microbiology and Pharmacy Departments

Antibiotic Sensitivity Profile for Period January-December 2022

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St. Peter's Health Antibiotic Sensitivity Profile 2022	# Isolates	Ampicillin/Sulbactam	Ampicillin	Cefazolin	Cefotaxime	Ceftazidime	Cefepime	Ceftriaxone	Ciprofloxacin		Clindamycin	Daptomycin	Ertapenem	Erythromycin	Gentamicin	Imipenem	Levofloxacin	Linezolid	Meropenem	Minocycline	Nitrofurantoin	Oxacillin(nafcillin)	Penicillin	Piperacillin/Tazobactam	Rifampin	Tetracycline	Tobramycin	Trimethoprim/Sulfa	Vancomycin
Staphylococcus aureus *MRSA*[3]	104										76	99		16	95			100		100	100				100	87		98	100
Staphylococcus aureus MSSA	338										82	99		68	100			100		100	100	100			100	92		98	100
Staphylococcus lugdunensis	86										91	100		91	100			100		100	100	93			100	93		100	100
Coagulase negative Staphylococcus	133										66	100		42	92			100		100	100	59			98	77		77	100
Streptococcus pneumoniae[4]	20				95			90			80			74			100	100					80			75		90	100
Streptococcus anginosus	41		98		98			97			73			68			100	92								46			100
Enterococcus species[1]	88		100						89												100					24			95
Escherichia coli	1614	74	66	95		96	98	96	90				100		93	100	90				98			100			94	85	
Klebsiella aerogenes	29			0		90	100	90	100				100		100	69	100				33			100			100	100	
Enterobacter cloacae complex	51			0		88	98		100						98	98	100				43			100			98	92	
Klebsiella oxytoca	56	75	0	89		98	100		100				100		98	100	100				92			100			98	95	
Klebsiella pneumoniae	248	86	0	94		96	98		98				100		98	100	97				45			100			98	91	
Proteus mirabilis	77	88	77	97		99	99	99	84				100		94	29	90							100			94	74	
Pseudomonas aeruginosa	109					94	98		99						97	99	94		100					100			99		

Values are reported as percent susceptible

[1]Group B strep and group A strep can be considered 100% susceptible to penicillin, ampicillin, and cefazolin therefore sensitivities are not routinely done and alternatives should only be considered in severely penicillin-allergic OB patients or for serious infections.

[2] Includes E. faecium and other Group D enterococci. E. faecium has traditionally had the highest level of vancomycin resistance. Currently 33% of E faecium isolates have been resistant to vancomycin.

Ampicillin is the drug of choice for UTI's caused by Enterococci. Ampicillin is highly concentrated in the urine meaning Enterococci remains susceptible to urinary concentrations of ampicillin 100% of the time even if the MIC is resistant. Sensitivities are performed on all sources except outpatient urine cultures.

[3] Sensitivities are only tested on urine cultures.

[4] All Staph aureus MRSA species have been 100% susceptibility to daptomycin and tigecycline

[5] Sensitivities for S. pneumoniae only tested on 16 isolates with 1 patient having resistant S. pneumoniae. Anticipate community sensitivities more reflective of traditional low MIC values.

^ 96% of the all MRSA isolates and 87% of all MSSA tested negative for Inducible Clindamycin Resistance.