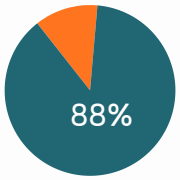
Los Angeles County (LAC) 2024-2025 Outpatient Urine Antibiogram

Los Angeles County Outpatient Urine Antibiogram 2024-2025[1]

		Amoxicillin	Amoxicillin-clavulanate	Cefazolin[2]	Ceftriaxone[3,4]	Ciprofloxacin[5]	Levofloxacin[5]	Nitrofurantoin	Trimethoprim-sulfa
Organism Name	Isolates (N)	%S	%S	%S	%S	%S	%S	%S	%S
Escherichia coli	81,869	51%	86%	83%	88%	73%	67%	96%	71%
Klebsiella pneumoniae	13,419	R	94%	87%	90%	87%	85%	21%	87%
Proteus mirabilis	9,124	80%	95%	82%	96%	89%	94%	R	82%
Enterobacter cloacae complex	3,085	R	R	R	79%	93%	91%	34%	91%
Pseudomonas aeruginosa	3,479	R	R	R	R	88%	84%	R	R
Enterococcus faecalis	8,329	100%	R	R	R	NA	NA	99%	R

Legend: R = Intrinsic resistance | **%S** = Percent of isolates susceptible to the antibiotic | **NA** = Not recommended for treatment
Teal = ≥80% susceptible | **Gold** = 60–79% susceptible | **Maroon** = 0–59% susceptible
All laboratory sources used Clinical and Laboratory Standards Institute (CLSI) guidelines.

1) Includes adult and pediatric isolates.
2) Cefazolin results using a susceptible breakpoint (BP) of ≤ 16 ug/mL predicts activity of cefazolin and oral cephalosporins (e.g., cephalexin, cefpodoxime) for uncomplicated UTIs. This BP was applied to 98% of *Escherichia coli, K. pneumoniae,* and *P. mirabilis* isolates tested.
3) Due to the possible selection of resistance (i.e., AmpC mutants), ceftriaxone may be ineffective against *Enterobacter cloacae complex*.
4) For *Escherichia coli, Klebsiella pneumoniae,* and *Proteus mirabilis,* ceftriaxone resistance can be viewed as a surrogate for extended spectrum beta-lactamase (ESBL) production.
5) Ciprofloxacin and levofloxacin have similar susceptibility rates; observed differences may reflect lab testing variations, not all isolates are tested for both.



E. coli, K. pneumoniae, and P. mirabilis accounted for **88%** of outpatient UTIs in LAC. When selecting empiric therapy, providers should aim for a **combined susceptibility rate*** of ≥80% (see Key Takeaways).

Combined susceptibility rate ≥ 80%: nitrofurantoin, oral cephalosporins (cephalexin, cefpodoxime), amoxicillin/clavulanate.
Combined susceptibility rate < 80%: ciprofloxacin, levofloxacin, trimethoprim/sulfamethoxazole, amoxicillin (47%).

*Combined susceptibility rate was determined by calculating the weighted average susceptibility (number of susceptible E. coli, K. pneumoniae and P. mirabilis isolates divided by the total number of isolates of these pathogens as shown in the antibiogram).

About This Antibiogram

This multifacility outpatient urine antibiogram is provided by the Los Angeles County Department of Public Health following consultation with experts from local healthcare systems. The report lists the bacteria commonly associated with outpatient urinary tract infections (UTIs) and their susceptibility rates to antibiotics (Abx) commonly used for treatment. Susceptibility data were voluntarily submitted from four health systems (two public and two private) and a large commercial laboratory that processes urine cultures from outpatient (OP) clinics and medical offices. Each source provided data for 12 consecutive months over the past two years (i.e., January to December 2024 or January to December 2025). Four of five sources provided isolates from adult and pediatric patients, and one source provided isolates from adults only. These data were aggregated to calculate countywide Abx susceptibility rates for each organism. Users should recognize that multifacility antibiograms, such as the LAC outpatient urine antibiogram, are more likely to reflect populations with diverse risk factors and Abx exposures. In addition to the LAC outpatient urine antibiogram, LAC also prepares a multifacility hospital antibiogram using susceptibility data from isolates recovered from all specimen sources.

How Outpatient Facilities Can Use the Antibiogram

The antibiogram was created for outpatient clinics and medical offices that do not have access to a facility-specific antibiogram but wish to review some local data to help develop treatment guidelines for UTIs and support appropriate antibiotic (Abx) use. Antibiogram data can also be used to help select antibiotic therapy when a diagnostic specimen is not available or while culture results are pending. Outpatient clinics and offices that have access to a facility-specific urine antibiogram may wish to compare their data with the LAC aggregated outpatient urine antibiogram by using the LAC DPH Antibiogram Benchmarking Tool.

Key Takeaways About Treatment of Urinary Tract Infections

1 If there are no UTI symptoms, no antibiotics are needed

Treat if one or more of these symptoms are present:

- Dysuria
- Frequency/urgency
- Suprapubic pain
- Hematuria
- Flank pain

Do NOT treat based on:

- Urinalysis results alone (bacteriuria, pyuria, leukocyte esterase, nitrites)

  - ***Absence of pyuria strongly suggests absence of a UTI***

- Nonspecific symptoms alone (delirium, falls, functional decline)

Other considerations when deciding whether to initiate antibiotics:

- Asymptomatic bacteriuria—common in older adults—does not require treatment.
- In stable patients who are unable to report symptoms, consider supportive care and close monitoring rather than empiric antibiotics.
- Treatment of asymptomatic bacteriuria is recommended during pregnancy, when undergoing invasive urologic procedures, or in some cases of severe immunosuppression

2 Consider outpatient antimicrobial susceptibility rates and patient context. Reassess if there is no improvement.

Use antimicrobial susceptibility rates

- For outpatient treatment consider ≥80% susceptibility as a general guide for empiric therapy selection.

Apply patient context, including:

- Symptoms
- Allergies
- Patient history and medications
- Prior culture results

Reassess if there is no improvement:

- Obtain cultures and susceptibilities.
- Although uncommon, consider the presence of multidrug-resistant organisms (MDROs).

3 Fluoroquinolones (FQs) should be avoided when safer options exist

Avoid the use of FQs due to:

- FDA black box warnings related to the risk of tendinopathy, peripheral neuropathy, central nervous system effects, aortic aneurysm, and *C.difficile* infection
- High rates of *E. coli* resistance, limiting empiric utility
- Promotion of colonization with FQ-resistant organisms, increasing the risk of subsequent difficult-to-treat infections

Other important safety considerations:

- FQs prolong QTc and may cause serious arrhythmias; consider ECG monitoring.
- FQs can increase or decrease levels of many drugs, risking toxicity or reduced efficacy of co-administered medications.
- Oral absorption of FQs is significantly reduced by calcium-, magnesium-, or aluminum-containing products (including antacids and supplements), increasing the risk of treatment failure, especially in complicated UTIs.

4 Over 90% of patients labeled as penicillin-allergic are not truly allergic and can safely receive a penicillin or cephalosporin

Evidence shows mislabeling patients leads to:

- Use of less effective antibiotics
- Use of less safe antibiotics
- Antibiotic use that promotes resistance

Reassess antibiotic history:

- True antibiotic allergies wane over time (>5-10 years).
- Many reported reactions were side effects rather than true allergies.
- A thorough penicillin allergy assessment can help avoid the use of suboptimal alternative antibiotics.

Cephalosporin use:

- Cross reactivity in a penicillin allergic patient is low (<2%), especially with later generation cephalosporins (e.g., cefpodoxime and ceftriaxone).

5 UTIs can be treated effectively in 3–7 days

Treatment duration depends on the antibiotic used and patient factors:

- Uncomplicated UTIs (bladder only): Use 3-5 days of therapy (5 days for nitrofurantoin).
- Complicated UTIs (beyond the bladder or catheter-related): Use 7 days of therapy if the patient is improving (FQs: 5–7 days). Use higher doses of non-FQ antibiotics to achieve tissue levels.

Consider individualized treatment duration for:

- Immunocompromise
- Urinary abscess
- Chronic kidney disease
- Bacterial prostatitis
- Complete obstruction
- Pregnancy

6 Antibiotic Stewardship for UTIs: Use antibiotics wisely to maximize benefit and minimize antibiotic resistance

Antibiotic Stewardship for UTIs:

- Treat only when UTI symptoms are present.
- Limit the use of FQs.
- Use the shortest effective treatment duration.

Ways to support antibiotic stewardship in outpatient facilities:

- Prescribers are encouraged to use a facility-specific UTI guideline based on an internal facility specific antibiogram or the LA County aggregated urine antibiogram.
- Reinforce guideline use through monitoring prescriber adherence, peer comparison feedback, and education

For references, please visit: ph.lacounty.gov/acd/docs/UrineAntibiogramCcompanionGuideReferences.pdf

Los Angeles County Department of Public Health
ph.lacounty.gov/acd/antibioticstewardshipprogram/index.htm
Urine Antibiogram Companion Guide, Rev. 9-16-26

County of Los Angeles Public Health