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August 26, 2021

Lewis G. Sandy, MD, FACP  
Executive Vice President, Clinical Advancement  
UnitedHealth Group  
9900 Bren Road East  
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RE: Urine PCR Coverage Policy

Dr. Sandy:

The American Association of Clinical Urologists (AACU) is a leading professional organization for the specialty of urology. As such, we support the highest standards of urological clinical care through education, research, and the formulation of healthcare policy.

Urinary tract infections (UTIs) are among the most common of all bacterial infections. They account for 10.5 million office visits and 3 million emergency department visits annually in the United States. What's more, from 1998 to 2011, there was a dramatic increase in hospitalizations attributed to UTIs: cases increased by 76% and incidence increased by 52%. In 2011, that meant more than 400,000 patients were admitted with a primary diagnosis of UTI, resulting in charges of \$9.7 billion and a real total cost of \$2.8 billion.

A standard urine culture plays a significant role in managing patients with suspected UTI. However, that diagnostic test has limitations in providing optimal clinical management for patients suffering from recurrent, persistent, or complicated UTIs. A standard urine culture misses a significant number of potential uropathogens, cannot provide antibiotic susceptibility for infections with two or more organisms (polymicrobial), and does not identify pairs of organisms that change the susceptibility results of antibiotics. These inadequacies can lead to treatment failure, increased antibiotic resistance, and urosepsis, with the latter being especially dangerous. The Institute for Healthcare Improvement notes there are 750,000 sepsis cases reported each year with 210,000 fatalities and a 2013 study observes sepsis secondary to a UTI accounts for approximately 20% to 40% of all severe cases of sepsis.

We have therefore been encouraged by the benefits of multiplex polymerase chain reaction (PCR) tests in the diagnosis and management of UTIs. The PCR test is unique in that it tests for up to 40 common and documented emerging urinary tract pathogens and it is more sensitive at detecting fastidious organisms that a routine urine culture will often miss. Additionally, the results of PCR are available in as little as 5 hours, where standard cultures typically take at least 24-48 hours. The ability to test for

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multiple different antibiotic resistance genes is important as it helps to guide empirical antibiotic therapy given by urologists. Knowing the resistance pattern of an organism allows a more targeted antibiotic treatment and can lead to better patient outcomes.

In the February 2020 issue of the journal Urology, Wojno et al. performed a retrospective review of 582 patients who had standard urine culture and PCR run in parallel. The study revealed that PCR was positive in 22% of cases in which the standard culture was negative. Their study also showed that PCR was far better at diagnosing patients with polymicrobial infections, 166 patients vs. only 39 for standard urine culture. In 2020, Daly et al. reported in a retrospective study that the use of PCR was associated with 13.7% decrease in hospital admissions and/or emergency department utilization vs. standard urine culture.

The notable benefits of PCR for urinary tract infections align with the Institute of Healthcare Improvement Triple Aim; improving the experience of care, improving the health of populations, and reducing per capita costs of health care. The urine PCR has a higher negative predictive value, the turnaround time is much faster, it is especially sensitive toward polymicrobial pathogens as well as more fastidious organisms, and it can provide valuable information to guide antibiotic therapy. Furthermore, better antibiotic stewardship, decreased emergency room utilization, and fewer hospital admissions will save lives and may reduce annual health care expenditures by more than a billion dollars.

We ask that you implement a positive coverage policy for Urine PCR testing to cover the following CPT codes and ICD-10 diagnosis codes:

#### CPT

87481 3 units	87801 3 units	87556 1 unit
87500 1 unit	87651 1 unit	87563 1 unit
87640 1 unit	87532 1 unit	87150 12 units
87653 1 unit	87529 2 units	
87798 13 units	87496 1 unit	

#### ICD 10

N39.0 Urinary tract infection	R31.0 Gross hematuria
R82.99 Other abnormal findings in urine	R31.29 Other microscopic hematuria
Z11.8 Screen for other infection/parasitic diseases	R31.9 Hematuria, unsp
Z87.440 Personal history of urinary (tract) infections	G89.29 Other chronic pain
N41.0 Acute prostatitis	N20.0 Calculus of kidney
N41.1 Chronic prostatitis	N30.00 Acute cystitis without hematuria
	N30.20 Other chronic cystitis without hematuria

We stand ready to address any questions and look forward to improving the diagnosis and treatment of these common, and potentially deadly, bacterial infections.

Sincerely,



Elliott R. Lieberman, MD, President  
American Association of Clinical Urologists

**References:**

- Daly A, et al. Utilization of M-PCR and P-AST for Diagnosis and Management of Urinary Tract Infections in Home-Based Primary Care. *JOJ Urology & Nephrology*, 2020; 7(2): 555707.
- Delcaru C, Alexandru I, Podgoreanu P, et al. Microbial Biofilms in Urinary Tract Infections and Prostatitis: Etiology, Pathogenicity, and Combating strategies. *Pathogens*. 2016;5(4):65. Published 2016 Nov 30. doi:10.3390/pathogens5040065
- Delcaru C, Podgoreanu P, Alexandru I, et al. Antibiotic Resistance and Virulence Phenotypes of Recent Bacterial Strains Isolated from Urinary Tract Infections in Elderly Patients with Prostatic Disease. *Pathogens*. 2017;6(2):22. Published 2017 May 31. doi:10.3390/pathogens6020022
- Dixon M, Sha S, Stefil M, McDonald M. Is it Time to Say Goodbye to Culture and Sensitivity? The Case for Culture-independent Urology. *Urology*. 2020;136:112-118. doi:10.1016/j.urology.2019.11.030
- Flores-Mireles AL, Walker JN, Caparon M, Hultgren SJ. Urinary tract infections: epidemiology, mechanisms of infection and treatment options. *Nat Rev Microbiol*. 2015;13(5):269-284. doi:10.1038/nrmicro3432
- Heytens S, De Sutter A, Coorevits L, et al. Women with symptoms of a urinary tract infection but a negative urine culture: PCR-based quantification of *Escherichia coli* suggests infection in most cases. *Clin Microbiol Infect*. 2017;23(9):647-652. doi:10.1016/j.cmi.2017.04.004
- Price TK, Dune T, Hilt EE, et al. The Clinical Urine Culture: Enhanced Techniques Improve Detection of Clinically Relevant Microorganisms. *J Clin Microbiol*. 2016;54(5):1216-1222. doi:10.1128/JCM.00044-16
- Simmering JE, Tang F, Cavanaugh JE, Polgreen LA, Polgreen PM. The Increase in Hospitalizations for Urinary Tract Infections and the Associated Costs in the United States, 1998-2011. *Open Forum Infect Dis*. 2017;4(1):ofw281. Published 2017 Feb 24. doi:10.1093/ofid/ofw281
- Trautner BW, Darouiche RO. Role of biofilm in catheter-associated urinary tract infection. *Am J Infect Control*. 2004;32(3):177-183. doi:10.1016/j.ajic.2003.08.005
- Turner RM, Wu B, Lawrence K, Hackett J, Karve S, Tunceli O. Assessment of Outpatient and Inpatient Antibiotic Treatment Patterns and Health Care Costs of Patients with Complicated Urinary Tract Infections. *Clin Ther*. 2015;37(9):2037-2047. doi:10.1016/j.clinthera.2015.06.013
- Vollstedt A, Baunoch D, Wojno KJ, Luke N, Cline K, et al. (2020). Multisite Prospective Comparison of Multiplex Polymerase Chain Reaction Testing with Urine Culture for Diagnosis of Urinary Tract Infections in Symptomatic Patients. *Journal of Surgical Urology: JSU-102*. DOI: 10.29011/JSU-102.100002.
- Vollstedt A, Baunoch D, Wolfe A, Luke N, Wojno KJ, et al. (2020). Bacterial Interactions as Detected by Pooled Antibiotic Susceptibility Testing (P-AST) in Polymicrobial Urine Specimens. *Journal of Surgical Urology: JSU-101*. DOI: 10.29011/JSU-101.100001.
- Wagenlehner FM, Lichtenstern C, Rolfes C, et al. Diagnosis and management for urosepsis. *Int J Urol*. 2013;20(10):963-970. doi:10.1111/iju.12200
- Wojno KJ, Baunoch D, Luke N, et al. Multiplex PCR Based Urinary Tract Infection (UTI) Analysis Compared to Traditional Urine Culture in Identifying Significant Pathogens in Symptomatic Patients. *Urology*. 2020;136:119-126. doi:10.1016/j.urology.2019.10.018
- Yu Y, Zielinski MD, Rolfes MA, et al. Similar Neutrophil-Driven Inflammatory and Antibacterial Responses in Elderly Patients with Symptomatic and Asymptomatic Bacteriuria. *Infect Immun*. 2015;83(10):4142-4153. doi:10.1128/IAI.00745-15