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Introduction & Objectives: Since bacterial antibiotic resistance rates may vary with significant differences between countries and regions, as well as change over time, yearly surveillance of the bacterial spectrum and antibiotic-resistance patterns of locally occurring uropathogens is essential to serve as a basis for empirical treatment of urinary tract infections (UTIs). The objective of our study was to investigate the changes in the bacterial spectrum and the antibiotic resistance rates of uropathogens cultured from urine samples collected at our department.

Materials & Methods: All urine samples taken in the Department of Urology in Jahn Ferenc South Pest Teaching Hospital, a tertiary care hospital in Hungary, from 2004 to 2017 were retrospectively analysed. The significance rates of the annual changes were calculated using Cochran-Armitage test ($P < 0.05$).

Results: A total of 3513 urine cultures showed significant presence of pathogens at our department during the study period. *Escherichia coli*, *Enterococcus faecalis*, *Klebsiella pneumoniae* were the three most frequently isolated bacteria. Resistance of *E. coli* to ciprofloxacin has increased significantly, reaching a rate of 25%, while in the case of cephalosporines, resistance of *E. coli* remained under 20%. Resistance of *Klebsiella pneumoniae* to cephalosporins was relatively high: in the case of cefepime it reached 40% by 2012.

Conclusions: For empirical treatment fluoroquinolones can be no longer recommended in our region. Gram-negative UTIs can be safely treated with cephalosporines, however, they should be avoided if multidrug resistant bacteria are suspected. Surveillance and monitoring of the bacterial resistance patterns is recommended for all institutions.