

*Objective:* *Escherichia coli* is the greatest cause of primary urinary tract infections (UTI). Antimicrobial susceptibility testing provides information that allows physicians to select the most appropriate antimicrobial agents for treating a specific infection. This study aimed to assess the current status of multidrug resistance among urinary *Escherichia coli* isolates in Kenya.

*Methodology and results:* A total of 3,341 urine samples were collected from in and out-patients attending Thika district hospital in Kenya between January and December 2008. The samples were cultured on Cystein lysine electrolytes deficiency (CLED) media and the bacterial isolates recovered were tested against Trimethoprim-sulfamethoxazole, Cefuroxime, Augmentin®, Nitrofurantoin, Nalidixic acid, Gentamycin, Cephaloxin, Norfloxacin, Ciproxin®, Ceftazidime, Amikacin, Ofloxacin, Centriaxone, Perfloxacin, Ticarcillin, Pipril and Roceph using Kirby Bauer disc diffusion technique. Among the 3,341 samples examined, 24% had *Escherichia coli* isolates with 64% of them being from female patients compared to 36% that were from men aged above 21 years. In children aged >10yrs, boys had the highest prevalence (55%) compared to girls (45%). Those in age categories <21yrs had the more isolates (73%) followed by 5-10yrs (46%), 1-4yrs (16%), and the least 11-20yrs (5%). Upto 75% of the isolates were resistant to Trimethoprim-sulfamethoxazole; all (100%) were susceptible to Ticarcillin, Peril/Tazo, Amikacin, Ofloxacin and Roceph; and 80% of the isolates were susceptible to Cephaloxin, Ceftriaxime, Nalidixic acid, Gentamycin, Norfloxacin, Ciproxin®, Ceftazidime/fortum and Centriaxone. *Conclusion and application of findings:* Considering the relatively high rates of UTI and drug resistance observed in this study, continued local, regional, and national surveillance is warranted. Antibiotics should only be issued when prescribed by physicians.