

**ANTIBIOGRAM PATTERNS OF UROPATHOGENIC *ESCHERICHIA COLI*
AND SOCIO-DEMOGRAPHIC FACTORS OF PATIENTS ATTENDING KERICHO
COUNTY HOSPITAL**

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ABSTRACT

Escherichia coli is the common cause of primary urinary tract infections (UTIs). UTIs are the most common non-intestinal infection in women worldwide. Antimicrobial susceptibility testing provides information that allows physicians to select the 21 most appropriate antimicrobial agents for treating a specific infection. A cross-sectional study was conducted at Kericho County Hospital patient's clinic between January and June 2015. A total of 133 urine samples were collected and used to investigate the prevalence of UTIs and to determine the antimicrobial profile of extraintestinal *E. coli* clinical isolates among patients. UTIs were diagnosed using mid-stream urine culture on standard media. The bacterial isolates recovered were tested against trimethoprim-sulfamethoxazole, gentamycin, amikacin, ceftriaxone, ciprofloxacin, cefoxitin, cefepim, imipenem, ampicillin and amoxicillin-clavulanic acid using Kirby-Bauer disc diffusion technique. Data was entered in MS Excel spread sheet and analyzed by using SPSS version 21. Among the 133 specimen examined 106 (79.7%) showed significant bacterial growth. *E.Coli* was the most pre-dominant 38 (35.8%), followed by *Staphylococcus aureus* 31 (29.2%), *Klebsiella pneumonia* 18 (17%), *Pseudomonas aeruginosa* 15 (14.2%) and *Proteus mirabilis* 4 (3.8%). Out of 38, *Escherichia coli* isolates 22 (58%) from females and 16 (42%) from male. Approximately 16 (73%) of the isolates were resistant to trimethoprim-sulfamethoxazole and 20 (91%) resistant to amoxicillin clavulanic acid; 21 (96%) were susceptible to imipenem and 18 (82 %) amikacine. *E. coli* showed high sensitivity to imipenem and amikacine but resistant to trimethoprim-sulfamethoxazole and amoxicillin-clavulanic acid. Chi-square analysis indicated no association between gender of patient and pathogens isolate ($p = 0.835$). Out of 106 isolates, *Escherichia coli* was the most prevalent clinical isolate (p value = 0.905) although there was 38 isolates, no association between the age of patient and pathogens isolated in patients indicating a possibility of an equal chance of being infected irrespective of age. *Escherichia coli* was the most prevalent causative organism, showing multi drug resistance pattern. Considering the relatively high rates of UTIs and drug resistance observed in this study, continued local, regional, and national surveillance is warranted. Imipenem and amikacine should be considered as drug of choice for empirical treatment of community acquired uncomplicated UTIs in patients in Kericho County hospital.