Objective: The objective of the study is to analyze the prevalence and resistance rates of bacterial agents causing urinary tract infections (UTIs) in Aseer, Saudi Arabia (2013-2016).

Methods: This was a four year (2013-2016) retrospective study undertaken in Aseer Central Hospital (ACH), Saudi Arabia. A total of 49,779 urine and other UT specimens obtained from patients suspected of having a UTI were analyzed. Urine specimens were inoculated onto CLED agar following standard procedures. Cultures showing significant bacteriuria were subjected to identification and sensitivity testing using VITEK 2 system. Data of patients and uropathogens were assembled, checked and analyzed using SPSS software.

Results: Culture positive samples were 49,779 (59.9% males, 40.1% females; p=0.000). Year trend showed significant variations (p=0.000) and the forecast trend line hypothesized a clear rise. Age groups 70 to 79 years old were the most vulnerable group (22.3%). Gram negative bacilli were 91.8% and the major species were Escherichia coli (39.7%), Klebsiella pneumoniae 15.8%, Pseudomonas aeruginosa 13.8%, Proteus mirabilis 10.6% and Acinetobacter baumannii 5%. Antimicrobials with high sensitivity rate were linezolid (99.1%), daptomycin (89.3%), vancomycin (86.7%), teicoplanin (85.5%), ertapenem (85.1%), fosfomycin (82.1%) and tigecycline (80.2%). High resistant rates to uropathogens were encountered with cephalothin (89.8%), nalidixic acid (86.7%) and ampicillin (81.9%).

Conclusions: The majority of uropathogens were resistant to antibiotics commonly used in clinical practice. Linezolid, daptomycin and vancomycin showed the lowest resistance to all uropathogens; this can be revised for empirical treatment of UTIs. Continuous surveillance of uropathogens and their susceptibility is important.

Speaker Biography
Abdulaziz Alamri is Professor in King Khalid University Medical College, Saudi Arabia

e: aazizamri@gmail.com