

# Community acquired bacterial infections and their antimicrobial susceptibility in Nairobi, Kenya.

Malonza, IM; Omari, MA; Bwayo, JJ; Mwatha, AK; Mutere, AN; Murage, EM; Ndinya-Achola, JO

## Abstract:

The purpose of the study was to determine the pattern and antimicrobial sensitivity on community acquired bacterial strains in Nairobi, Kenya. Clinical specimens collected from out-patient clinics at the Kenyatta National Hospital were cultured on appropriate media and identified according to Cowen and Steel's manual. The antimicrobial sensitivity was determined using comparative disc diffusion techniques. Between 1991 and 1995, there were a total of 1659 positive cultures comprising 30 different bacterial species. Out of the overall gram negative isolates (61.9%), *E.coli* and *Klebsiella* spp formed over 70%. Among the gram positive, *Staphylococcus aureus*, *Enterococcus* and coagulase negative staphylococcus spp constituting 41%, 26% and 18% respectively were the most common. Most organisms showed multiple resistance patterns to commonly used antimicrobials similar to hospital acquired infections. The gram negative isolates were resistant to cotrimoxazole, ampicillin, tetracyclines, chloramphenicol, and sulphamethoxazole. However, the sensitivity of these organisms to gentamicin and kanamycin was between 60 and 90%. Among the gram positive isolates, there was a high resistance to penicillin and tetracyclines (60-90%) while the resistance to lincomycin, minocycline and chloramphenicol was low (5-50%). All isolates were, however, highly sensitive to cephalosporins and fluoroquinolones. Beta-lactamase production among, *E.coli*, *Klebsiella* spp and *Staphylococcus aureus* was 48.9%, 76.7%, 76.1% respectively. Methicillin resistance for *Staphylococcus aureus* was 59.2%. Indiscriminate use of antibiotics in the community may have selected for resistant strains. This calls for urgent need to review policies on prescription practices