

# Nosocomial and Healthcare Associated Infections &

## 3 ODVPLG SUR ĩ OH DQG FXULQJ RI UHVLVWDQW EDFWHULD LVR in calabar metropolis

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**N**osocomial agents are a major challenge in hospital settings globally. This study evaluated the prevalence of bacteria in the environments of two tertiary hospitals in Calabar metropolis and elucidated the plasmids associated with resistance in the isolated bacteria. Bacteria were isolated and characterized from various sections of the hospitals using standard microbiological techniques. The isolates were subjected to antibiotic susceptibility testing and the plasmids of resistant bacteria were probed using the ZYPHYTM Plasmid Miniprep Kit (Inqaba Biotech. SA), quantified using nanodrop 1000 and amplified using standard PCR. Isolates possessing plasmids were cured using ethidium bromide and re-subjected to antibiotic of prior resistance. Exactly 159 organisms were recovered from the hospitals with a mean count of 1949cfu. Most prevalent isolates were Escherichia coli, Pseudomonas aeruginosa, Klebsiella pneumoniae, Salmonella species, Staphylococcus aureus, Coagulase-negative Staphylococci, Candida species, and Penicillium species. All bacteria species except Streptococci showed resistance to  $\beta$ -lactams but not to fluoroquinolones and aminoglycosides with multiple antibiotic resistance (MAR) index of 0.19-0.62 and high MICs and MBCs. Plasmid profiling of MAR isolates showed the presence of CTX-M (40%), SHV (86.7%) and MecA (91.7%) genes in test isolates. Chi-square and the Fischer exact tests showed significance ( $P < 0.001$ ) for SHV but not CTX-M. Cured isolates showed susceptibility to all the antibiotics except P. aeruginosa. These findings revealed that MAR bacteria in these hospitals possessed plasmids and possibly other resistance mechanisms and makes the need for intervention.

### Biography

0ERWR LV D 9LURORJLVW %DFWHULRORJLVW DQG (SLGHPLRORJLVW ZLWK RYHU WZR GHFDGHV RI 8QLY  
MRXUQDOV DQG VFLHQWLĭF SDSHUV SUHVHQWHG DW ,QWHUQDWLRQDO FRQIHUHQFHV LQ YDULRXV S  
DV RQH RI WKH WRS 1LJHULDQ 6FLHQWLWV LQ 1LJHULDQ ,QVWLWXWLRQV LQ DQG +H LV SU  
RI WKH 8QLYHUVLW\ RI &DDEDU DQG D 9LVVLWLRQ 6FKRODU WR WZR RWKHU 8QLYHUVLWLHV

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