

**PREVALENCE OF CATHETER ASSOCIATED URINARY TRACT INFECTIONS
AMONG PATIENTS HOSPITALISED AT THE NYERI COUNTY REFERRAL
HOSPITAL**



**Peris Wangari Cheche (B. Sc.)
156/CE/21446/2012**

Signature *Peris* Date *25/7/2014*

Department of Microbiology

A research proposal submitted in partial fulfillment of the requirements for the award of the degree of Masters of Science (Microbiology) in the School of Pure and Applied Sciences of Kenyatta University

SUPERVISORS

Dr. Anthony Kebira

Signature *Anthony Kebira* Date *25/7/14*
Department of Microbiology

Dr. John Maingi

Signature *John Maingi* Date *30/7/2014*
Department of Microbiology

ABSTRACT

Urinary tract infection, a type of health care infection is the most common nosocomial infection accounting for up to 40% of infections reported by acute hospitals and approximately 18% to 25% of all nosocomial bacteremias. Up to 80% of urinary tract infections are associated with the presence of an indwelling catheter. Catheter associated urinary tract infections can result in increased morbidity, mortality, hospital cost, and length of stay. The infections are caused by Gram negative bacteria, Gram positive bacteria and *Candida* species. The infections are treated by common antimicrobial agents which include: Cotrimoxazole, Amoxylin, Gentamycin, Augmentin, Ceftriaxone, Erythromycin, Nalixidic acid and nitrofurantoin. However multiple drug resistance has been a problem in controlling the infections. The aim of this study will be to isolate and identify microorganisms causing the infections, their antimicrobial resistance levels and the influence of the catheters duration, age and gender of the patient on the infections at the Nyeri County Referral Hospital. In this study 175 patients will be enrolled. About 10 ml of urine will be collected and cultured using standard conventional methods. The isolated microorganisms will be identified using their colonial morphology, Gram stain and confirmed by biochemical tests. The antimicrobial susceptibility of the isolates will be tested using the disk diffusion method according to the Clinical and Laboratory standard institute (CLSI). Data collected will be analyzed using statistical package for social sciences (SPSS) 20.0 and would be used in future by clinicians in the management of patients with catheters as well as in making decisions on antibiotic prescriptions.

ACRONYMS AND ABBREVIATIONS

CAUTI Catheter Associated Urinary Tract Infections

CDC Centre for Disease Control

CLED Cysteine Lactose Electrolyte Deficient Agar

CLSI Clinical and Laboratory Standards Institute

CRH County Referral Hospital

ENT Ear, Nose and Throat

NHSN National Healthcare Safety Network

TB Tuberculosis

UTI Urinary Tract Infections

WHO World Health Organisation