

BACTERIAL ENTEROPATHOGENS IN ADULT ACUTE DIARRHOEA:

A RETROSPECTIVE SURVEY AT THE KENYATTA NATIONAL HOSPITAL

BY

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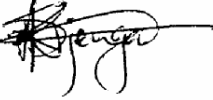
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**Project report submitted in partial fulfillment for the award of the Master of
Science degree in Tropical and Infectious Diseases (MSc. TID) of the University of
Nairobi**

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DECLARATION

This research project is my original work and has not been presented for academic award in any other university.

Samuel Kaberere Njenga signature  date 17/07/2012

SUPERVISORS

This research project has been submitted for the award of the degree of Masters of Science in Tropical and Infectious Diseases (MSc.TID) with my approval as the University supervisor.

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ABSTRACT

Study Type: Retrospective cross-sectional study that involved the review of laboratory reports on stool culture of adults at KNH microbiology laboratory from 1st January 2005 to 31st December 2009.

Objectives: To determine the rate of isolation of bacterial pathogens and their antibiotic sensitivity patterns

Methodology: A sampling frame constituting 3044 reports was used to obtain a sample of 338 reports. The sampled reports were reviewed for demographic data, culture outcomes, pathogens isolated and their antibiotic sensitivity characteristics

Results: From the 338 reports reviewed, there was no growth in 100 (29.6%) of the stool cultures. There was growth in 238(70%) cultures

Salmonella spp isolated were identified in 11 (3.3%) stool cultures. *Shigella* spp isolated were identified in 7(2.1%) cultures, non lactose fermenters other than *Salmonella* spp and *Shigella* spp were found in 102 (34.9%) of the stool cultures.

The *Salmonella* spp and *Shigella* spp isolated were relatively sensitives to ceftriaxone, (100%) and (70%) and ciprofloxacin (83.3%-100%). For the three antibiotics *Salmonella* spp were more sensitive compared to those of *Shigella* spp

For both *Salmonella* and *Shigella* there were isolates resistant to more than two antibiotics (multi-drug resistant isolates). *Salmonella* isolates resistant to augmentin (22%), ciprofloxacin (16.7%), minocycline (25%), piperacillin (50%). *Shigella* isolates resistant to augmentin (60%), Gentamicin (100%), piperacillin (100%) and ceftazidime (25%).

Conclusion/ Recommendation: Bacterial enteropathogens other than *Salmonella* spp and *Shigella* spp are important causative agents of adult acute diarrhea in the catchment patient population of Kenyatta National Hospital. Multidrug resistant *Salmonella* spp, *Shigella* spp and by extrapolation multidrug resistant enterobacteriaceae exist among the patient population of Kenyatta National Hospital. Screening for other bacterial enteropathogens other than *Salmonella* spp, *Shigella* spp in KNH microbiology laboratory should be facilitated. Ciprofloxacin, cefuroxime and ceftriaxone can be used for empirical treatment of adult acute diarrhea. Surveillance for multidrug resistant enterobacteriaceae should be instituted.