

UNIVERSITY OF NAIROBI
SCHOOL OF PHARMACY
DEPARTMENT OF PHARMACOLOGY AND PHARMACOGNOSY

THEMATIC AREA : PHARMACOEPIDEMIOLOGY AND PHARMACOVIGILANCE

Staff

Academic Staff

- Prof. Maitai Charles K. - Professor
- Prof. Muriuki Gichuru - Professor
- Prof. Guantai Anastacia N. - Professor
- Dr. Sinei Kipruto A. - Senior lecturer
- Dr. Okalebo Faith A. - Senior lecturer (**Head of Thematic Unit**)
- Dr. Osanjo George O. - Senior lecturer
- Dr. Oluka O. Margret O. - Lecturer
- Dr. Guantai Eric M. - Lecturer
- Dr. Mulaku Mercy N. - Tutorial fellow

Training is supported by members of:

- Thematic Unit of Clinical Pharmacy, School of Pharmacy
- School of Public Health
- Department of Pharmaceutical Chemistry, School of Pharmacy
- Department of Medical Physiology, School of Pharmacy

In addition 4 honorary lecturers with specialization in their fields of practice have been engaged to provide support.

Introduction

Pharmacoepidemiology is the “study of the use of and the effects of drugs in large numbers of people”. It borrows heavily from methods used in general epidemiology. Areas of focus in

pharmoeconomics are: costs of medicines; patterns and determinants of consumption; quality of drug use and dispensing; effectiveness of drugs; drug related policies; formulation of treatment guidelines; and drug supply problems.

Pharmacovigilance is also known as Drug Safety and is a pharmacological science. Its main focus is the collection, detection, assessment, monitoring, and prevention of adverse effects and medication errors caused by pharmaceuticals and medical devices. The word Pharmacovigilance is derived from the Greek and Latin words *pharmakon* and *vigilare* which mean “drug” and “to watch out respectively”. The prevalence of drug induced adverse effects is very high. Medication errors such as overdose, misuse and abuse are common. Pharmacovigilance is considered to be a branch of Pharmacoepidemiology.

In Kenya, pharmacovigilance activities were initiated and co-ordinated by the Pharmacy and Poisons Board which is a World Health Organisation/Uppsala Monitoring regional center for pharmacovigilance. Online reporting of medication errors and adverse drug reactions can be done at www.pv.pharmacyboardkenya.org.

History of the Thematic Unit

The development of a postgraduate training curriculum in Pharmacoepidemiology and Pharmacovigilance began in 2005 in response to a need for specialists in this area. Development of the curriculum was supported by [Management Sciences for Health](#). The Department of Pharmacology and Pharmacognosy received senate approval in December, 2011 to offer the program. The first lot of 11 students was received in September, 2012.

Programs/courses offered

The thematic unit offers training at post-graduate level to students pursuing [Master of Pharmacy in Pharmacoepidemiology and Pharmacovigilance](#). Under the unit/module Pharmacovigilance learners are trained on:

- How to code adverse drug events
- Methods and tools for reporting
- Seriousness and causality assessment
- Reporting methods

- Regulations on reporting
- Managing an adverse event

Pre-requisites for training in Pharmacoepidemiology and Pharmacovigilance are: undergraduate training in pharmacology. Foundation courses in the post-graduate program are: epidemiological methods, biostatistics and research methodology. Other modules/units offered include pharmacoconomics, regulatory pharmacovigilance, drug utilization review/studies; evidence based health care and an introductory course on pharmacogenetics.

In addition, the thematic unit offers post-graduate training in Epidemiology to students pursuing a Master of Pharmacy in Clinical Pharmacy. It also offers post-graduate training in Research Methods to all post-graduate students registered in the School of Pharmacy.

Research and Projects / Impact of the Thematic Unit

Though the program is still in its infancy, Kenyatta National Hospital has benefitted from the services provided by the learners. Five drug utilization studies have already been carried out and problems identified in drug use were presented to the Medicines and Therapeutics Committee of the Hospital. It is hope that these studies will be used to modify current practice.

In this year, the learners submitted 33 reports on adverse drug reactions to the Pharmacy and Poisons Board Pharmacovigilance unit.

Members of unit have supervised about 15 students pursuing post graduate studies in Master of Pharmacy (Clinical Pharmacy). About 5 papers have resulted from the supervised research activities.

One comparative study on the renotoxicity of stavudine and tenofovir was presented at the International Society of Pharmacoepidemiology annual conference in Barcelona, 2012. A second study that examined patterns of antibiotic use in patients with renal failure will be presented in an ISPE conference in Canada in 2013.

Future plans

The unit hopes to work with the Pharmacovigilance Unit of the Board and other stakeholders to strengthen drug regulation in Kenya. It also hopes to work together with the Department of

Quality Assurance of the Ministry of Health in treatment guideline development and monitoring quality of care.

Career opportunities

All alumni of the Pharmacology and Therapeutics thematic unit can pursue careers in academia, clinical trials, health programs (e.g. BASCOP), regulatory institutions (e.g. Pharmacy and Poisons Board), hospitals and health facilities and institutions involved in drug research.

News and Events

Click [here](#) for news and events.

Alumni

The thematic unit shall graduate its first class of M.Pharm (EpiVigil) students in 2014.

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