

# Pharm

Journal

Edition 01 May - August 2015



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# Study of Pharmacy at the College of Medicine, University of Malawi

By Anderson Ndalama, Nettie Dzabala and Lutz Heide

In Malawi, the College of Medicine was founded in 1991 as a constituent college of the University of Malawi, a state owned university. It is the first college to offer medical courses up to bachelor's level in Malawi. It was established in response to the critical shortage of well qualified health care professionals

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in Malawi's health sector. In its early years, College of Medicine was offering only one course: the "Bachelor of Medicine and Bachelor of Surgery (MBBS)". However, the lack of qualified pharmacists and other health care professionals remained severe for several years. For instance, by the year 2009 there were only 73 pharmacists in Malawi, most of them non Malawians trained outside the country. In this situation, the Pharmacy Department was established within the College of Medicine in 2006. The first group of Malawi trained pharmacists completed their five year education in the year 2010. This first group comprised only eight graduates. Due to the strong demand, the number of graduating students has gradually been increasing to 40-50 per year. Currently, the College of Medicine offers around 10 undergraduate courses under several faculties. Among the undergraduate courses offered are MBBS, Bachelor of Pharmacy (Hons), Bachelor of Medical Laboratory Science (Hons), Bachelor of Physiotherapy (Hons), Bachelor of Health Systems Management, and other specialized medical fields like Surgery, Internal Medicine, Paediatrics, Gynaecology and

Orthopaedics. The College has over 1000 registered students, out of which 200 are pharmacy students. International students are also welcome at the College of Medicine. Currently there are international students especially from African countries and from India.

## The education of pharmacists in Malawi

The education of pharmacists in Malawi comprises a five-year university education followed by a one-year practical education. The year of entry is called foundation year. In this year, students learn basic sciences like Physics, Chemistry and Biology at an advanced level. From foundation year, students then go to year 1 where they learn basic medical sciences like Anatomy, Physiology and Biochemistry. Other courses offered in year 1 are Epidemiology, Biostatistics and Introduction to Pharmacy. The subjects in the 2nd, 3rd and 4th year of the pharmacy curriculum are similar to that of the pharmacy education worldwide. As an additional key subject, "Management of Drug and Medical Supplies" is taught in years 3 and 4. In this subject, the students are prepared for the organizational and logistic problems of drug supply



system in Malawi.

In the 3rd and 4th academic year the students are also sent for site visits and practical attachments in private pharmacies, hospital pharmacies, pharmaceutical industries, the Central Medical Stores Trust and within the wards of the teaching hospital, Queen Elizabeth Central Hospital. The Central Medical Store Trust is entrusted by the Malawi Government to supply all drugs and medical supplies to all government hospitals and health centers. In their final year, pharmacy students are required to carry out a research project. They develop a research plan which has to be approved by the College of Medicine Research and Ethics Committee; thereafter, they receive a small research budget to carry out their project. Most research projects are carried out in hospitals or in other health service facilities, less often in a pharmaceutical laboratory. Afterwards they present their results orally and deliver a written research report.

The internship year, following the university education, is organized by the regulatory authority in the Ministry of Health, the Pharmacy, Medicines and Poisons Board (PMPB). The internship program involves rotation among mostly government hospital pharmacies, and two months each in a private pharmacy, pharmaceutical industry and in the Central Medical Stores Trust. The internship year concludes with a written exam, and after passing the exam the candidate can apply for his licensing as a pharmacist by the PMPB.

### **Carrier paths for pharmacists in Malawi**

The job market for Pharmacists in Malawi is still very large. The government health system which comprises four central hospitals, 24 district hospitals and 328 rural health centers forms the immediate career path. The Ministry of Health pursues the aim that all hospital pharmacies of the Central and

District Hospitals should be headed by pharmacists. However, due to the lack of professional personnel, this aim has not yet been achieved.

About 30% of the medical services in Malawi are provided by member institutions of the Christian Health Association of Malawi (CHAM). CHAM operates 20 hospitals and 107 health centers. However, in total only two pharmacists and 21 pharmacy technicians work in these facilities, which signifies availability of job opportunity for pharmacists.

The pharmaceutical industry of Malawi, though still small, is another potential career path. The largest pharmaceutical manufacturer in Malawi is Pharmanova Limited. Other manufacturers are Kentam, SADM and Malawi Pharmacies Limited. Pharmanova also assists in the education of the pharmacy students by providing site visits, places for industrial pharmacy practical attachments, and internships. Other areas where pharmacists in Malawi get employed are the Ministry of Health, the Pharmacy, Medicines and Poisons Board (PMPB) as well as the Central Medical Stores Trust (CMST).

Retail pharmacy business is another important career path in Malawi. At the moment there are only about 40-50 such private pharmacy shops. The owner does not have to be a pharmacist himself, but he must employ at least one academically qualified, licensed pharmacist for every pharmacy.

### **Current projects of the College of Medicine Pharmacy Department**

Some of the current research and practice projects underway in the Pharmacy Department at College of Medicine are: Establishment of a pharmacovigilance center, to monitor adverse drug events; detection of substandard and counterfeit medicines; production

of dermatological preparations for Queen Elizabeth Central Hospital; investigation of traditional medicinal plants; establishment of the clinical pharmacy services; antimicrobial stewardship; and clinical studies on anti-infective therapy.

The Pharmacy Department also aims to become a member of the FIP/UNESCO Center of Excellence of pharmaceutical university institutes in Africa. We also look forward to partnering with other universities like Kenyatta University, all towards improvement of healthcare in Africa.



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