



## Letter to the Editor: Pharmacy Education in Africa

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Pharmacy education in African countries faces numerous challenges that require immediate intervention by stakeholders, national governments and other development partners in order to maximize student learning experience and contribute effectively to the national workforce upon graduation (1). The practice of pharmacy is continuously evolving worldwide and so is the need for a corresponding evolution of learning methods. Present demands require that education be tailored towards provision of evidence based health service to optimize patient care and total health service delivery.

The basic licensure degree in Anglophone African countries is the Bachelor of Pharmacy (BPharm) degree. The Doctor of Pharmacy degree (PharmD) is more centred around pharmaceutical care and is currently being embraced in countries like Nigeria, Ghana, South Africa (1-3). Kenya lags behind in the implementation of this (4).

The mode of learning in these countries is based on preliminary years of didactic teaching in pharmaceutical sciences and the final year of the 5 to 6 year program being more tuned to experiential, combined research and more clinical practical experience. This is usually followed by a one year period of internship in sectors such as community, hospital, industry, administration or research. Egypt employs a similar system as seen in Anglophone African countries. The degrees offered are the BPharm, Post Graduate Diploma Pharmacy, Master of Pharmacy, Doctor of Pharmacy (PharmD), and Doctor of Philosophy in Pharmacy (PhD) (5). South Africa employs a system which focuses on acceptable problem based learning (PBL) principles including scenarios, workshops, as well as individual and group presentations (3).

In Francophone African countries (those with French colonial heritage) the system is quite different. The degree obtained after two cycles of didactic and experiential training is the Doctorate in Pharmacy. There is an optional addi-

tional four year period of residency which gives room for specialization (2, 6).

Most African universities are deficient of a good practice in the development of required communication skills. There is a limited access to the patient by the training pharmacist during the clerkship/externship exposure which serves as the means by which communication skills are developed (1, 7).

Students in health care professions have their academic performance affected by factors such as stress, test anxiety, stability and sleep quality (8). It has been observed that students in didactic education as employed by most African universities suffer from poor sleep quality and as such predisposing them to poor performance which could in turn lead to less confidence and competency development (9, 10).

There is a need to revise training methods to incorporate best practices seen in developed nations. The Virtual Centre of Excellence launched in September 2014 at the International Pharmaceutical Federation's World Congress of Pharmacy and Pharmaceutical Sciences is in part helping to improve pharmacy education in Africa. The system encourages staff exchange and provides access to free resources contributed by international universities to support educational activities as well as having practical demonstrations and pharmacy simulators on the site to assist learning (11).

Problem based learning encourages students to think and solve real life problems. It is what Africa needs at this time to facilitate knowledge application, development of critical and clinical reasoning and also to encourage life-long learning (12). This way, problems peculiar to regions where the pharmacist intends to practice are the focal points of training with adjustments to current trends. This will help in optimising the health care system in addressing the local needs. There should also be room for incor-

poration of solutions to problems encountered in other countries so as to develop international competency.

Infrastructure, access to teaching resources, development of academic staff, and quality research remain a long standing barrier to delivery of quality pharmacy education in developing countries (13). There is need to allocate more public funds to the improvement of the educational system in terms of infrastructure and development. Though clinical training should be of greater emphasis, pharmacist's training should also encourage the uptake of national legislative positions.

Going forward, pharmacy education in Africa requires improvement to bring it at par or closer to what is tenable as international best practices in the world. There is a need for continuous curricular upgrades such as the development of the minimum standard degree requirement for the licensure of a continent-wide PharmD degree for improved pharmaceutical care; continuous workforce and teacher assessment, and training by regulatory bodies; practicing needs based learning; and exploring better curriculum delivery strategies by the introduction of problem-based learning. Transitioning to the PharmD program will also require that the room for upgrade of present BPharm degrees be made available. Training should also be aimed at creation and application of new knowledge based on research in pharmaceutical, social and clinical sciences.

#### Footnotes

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