

doi: 10.3325/cmj.2009.50.77

## Case for Clinical Officers and Medical Assistants in Malawi

by Adamson S. Muula

[muula@email.unc.edu](mailto:muula@email.unc.edu)

In Malawi, a country of 13 million people, there are just about 260 medical doctors. With this number of medical doctors, it is impossible to expect that doctors will be the main human resource in delivering clinical medical care. Malawi experienced doctor shortage both in British colonial period and in the period after attaining political independence in 1964. However, the situation has consistently improved and a huge impetus has been given by the establishment of the country's only medical school, a constituent college within the University of Malawi.

When the medical school was opened in 1991, its first 12 graduates obtained a Bachelor of Medicine and Bachelor of Surgery degree in 1992, having completed most of their training in the UK (1). With an annual output of up to 20 graduates, the medical school failed to keep up with the country's population growth, which amounted to 33% between 1998 and 2008. In 2001, the first-year intake was increased to 30 students, rising again to the current level about 60 students enrolled. This is a really small number in comparison with other African countries such as Kenya, Uganda, or Ethiopia, which enroll hundreds of first year medical students each year. For Malawi, though, this has been a significant leap of faith with a potential to change the way in which medical care is delivered.

### TRAINING OF CLINICAL OFFICERS

In Malawi, there are two institutions providing training for clinical officers – the Malawi College of Health Sciences (a public training institution, located in the capital, Lilongwe) and the Malamulo College of Health Sciences (owned by the Seventh-Day Adventist Church and located in the rural area of Makwasa). The formal Diploma in Clinical Medicine training requires 3 years of education at the institutions followed by a year of internship.

Clinical officers appeared on the scene in Malawi only in the 1980s. Before that, clinical duties were largely performed by medical assistants. Medical assistants receive 2 years of formal training, earning a Certificate in Clinical

Medicine. Unlike clinical officers, medical assistants have no internship requirements and are not expected to perform surgical procedures such as Cesarean deliveries.

Apart from the primary clinical officers' career route, medical assistants can upgrade to clinical officers after completing a 2-year bridging course. Furthermore, medical assistants also have an opportunity to complete an 18-month training program for orthopedic, ophthalmology, or anesthesia clinical officers. The orthopedic training program began in 1985 and 117 clinical officers have been trained, of whom 82 were in clinical practice in 2008 (2). In 2002, the country began an orthopedic postgraduate program for medical doctors but it can only take in only two candidates per year. Nurses may also upgrade to anesthetics clinical officers after completing a similar training. Unlike the generic clinical officers, who are trained to provide general medical-surgical care, the orthopedic, anesthesia, or ophthalmology clinical officers are only recognized as clinical officers within their specialized disciplines. The individuals may still practice as medical assistants with the limited responsibilities if they want to practice general medicine.

### THE CASE FOR CLINICAL OFFICERS AND MEDICAL ASSISTANTS

Clinical officers and medical assistants are trained and recruited as substitutes or temporary cadres until the number of medical doctors increases. Even with an annual doctor output of 100 graduates, it may take up to 20 years (not including brain drain and other losses) for the country to have 2000 of its own doctors, although in that time many of the earlier graduates will approach retirement.

It is unclear who is responsible for the inadequate number of doctors. Of course, retention of health professionals and recruitment of suitable candidates for training have not always attracted political attention. However, it has to be noted that with a unit training cost estimated to be between US \$10,000 and 18 000 (3,4), medical training

presents a huge financial burden to tertiary education in the country.

Although the number of doctors graduating in the country increases, the majority of doctors choose to work in urban areas. This poses a considerable problem in a country where 80% of the population lives in rural areas. In this sense, clinical officers and medical assistants have an advantage over doctors since they are more willing to work in rural areas.

The importance of clinical officers and medical assistants in health care delivery in Malawi was brought to the fore in 2004, when the decision was made to provide free universal HIV antiretroviral therapy. The aim was to rapidly include into treatment programs between 160 000 and 200 000 of the estimated 1 million HIV-infected people in the country. Were it not for the mobilization of clinical officer and medical assistant cadres, the often reported Malawi success story would not have been told.

#### THE CASE AGAINST CLINICAL OFFICERS AND MEDICAL ASSISTANTS

One of the frustrations associated with clinical officers and medical assistants replacing doctors in Malawi is that what started as a temporary solution has become a permanent one. There seems to be a perception that "clinical officers are just as good as doctors," implying that doctors are not that crucial for health delivery. Gul and Sambandam have expressed concern regarding the assessment of effectiveness of clinical officers' practice (5). Chilopora et al (6) reported that postoperative outcomes of Cesarean sections performed by clinical officers, either combined with subtotal hysterectomy or with total hysterectomy or repair of

uterine rupture, were comparable with those of medical doctors. The problem with this assessment is that it may be shown that post-operative outcomes for medical doctors were just as bad.

Although the current assessments of effectiveness and safety of employment of clinical officers and medical assistants may be limited, in a country with limited numbers of doctors like Malawi, the use of such cadres is inevitable in the provision of medical care, especially in the scaling-up of HIV antiretroviral therapy.

#### References

- 1 Broadhead RL, Muula AS. Creating a medical school for Malawi: problems and achievements. *BMJ*. 2002;325:384-7. [Medline:12183314](#) [doi:10.1136/bmj.325.7360.384](#)
- 2 Mkandawire N, Ngulube C, Lavy C. Orthopaedic clinical officer program in Malawi: a model for providing orthopaedic care. *Clin Orthop Relat Res*. 2008;466:2385-91. [Medline:18633684](#) [doi:10.1007/s11999-008-0366-5](#)
- 3 Muula AS, Panulo B Jr. Lost investment returns from the migration of medical doctors from Malawi. *Tanzan Health Res Bull*. 2007;9:61-4. [Medline:17547104](#)
- 4 The World Bank. Cost, financing and school effectiveness of education in Malawi: limited choices and endless opportunities. Washington DC: Human Development Sector, Africa Region, The World Bank; 2004.
- 5 Gul A, Sambandam S. Results of manipulation of idiopathic club-foot deformity in Malawi by orthopaedic clinical officers using the Ponseti method: a realistic alternative for the developing world? *J Pediatr Orthop*. 2007;27:971. [Medline:18209628](#)
- 6 Chilopora G, Pereira C, Kamwendo F, Chimhiri A, Malunga E, Bergstrom S. Postoperative outcome of caesarean sections and other major emergency obstetric surgery by clinical officers and medical officers in Malawi. *Hum Resour Health*. 2007;5:17. [Medline:17570847](#) [doi:10.1186/1478-4491-5-17](#)