Evaluation of sustainable surgical training for clinical officers in Malawi

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Background: Shortages of specialist surgeons in African countries mean that the needs of rural populations go unmet. Task-shifting from surgical specialists to other cadres of clinicians occurs in some countries, but without widespread acceptance. Clinical Officer Surgical Training in Africa (COST-Africa) developed and implemented BSc surgical training for clinical officers in Malawi.

Methods: 17 trainees participated in the COST-Africa BSc training 2013-2016. This matched-pairs study done in 16 hospitals compared crude numbers of selected numbers of major surgical procedures between intervention and control sites before and after the intervention. Volume and outcomes of surgery were compared within intervention hospitals between the COST-Africa trainees and other surgically active cadres.

Results: The volume of surgical procedures undertaken at intervention hospitals almost doubled (+89%, 2013-2015), and there was a slight reduction in the number of cases done in the control hospitals (-4%, 2013-2015), (p=0.059). In the intervention hospitals most general cases were done by COST-Africa trainees (61.2%) compared to other Clinical Officers (31.3%) and Medical Doctors (7.4%). Postoperative wound infection rates for hernia procedures at intervention hospitals were compared between trainees and Medical Doctors with no statistical difference found (p=0.065).

Conclusion: COST-Africa developed, implemented and evaluated Malawi’s first postgraduate surgical training programme for non-physician clinicians. The training model has proved to be effective and has been embedded within the mainstream educational programmes offered by the University of Malawi’s College of Medicine. However, there are serious risks endangering the long term success of the model, including the absence of career paths for COs in Malawi after obtaining the BSc in Surgery, which is similar to the situation of other NPCs in the region.