Task-shifting: The crucial role of medical doctors in reducing maternal deaths in South Sudan

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Introduction

Millennium Development Goal (MDG) 5 is related to reducing maternal mortality. Against the background of the failure of this MDG, South Sudan has two features that make it interesting for the international donor community:

Firstly, South Sudan has the highest national maternal mortality ratio in the world, above 2,000 (i.e. 2,000 maternal deaths/100,000 live births), which is roughly 1,000 times higher than in Sweden.

Secondly, leading cadres in the Ministry of Health in Juba have an open and scientifically updated attitude to the most fundamental underlying problem: the scarcity of human resources for health (HRH) to save maternal lives.

Human resource management

In the "National Reproductive Health Strategic Plan 2013-2016" (November 2012) for South Sudan there is a human resources for health focus in the chapter entitled "Human resource management". Much attention is given to two categories of mid-level personnel, namely professional midwives and clinical officers. In addressing "staff redeployment, rationalization and retention" it is stated that the government has to "give priority to the deployment of newly trained staff to under-served states and counties and classify hardship areas with the view to developing incentives, benefits and packages for staff serving in those areas".

What is not presented convincingly in this document is the fact that any initiative to train 'mid-level providers of health care' is doomed to fail if there are no competent trainers to lead this training. And there are no other more competent trainers than medical doctors. This has been demonstrated in other African countries (for example in Tanzania, Mozambique, Malawi, Zambia and Ethiopia) where there have been similar initiatives and where life-saving comprehensive emergency obstetric care (CEmOC), including Caesarean sections, has been successfully delegated to 'mid-level providers of care'. Such delegation of major surgery to thoroughly trained and supervised mid-level providers is called 'task-shifting of CEmOC'. Extraordinary precautions must be observed in order not to create a sub-standard cadre of 'surgeons'. Mozambique has now almost 30 years of experience, and scientific research has clearly demonstrated that it is a success. However this success is not free of significant costs, and medical doctors' active collaboration and formal employment as supervisors are crucial prerequisites for success.

"Who should do the Caesareans where there is no doctor?"

The article "Who should do the Caesareans where there is no doctor?" in the British Journal of Obstetrics and Gynaecology addresses the issue of task-shifting [1]. Shifting doctors' normal duties in surgery to 'non-doctors' or 'non-physician clinicians' - or 'associate clinicians' (ACs) using the current terminology - has been controversial but is now recognized as the only solution in most low-income countries, if we are serious about MDG 5 (and beyond 2015 in particular) to reduce maternal mortality.

Task-shifting in surgery raises important ethical issues, as patient risk could be increased when the operating clinician lacks the expertise of a fully trained surgeon. However, comparative studies in Mozambique [1] and Tanzania [2] indicate that postoperative outcomes do not

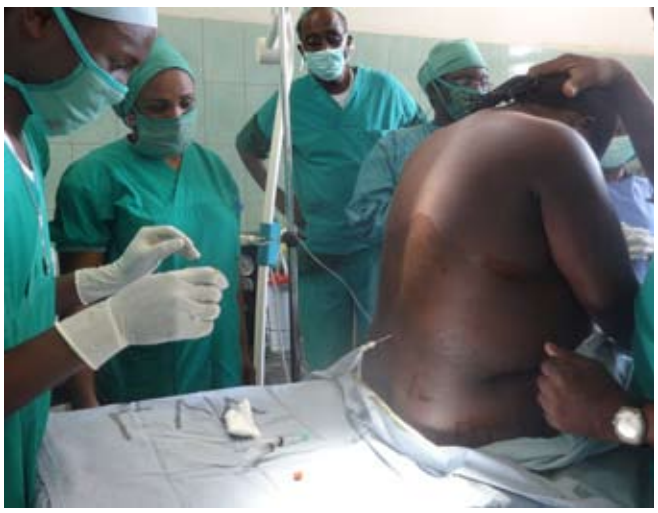

Figure 1. Trained nurse conducts spinal anaesthesia as part of task-shifting (credit: Dr Angelo Nyamtema)

differ between physicians and ACs. However many aspects of quality of care remain unaddressed in the surgical task-shifting literature [3]. These include low referral rates to tertiary care centres due to the presence of ACs at district hospitals, the unknown quality of surgical education and training beyond the relatively small number of educational interventions described in the literature, and the degree of supportive supervision and training that providers who engage in surgical task-shifting may require but not always receive.

Surgical task-shifting remains a compelling model for surgical care delivery, and perhaps even an ethical imperative. It has been shown to be cost-effective [4, 5, 6], and may be associated with lower rates of 'brain drain' to higher-income countries [7] and with greater provider retention in the most underserved regions [8].

What can South Sudan learn from other African countries?

A few pertinent country examples, relevant for South Sudan, are briefly described here:

- In Mozambique training of ACs in surgery is well structured in a school with a three year curriculum, a process of evaluations and an internship. The graduates are called 'técnicos de cirurgia' (TCs) in Portuguese. Published scientific studies demonstrate that TCs are well appreciated by other professionals, such as doctors, nurses and midwives. Around 90% of them gave a positive rating with regard to TCs strong practical skills and their critical role in saving the lives of mothers and their newborns at district hospitals. With accumulated surgical experience among these TCs, young doctors deployed in rural areas are increasingly trained in surgery by them. The assessment of outcomes of Caesarean sections among TCs and medical officers at the teaching hospital in Maputo showed no clinically significant differences between them [1]. (See figures 1 and 2)
- ACs in Tanzania are called 'assistant medical officers' (AMOs) and trainees are selected among clinical officers with previous working experience of a minimum three years in peripheral health units or District Hospitals. The training takes two years with another three months of surgery and three months of obstetrics (presumably to be prolonged in the near future). Our studies show that for major obstetric operations performed by AMOs and medical officers, there were no clinically significant differences in their postoperative outcomes, risk indicators, or quality of care indicators [2].

Figure 2. Lady with a uterus that had entirely herniated through the abdominal wall undergoing caesarean section (File Photo - credit Clare Attwood)

The scientific studies mentioned show that mid-level health professionals carry out most of surgical procedures outside urban areas in several African countries. They are key surgical professionals in rural areas where doctors are scarce. The results of our studies also show that técnicos de cirurgia in Mozambique performed 92% of Caesarean sections in district hospitals and in Tanzania AMOs performed 85% of Caesarean sections, 94% of repairs of ruptured uterus, 86% of removal of ectopic pregnancy and 70% of hysterectomies in Mwanza and Kigoma regions in Tanzania [8, 2].

Task-shifting in surgery: what is the research evidence?

The literature highlights the initial problem of reluctance and even resistance among doctors to accept task-shifting in surgery. Since the inception of training of TCs in 1984 in Mozambique the reluctance has gradually disappeared and it is now recognized among doctors that this cadre actually alleviates the recently graduated and often inexperienced doctors assigned at district hospitals from the tangible burden of emergency obstetric and surgical care [6].

According to the literature, health worker motivation and retention in rural assignments is a crucial response to the HRH crisis in African countries. Poor remuneration, bad working conditions, suboptimal management of human resources, limited opportunities for career progression, oppressive political climate, including insecurity and threat of violence, and a wish to provide a good education for their children influence the motivation of the health workforce, including ACs, to continue.

In Mozambique, like in South Sudan, the health workforce has generally low work motivation due to inadequate salaries and incentives, poor working conditions, absence of job description, unsatisfactory organization and management of services, heavy workload, degraded physical infrastructure preventing application of biosafety norms, and lack of supplies. In Mozambique's task-shifting initiative the main problem of TCs is dissatisfaction due to workload, as they can rarely leave the workplace to attend training in referral hospitals or attend specific seminars to ameliorate their knowledge. In addition, there is irregular supervision by specialists as the specialist surgeons are few at provincial level.

In Tanzania's task-shifting policy the situation is similar and the motivation is reportedly weak among health workers. AMOs face overwork, poor working conditions and lack of supportive supervision. They are rarely invited to attend meetings at the Ministry of Health in the same way as their colleagues, such as nurses and midwives, despite sharing activities in the same areas. They are seldom moved to referral hospitals for job training to ameliorate their performance, which make them feel abandoned and disoriented. Lack of career perspectives make them dissatisfied.

Attention paid to adequate supportive supervision and good management can reportedly improve work satisfaction, performance and quality of work in remote settings. In our studies, supportive supervision was not specifically addressed, but the literature reviewed indicates that, in both Mozambique and Tanzania, it is irregular or non-existent in most districts. This is an important lesson for South Sudan: medical doctors should be employed for, and closely involved in, supportive supervision of clinical officers 'shoulder-to-shoulder'.

Supportive supervision of clinical officers: a key role for medical doctors in South Sudan

For South Sudan the experiences gained in Mozambique are extremely relevant and important. There is at present no clear retention plan of health workers in remote settings in South Sudan. Insufficient human resource management implies a lack of job descriptions, often irregularly paid (and low) wages and lack of supportive supervision at most levels. Failure in retention policy as well as substandard human resource management have led to high turnover of HRH in all government-managed health facilities.

Retention of health staff is a crucial issue in both Mozambique and South Sudan. Our research in post-war Mozambique [8] shows that 88% of técnicos de cirurgia remained in rural areas seven years after graduation while none of the doctors assigned there stayed on in such areas after that period. Another study indicates that retention may be related to the recruitment system. If candidates are selected from each region of the country, mainly from rural areas and are integrated in scholarship schemes at provincial level with commitment to return after having finished the training, distribution of cadres and their retention are improved.

For South Sudan the issue of enabling environment in task-shifting will doubtlessly be of utmost importance. The enabling environment goes beyond the issue of numbers of health workers. Solving the problem of numbers of health professionals is not a panacea for improving access to health care. Other problems have to be addressed simultaneously in order to improve the function of the health system. For well-trained health workers in sufficient numbers to perform optimally, an enabling environment is required. Supportive supervision is presumably the most crucial ingredient of the enabling environment in South Sudan.

Addressing the issue of task-shifting in South Sudan without paying attention to the need of an enabling environment - centrally and locally - would be detrimental. Also here lessons from other countries are pertinent. In Mozambique an 'Instituto Superior de Ciências de Saúde' (Higher Institute of Health Sciences) was created in order to, among other things, clarify the career path for TCs. Further, the initiation of the national programme of human resources was a positive step in counteracting the human resource crisis.

The way forward for South Sudan to have fewer maternal deaths

For the foreseeable future medical doctors will be crucial for the reduction of maternal mortality in South Sudan. In the near future the country might come to stand out as a exemplary model on how to reduce the world's highest maternal mortality ratio to well below the African average. Medical doctors cannot manage this enormous burden themselves. Clinical officers - with improved background

schooling - and trained (by medical doctors!) to perform life-saving surgery will be the backbone of emergency surgery and obstetrics at county levels. Decentralization of such emergency care to health centres (well beyond district hospitals) closer to the origin of the majority of serious obstetric complications is a success story in Tanzania [9].

An important source of information about what is going on in the field of task-shifting is the 'African Network of Associate Clinicians (ANAC), based at the Chainama College of Health Sciences, Lusaka. Medical doctors are involved in this network in order to learn and to share knowledge of the critical issue of maternal mortality reduction, among many other issues.

The challenge to us doctors is the question: do we want to be a part of the solution or a part of the problem? I am sure all of us should want to be part of the solution.

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