

EDITORIALS

“Non-physician clinicians” in low income countries

A potential solution to lack of human resources for maternal health

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The crisis in human healthcare resources disproportionately affects the poorest women in low income countries. The World Health Organization reports that net numbers of doctors, nurses, and midwives in Africa will decrease between 2000 and 2015.¹ Furthermore, because of population increases, the number of healthcare workers relative to the number of people they need to treat will decrease even more markedly.¹ In the linked systematic review (doi:10.1136/bmj.d2600), Wilson and colleagues assess the effectiveness and safety of clinical officers (mid-level healthcare providers who are not medical doctors, yet are trained to perform tasks that are usually undertaken by doctors) in caesarean section surgery, compared with doctors.²

It has been increasingly recognised that human resources were not sufficiently considered when the Millennium Development Goals were formulated. A review of the link between human resources and health reported that current spending on human resources is inefficient and fragmented.³ The review also looked at “health worker density”: according to its population sub-Saharan Africa has a tenth of the nurses and doctors that Europe has, and Ethiopia has a 50th compared with Italy.³ Furthermore, low density areas have a much higher burden of disease than high density areas. Africa has about a quarter of the burden of the world’s diseases but only 1.3% of the world’s health workforce.¹

The global shortage of health workers has been estimated at more than four million; sub-Saharan countries need to almost triple their current number of workers by adding around one million workers through retention, recruitment, and training if they are to come close to approaching the millennium development goals for health.⁴ This applies particularly to millennium development goal 5 and the target of drastically reducing maternal mortality by 2015.

The depletion of human resources in the most deprived countries has forced us to question traditional roles and responsibilities within the healthcare system. Much resistance remains, however, to the concept of delegating surgery to non-physician clinicians. Other non-surgical advanced clinical tasks, like lumbar puncture, assessment of emergency obstetric cases, or management of the very sick child have already been in the hands of non-physician clinicians for decades. Many people in the medical profession see this as a threat. But if doctors insist on having exclusive

rights to surgery, they may end up by being a part of the problem rather than the solution.

Clearly much research is needed to assess how best to remedy the crisis in human resources for health in general, and for maternal health in particular. One of the most burning topics is “task shifting” of life saving comprehensive emergency obstetric care—including caesarean sections—from conventionally (faculty) trained doctors to “non-physician clinicians.” This new term is now commonly used for a wide variety of mid-level providers of care, who are usually more (formally) qualified than nurses but less (formally) qualified than doctors. They are, importantly, clinicians because they perform independently the tasks of medical doctors in the absence of such doctors, but they are also non-physicians, because they have not been trained at a school of medicine. Are non-physician clinicians a substandard solution to the crisis in human resources for maternal health? Evidence suggests that the answer is no.

A PhD thesis, which was endorsed at the Karolinska Institute in Stockholm in 2010 reviewed task shifting of major surgery to mid-level providers of healthcare (Pereira C. Task-shifting of major surgery to midlevel providers of health care in Mozambique and Tanzania—a solution to the crisis in human resources to enhance maternal and neonatal survival [PhD thesis]. Karolinska Institutet, Sweden 2010). It included studies from Mozambique⁵⁻⁸ and Tanzania⁹⁻¹⁰ on non-physician clinician’s clinical performance. It found no clinically significant differences in the outcomes of caesarean section when postoperative assessment is carried out by non-physician clinicians or specialists in obstetrics and gynaecology. Also, the professional performance of non-physician clinicians and their high retention rates (90% after seven years compared with 0% for physicians) in rural hospitals indicate that they perform extremely well. The thesis clarifies the variety of confusing terminologies used to describe these different categories of staff. They should not be called “clinical officers” as in the current study by Wilson and colleagues. “Clinical officers” in Tanzania (who are legally prohibited from performing caesarean sections) have secondary school education followed by three years of training in the management of common, medical, reproductive health, and simple surgical problems. In contrast, the mid-level category workers who perform caesarean sections in

Mozambique—called “técnicos de cirurgia” and described in Wilson and colleagues’ study—are already trained mid-level providers of care with three more years of intensive training in surgery.¹¹ These two categories are not comparable. To add to the difficulties of comparing mid-level providers of caesarean sections between countries, there are “assistant medical officers” in Tanzania, “health officers” in Ethiopia, “medical licentiates” in Zambia, “attachés de santé” in Burkina Faso and still others. For this reason, meta-analyses of the clinical skills of non-physician clinicians cannot compare assessments made between countries but should be limited to those within countries. The current research challenges are specifically in the context of diagnostic accuracy (and not only manual skills) preoperatively, intraoperatively, and postoperatively—studies are needed in all countries where non-physician clinicians perform major surgery to assess decision making and management skills in clinical practice.

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