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# Task shifting for emergency obstetric surgery in district hospitals in Senegal

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**Abstract:** *Due to a long-term shortage of obstetricians, the Ministry of Health of Senegal and Dakar University Obstetric Department agreed in 1998 to train district teams consisting of an anaesthetist, general practitioner and surgical assistant in emergency obstetric surgery. An evaluation of the policy was carried out in three districts in 2006, covering trends in rates of major obstetric interventions, outcomes in newborns and mothers, and the views of key informants, community members and final year medical students. From 2001 to 2006, 11 surgical teams were trained but only six were functioning in 2006. The current rate of training is not rapid enough to cover all districts by 2015. An increase in the rate of interventions was noted as soon as a team had been put in place, but unmet need persisted. Central decision-makers considered the policy more viable than training gynaecologists for district hospitals, but resistance from senior academic clinicians, a perceived lack of career progression among the doctors trained, and lack of programme coordination were obstacles. Practitioners felt the work was valuable, but complained of low additional pay and not being replaced during training. Communities appreciated that the services saved lives and money, but called for improved information and greater continuity of care.*


**Keywords:** task shifting, emergency obstetric care, caesarean section, maternal mortality and morbidity, health policy and programmes, Senegal

SENEGAL is a low-income West African country of about 12 million inhabitants. Half the population lives in urban areas, 25% in Dakar region. The fertility rate is 5.3 births per woman and the crude birth rate is 39.3%.[1] The GDP is around US$ 2,000 (using purchasing power parity)[2] and about half the population are still living below the poverty line, the majority in rural areas.[3]

Antenatal care attendance is high, with an average of 87% of women (96% in urban areas) having at least one antenatal consultation. In urban areas, 81% of women deliver in a health facility, while in rural areas, the proportion is 45%.[1] The country is divided into 11 regions and 63 health districts, of which, outside Dakar, 18 provide comprehensive emergency obstetric care (EmOC) to about 4.4 million inhabitants, leaving 4 million others without a district hospital. In 2005, a fee exemption policy was introduced into five poorer regions, and in 2006 extended at regional hospital level to all regions apart

from Dakar, the capital. The aim of the policy was to reduce financial barriers for maternal health services, increase supervised delivery rates and decrease maternal mortality.[4]

Lack of basic surgical and emergency obstetric care in district hospitals in rural areas has long been a major problem in Senegal.[5] Practically all surgical cases in rural health districts (emergencies or not) were being referred to one of the ten tertiary-level regional hospitals. These patients faced many obstacles, including high transport costs. Usually they ended up going directly to the regional hospital – or a traditional healer. As a consequence, the tertiary hospitals were getting more patients than they could actually cope with. They suffered from infrastructural and material limitations, compounded by a chronic lack of qualified staff.[6] There was also no guarantee that emergency patients rushed by ambulance to Dakar would be promptly or adequately managed at the University hospital or any other national-level health establishment, for there again they confronted a plethora of problems – no bed space, not enough supplies, lack of blood transfusion services, lack of staff or operating theatres.[7,8]

In the early 1990s, the Senegal Demographic and Health Survey found a maternal mortality ratio of 500–550 maternal deaths per 100,000 live births for the period 1979 to 1992.[9] In 1992, a situation analysis found low coverage for major obstetric interventions. Outside Dakar in 1992, there were only 12 hospitals with the capacity to perform a c-section and only 15 medical doctors skilled in doing c-sections.[10] The national caesarean section (c-section) rate averaged 0.7%, with the highest rate in Dakar (1.2%) and the lowest in poor rural areas (0.2%); of 100 women who underwent a c-section, 4.7% died and 30% of their newborns died.[11]

A clear gradient of maternal mortality according to distance to a source of comprehensive essential obstetric care[12] called for a strategy of investment in building referral facilities and increasing the number of surgeons or obstetrician–gynaecologists. In 1996 the c-section rate was still only 0.6%.[8] The government decided in 1999 to ask the World Bank and African Development Fund to provide fellowships to train more obstetrician–gynaecologists under the National Health Development Plan. It was calculated that 130 surgically skilled people at district level were required to provide coverage of two per district outside Dakar. Yet only five gynaecologists per year ended up being trained, and very few agreed to work in regional hospitals.

This contributed to the Ministry of Health's decision in 1998 to delegate emergency obstetric surgery to non-specialists, which was perceived as the only possible alternative, and specifically to train anaesthetists, general practitioners and surgical assistants to provide emergency obstetric surgery at district level.

## The task-shifting policy

Task shifting is a process of delegation of tasks to less specialised health workers.[13] The term comes from the domain of HIV/AIDS treatment and care, where it was recently developed as a policy response to the shortage of health workers.[14] The objective of task-shifting is to provide essential services closer to the population and hence to better meet their needs. To reduce maternal and neonatal mortality, an increase in rates of major obstetric interventions is required. To make this possible in many sub-Saharan African countries, the majority of c-sections are now performed by non-obstetricians, and in at least five countries by non-physician clinicians.[15]

In Senegal, the Ministry of Health signed an agreement with the University and the university gynaecology & obstetrics department in 1998 to provide the training. The programme was supported by the African Development Fund in collaboration with the *Cellule d'Appui et de Suivi* of the Ministry of Health, which monitored implementation of the National Health Development Plan. The agreement provided for the training of eight district teams in 1998–2002 and eight more in 2005–2008. This would allow EmOC coverage of 16 of the 45 districts in Senegal by 2008, but it meant that it would take a further two decades to cover all 45 districts unless the rate was increased, and that is assuming all teams remained in place.

Anaesthetists in Senegal are qualified to perform general as well as spinal anaesthesia. Only one anaesthetist among the 11 teams trained between 2001 and 2006 undertook the specific training in obstetrics, since the others were considered to have acquired the requisite skills during their basic training. The general practitioners were trained in general obstetrics, post-abortion care, instrumental extraction, laparotomy for ectopic