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Provision of anaesthesia services for emergency obstetric care through task shifting in South Asia

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Abstract: *Anaesthesia is required for certain procedures in emergency obstetric care, such as caesarean section and the repair of ruptured uterus. Task shifting for provision of anaesthesia has been implemented in public sector rural hospitals of South Asia in recent years because of significant shortages of anaesthetists, but there has been limited research on this issue. This paper reviews the literature on this topic and documents existing programmes for task shifting anaesthesia services to mid-level providers in South Asia to increase access to emergency obstetric care and reduce maternal mortality. We found that task shifting of anaesthesia services has been effective in expanding coverage and access to care in South Asia, but most programmes have not been implemented systematically as part of an overall human resources strategy. A comprehensive approach, to maximise the benefits of these programmes, calls for countries to appoint a director at national or state level who is responsible for the availability of anaesthesia services in rural areas; legal protections, licensing by a competent authority and registration to perform anaesthesia services, including prescription of anaesthesia drugs; supportive managerial arrangements, competency-based training, monitoring and evaluation; performance rewards, career structure and job clarity; adequate equipment and supplies; support from specialist anaesthetists and quality assurance for safety. ©2009 Reproductive Health Matters. All rights reserved.*

Keywords: task shifting, anaesthesia, mid-level providers, emergency obstetric care, South Asia

EACH year, over half a million maternal deaths occur, almost all in developing countries.¹ South Asian countries account for around half of the global burden. Increasing access to emergency obstetric care (EmOC) when complications occur during pregnancy, delivery and the post-partum period has been shown to be the most effective intervention for preventing maternal deaths. Anaesthesia is an essential component of comprehensive EmOC, which includes caesarean section and repair of ruptured uterus. However, in many developing countries, the lack of specialised staff who can provide care in public sector rural hospitals is a major obstacle in the expansion of EmOC.^{2,3} This is true for many South Asian countries, which face a shortage of obstre-

tricians and anaesthetists in highly populated rural areas.⁴

Given the shortages of specialists, shifting tasks to lower level cadres is seen as a cost-effective method to improve coverage and access to services.^{5,6} The World Health Organization defines task shifting as “*the process whereby specific tasks are moved, where appropriate, to health workers with shorter qualifications and shorter trainings*”. Task shifting, or delegation of tasks as it used to be called, was a pillar of the primary health care movement, where it was realised that about 90% of basic health care could be provided by non-physician health workers. This led to the role of health workers being expanded in many areas that were earlier thought to be in

the domain of the medical profession. However, secondary care, including life-saving emergency surgery, remained a part of the duties of doctors and specialists. Only over the past ten years have efforts been made in South Asia for provision of anaesthesia skills through task shifting to medical officers and mid-level health workers. However, both the initiation and implementation of task shifting have had varied success across South Asian countries.⁵

Reduction in maternal mortality has been shown to be partly dependent on the availability of surgical care, such as caesarean section and repair of ruptured uterus, in referral facilities.⁷ In order to provide these, an anaesthetist available on short notice is essential. When this is not possible, EmOC providers have only three options. They can provide the anaesthesia on their own and ask an attendant to maintain it, use an informally trained anaesthesia provider, or refer the patient to another facility, even though transport may be unavailable or unreliable. All three options are risky for the patient.

Benefits of task shifting anaesthesia services for emergency obstetric care

Mid-level providers have been used in several public health interventions, including family planning programmes, immunisation campaigns, malaria prevention and treatment, and more recently, HIV/AIDS treatment and care.⁸ There are several benefits in using mid-level providers to perform anaesthesia for EmOC. The training cost and training period for mid-level providers are lower than those of anaesthetists. Additionally, the retention rate of mid-level providers in rural areas is higher than specialists, including anaesthetists.⁹ This can increase the availability of EmOC in rural areas and reduce the need for referrals to other centres.

Implementing task shifting in situations that require less medical and surgical knowledge, such as family planning and immunisation, has proved to be less challenging than with anaesthesia provision for EmOC. This article reviews existing knowledge related to task shifting for anaesthesia provision in EmOC, with an emphasis on South Asia. It identifies key factors in successful use of task shifting of anaesthesia for EmOC and makes recommendations for improvements in these services in South Asia.

Methodology

A review of the literature on task shifting in anaesthesia was conducted using three electronic databases - PubMed, Medline and Google Scholar. PubMed and Medline were searched for all articles published from 1948 onwards. Search terms that were used independently or in combination were: task shifting, delegation, substitution, anaesthesia, anaesthesiology, anaesthesiology, anaesthetist, anaesthesiologist, emergency obstetric care, maternal mortality, human resources, mid-level providers, paramedical, training, developing countries, South Asia, India, Pakistan, Bangladesh, Afghanistan, Bhutan, Nepal and Sri Lanka, frameworks, conceptual.

The articles identified were downloaded and the abstracts were examined to check for relevant information. 55 articles which contained relevant information were analysed. Policy documents and evaluations of anaesthesia task-shifting programmes were also analysed. Government officials and development partners were contacted in countries where published data were not available. Information provided by government officials at conferences and professional meetings were also used in the analysis. The personal observations of the authors, based on prior work in this area, were also included.

History of task shifting in anaesthesia services

The use of mid-level providers for anaesthesia began as early as 1909 and has been used in more than 100 countries, irrespective of the presence of specialists or the economic and development status of the country.^{10,11} The strategy of using nurses as anaesthesia providers has been widely used in the United States, Europe and several countries in sub-Saharan Africa. Due to critical personnel shortages and high emigration rates, many African countries adopted task shifting as a means to increase coverage of and access to anaesthesia services. Ghana, Malawi, South Africa, Tanzania and Zambia have employed nurse anaesthetists since the 1950s.¹² Clinical officers in Malawi, a non-physician clinician cadre, are allowed to train for two years in order to upgrade to medical assistant and specialise in either anaesthesia or orthopaedics.⁷ International organisations have endorsed the idea of task shifting of anaesthesia services to mid-level providers. The World Health

Organization and the World Federation of Societies of Anesthesiologists state that health workers trained for one to two years in anaesthesia can safely provide anaesthesia.¹³ In 1992, the International Association of Obstetricians and Gynecologists (FIGO) proposed that tasks relating to maternal health be delegated to other cadres of health workers.¹⁴ Studies conducted in the United States have also shown that nurse anaesthetists and specialist anaesthetists have similar post-operative outcomes and rates of complications.^{15,16}

Availability and distribution of anaesthesia specialists in South Asia and need for task shifting

According to the 2006 World Health Report published by the WHO, six countries in South Asia are among the 57 countries worldwide that face a human resources crisis.¹⁷ This includes a critical shortage of specialists, an imbalance in distribution within countries, migration, low rates of production and training of specialists, and an increasing demand for anaesthesia services. Recently, task shifting has gained importance as a strategy to tackle the human resources imbalances, particularly for specialists, in several South Asian countries.

Availability and coverage of specialists in rural areas of South Asian countries is low compared to the huge populations of countries in this region. In India, only 10% of Community Health Centres (sub-district hospitals, each of which covers 100,000 to 200,000 people) have anaesthetists.¹⁸ This is also evident in Pakistan and Bangladesh, where the distribution of specialists is skewed in favour of urban areas, resulting in inequitable access to emergency anaesthesia services.^{19,20} In Pakistan (population 145 million), there are only 1,163 qualified anaesthetists, with an anaesthetist to population ratio of 1:160,000.²¹ Given that the rural population of Pakistan is estimated to be 89.3 million and assuming a rural-urban ratio of distribution of specialists of 1:4, the ratio of anaesthetist to rural population would be even worse at 1:306,100.²¹

A major factor contributing to the shortage of anaesthetists in South Asia is the fact that most countries in the region have a low level of training slots for anaesthesia specialists. In Bangladesh (population 150 million), only 25-30 anaesthetists are produced per year.²² Other analyses have

shown that even with all 13 medical schools in Bangladesh producing anaesthetists at maximum capacity, it is still insufficient to meet the needs of the country.^{20,22} The situation is far more critical in Afghanistan (population 32 million). There are only nine specialist anaesthetists in the country.²³ Similarly in Bhutan (population 672,425), only eight anaesthetists work in the country, all in urban areas (Ministry official, personal communication, 5 November 2008).

In India, the production of anaesthetists is not as limited as it is in other South Asian countries. There are 701 post-graduate degree (MD) seats and 578 diploma (DA) seats available in the entire country per year as per Medical Council of India records.²⁴ The Indian Society of Anaesthesiologists reported a membership of 12,940 as of 2007.²⁵ By dividing India's population of 1.1 billion with the number of members of the Indian Society of Anaesthesiologists the ratio calculated is 1:85,000. However, the distribution is far from uniform; most anaesthetists work in urban areas and in the private sector. Some limited observations of a few states of India suggests that there are only 1-6 anaesthetists per district with a population of 1-2 million, many of whom work at public sector district hospitals, leaving few anaesthetists in the sub-district hospitals.³

In South Asian countries, medical graduates are awarded the MBBS (Bachelor of Medicine and Surgery) degree following four and a half years of education and a one-year internship. In countries such as India and Bangladesh, adequate anaesthesia training is not included in the MBBS curriculum. As a result, MBBS doctors in rural areas are unable to perform anaesthesia services, thereby increasing the number of referrals to specialists in urban centres, which are difficult to access. Specialisation in anaesthesia requires an additional 2-3 years after MBBS. Therefore, it takes 7-8 years to produce one specialist in anaesthesia. A medical college usually has 100-200 slots for MBBS students each year, while there are only 3-6 post-graduate training slots for anaesthesia in the same college per year.

Emigration is also a major reason for a lack of anaesthetists in many South Asian countries. Between 1997 and 2000, 37% of Sri Lankan anaesthetists migrated to countries such as the United Kingdom and the United States.²⁶ Similarly, over 25-30% of anaesthetists trained in Pakistan work abroad.²³ Of the 43 Diploma in

Anaesthesia graduates in Nepal as of 2000, 30% had left the country permanently.²⁷

With the development of medical sciences in the recent past there has been a great increase in the number of surgical specialities and types of surgery performed, especially high value complicated surgery (heart, gastro-intestinal, neurological, orthopaedic, trauma, etc). This has contributed to an increase in the demand for anaesthetists in urban areas and the private sector. The number of surgeries performed on populations has increased significantly over the past two decades. Due to this rise in high value surgeries, private practice in anaesthesia has become more lucrative, thereby drawing anaesthetists from rural public services to the urban private sector. This leaves a dearth of qualified anaesthetists to practise in public sector rural hospitals, which traditionally perform less complicated but life-saving obstetric surgeries for poor women.

Task shifting programmes in South Asia

In the literature, there is limited documentation of task-shifting programmes in anaesthesia in South Asian countries. Through our review, we found that even though task shifting for anaesthesia provision is well established in both developed and developing countries, few South Asia countries have developed systematic programmes. No information was available on task shifting efforts in Pakistan. However, due to programmes in Afghanistan, Bangladesh, Bhutan, India and Sri Lanka, coverage of anaesthesia providers seems to have increased. Evidence from Nepal and Bangladesh suggests that their programmes contributed to an increase in the availability of EmOC.^{2,28} Geographically smaller countries in South Asia (Afghanistan, Bhutan, Nepal and Sri Lanka) have taken the lead in task shifting, while larger countries like India and Bangladesh have only started such efforts recently (see [Table 1](#)). The following describes briefly the task-shifting efforts for anaesthesia in South Asia.

Afghanistan

There are currently a total of 399 non-specialist providers practising anaesthesia in Afghanistan, out of which 320 are general technicians who have not had any formal training in medicine or anaesthesia. Given the extremely high maternal mortality rate in the country (1,900 deaths

per 100,000 live births) and constant, major, civil war-related injuries needing surgery, there have been efforts to increase the number of trained anaesthesia providers (non-doctors) with the purpose of expanding coverage of EmOC.²⁹ Fifty nurses are trained per year for a duration of one year in anaesthesia provision. So far, 192 nurses have been trained through this programme.²⁴

Bhutan

Bhutan has in recent years made significant efforts to expand the availability of EmOC through a restructuring of its health system, including increasing the numbers of trained personnel available to provide services.³⁰ Since 2002, Bhutan has trained 21 nurse anaesthetists for four months in Bhutan and then one year in Bangkok, Thailand (Ministry official, Personal communication, 5 November 2008). Three to four nurse anaesthetists are produced per year. In order to increase the number of specialist anaesthetists, there are efforts to graduate at least one trained anaesthetist each year.²⁴

Nepal

Nepal has significant shortages of specialists and medical officers. In some remote and mountainous districts, peons or helpers in operating theatres have developed basic competencies in anaesthesia as a result of assisting specialist anaesthetists. In the event that the specialist leaves the facility, they have taken over the provision of anaesthesia. This informal training has made them acceptable anaesthesia providers due to the lack of qualified professionals in the facilities. Given this situation, in 1996, Nepal launched a programme to create a cadre of anaesthesia assistants, with the assistance of the UK Department for International Development (DfID), the Nick Simons Institute and Jhpiego. Anaesthesia assistants are non-physicians such as nurses and health assistants, trained in the provision of anaesthesia in order to assist the physician performing the surgery. The length of the training programme was subsequently revised from three to six months. Approximately 74 anaesthesia assistants have been trained since the inception of the programme. An evaluation of the programme found that the presence of anaesthesia assistants in a hospital increased the number of surgeries performed in the hospital, particularly comprehensive EmOC, and

Table 1. Summary of task shifting programmes for anaesthesia services in South Asia

Countries (population in millions)	Personnel to whom tasks have been shifted	Duration of training	Programme started since	Number of personnel trained	Funding and Technical Support
India (1,129)	Medical officers	18 weeks	2003 (ongoing)	500 ^a	Government of India
Nepal (29)	Anaesthesia assistants	initially 3 months	1996 (ongoing)	50 (3 months)	Government Nepal, DfID, ^b Nick Simons Institute, AMDD, ^c Jhpiego ^d
		currently 6 months		74 (6 months) (28)	
Bangladesh (150)	Medical officers	1 year	1993–1998	47	Government of Bangladesh, UNICEF, Jhpiego, AMDD
		1 year	2000 (ongoing)	63	
		17 weeks	2000 (ongoing)	12 (2)	
Pakistan (165)	na ^e	na	na	na	Government of Pakistan, UNICEF, AMDD, Jhpiego
Sri Lanka (21)	Medical officers	1 year	na	na	Government of Sri Lanka, College of Anaesthesiologists of Sri Lanka
Afghanistan (32)	Nurse anaesthetists	1 year	2006 (ongoing)	50 per year 192 since 2006 (23)	Government of Afghanistan UNICEF, Jhpiego
Bhutan (0.67)	Nurse anaesthetists	1 year, 4 months	2002 (ongoing)	3–4 per year 21 since 2002 ^f	Royal Government of Bhutan, UNICEF, AMDD, Jhpiego

a Ministry official, personal communication, 30 January 2009

b DfID = Department for International Development UK

c AMDD = Averting Maternal Death and Disability, Columbia University, New York NY, USA

d Jhpiego = Affiliate of Johns Hopkins University, Baltimore MD, USA

e na = information not available

f Ministry official, personal communication, 5 November 2008

decreased the number of referrals to higher centres.²⁸ The retention rate of anaesthesia assistants in rural areas was also high, signalling the sustainability of the programme.³¹ The Government of Nepal has also endorsed a programme to train nurses in anaesthesia as part of efforts to expand the basic EmOC services they can provide.³²

Sri Lanka

Sri Lanka is the only South Asian country that has been successful in reducing maternal mor-

tality, primarily through increasing the availability of skilled birth attendance and EmOC.³³ Sri Lanka uses fully qualified anaesthetists in comprehensive EmOC facilities in large hospitals, but relies on trained medical officers in emergency situations in smaller rural hospitals, where anaesthetists are not available. Medical officers are trained for 6 or 12 months by the College of Anaesthesiologists of Sri Lanka and work under a consultant anaesthetist (Ministry official, Personal communication, 17 October 2008).

Thus, these medical officers develop skills and confidence in giving anaesthesia under the guidance of a specialist, in close collaboration with the College of Anaesthesiologists.

Bangladesh

As part of efforts to increase availability of EmOC, Bangladesh had adopted a strategy between 1993 and 1998 to train MBBS doctors for one year in anaesthesia provision. This training was initiated once more in 2000 and was based on the traditional model of postgraduate education where students work with senior teachers in an apprentice mode. However, this training was adapted with the assistance of Jhpiego and the Averting Maternal Death and Disability programme to become a 17-week, competency-based training, in order to increase output of trained doctors. In spite of this short duration, quality was maintained through techniques such as modelling of skills and practical training on models, both under supervision and independently. In total, 122 medical officers have been trained to provide anaesthesia. Evaluations of the efforts to increase EmOC provision have found that there was a sharp increase in the number of centres that were functional in EmOC and comprehensive EmOC, partly due to the presence of trained personnel.²

India

During the Child Survival and Safe Motherhood programme in India (1992-1996), the dearth of anaesthetists in rural areas was recognised as a significant challenge to the operationalisation of comprehensive EmOC services. As a result, a six-month training programme for MBBS doctors was initiated in some states, but it could not be sustained. In 2002, under the dynamic leadership of a health secretary, a short-course anaesthesia training known as Life Saving Anaesthetic Skills was developed and piloted in the state of Chhattisgarh. Evaluations of the programme have found that there were problems in implementation, particularly in certification of trainees and standardisation of the programme.³⁴ They were also given less support from the health system following the transfer of the health secretary who had initiated the programme.

In 2006, the state of Gujarat became the first state to implement the Life Saving Anaesthetic Skills programme on a larger scale following the Government of India guidelines.³⁵ This was

to supplement similar training of MBBS doctors for comprehensive EmOC in collaboration with the Federation of Obstetric and Gynaecologists Societies of India, which was started with support from the Averting Maternal Death and Disability programme and the MacArthur Foundation. The Life Saving Anaesthetic Skills training has been expanded to 21 states in the country, with support of the Government of India under the National Rural Health Mission programme.

In India, certain faith-based NGOs working in remote areas have been training nurse anaesthetists for quite some time (Dr Nalini Abraham, personal communication, 1 February 2009). However, this has been on a very small scale and has never become part of a government programme.

Discussion

This review shows that task-shifting programmes in anaesthesia have been initiated in most South Asian countries and that coverage of anaesthesia providers has expanded as a result. However, many of them are still *ad hoc* and have not been able to maximise their potential to improve EmOC in rural areas.

Political and administrative will is necessary, not only for the initiation of task shifting but its successful implementation. In Sri Lanka such political will has existed for several years but in countries such as India, it has only recently developed, because political and social arrangements have appeared to lean towards protecting the privileges of urban specialists, rather than ensuring the right to survival of people in remote and rural areas. Policies are largely made in metropolitan cities such as New Delhi, where there is an excess of doctors and specialists, and by bureaucrats and clinical doctors, without much public health input. In such a policymaking environment, the neglect of rural areas is common. For example, the Government of India has not emphasised availability of anaesthesia services in the public sector. This is seen in the lack of posts for anaesthetists at community health centres covering populations of 100,000. The *Bulletin of Rural Health Statistics*, which reports on availability of health staff such as medical officers and specialists (physicians, surgeons, obstetricians, gynaecologists and paediatricians), does not include data on anaesthetists.³⁶ There is no director or manager at the national or state level who

is responsible for the availability of anaesthesia services in rural areas of India.

Specialists in urban areas can create the impression that anything below their level of training is "second class care" and thus discriminatory against poor and rural populations. This in turn influences political thinking as politicians want to avoid giving the impression that rural areas are receiving lower standards of care. However, in reality, people in rural areas are getting no care, which is far worse, even though good quality services can be provided by a mid-level provider. In countries like Nepal, Bhutan and Afghanistan, with a considerable shortage of both medical officers and specialist anaesthetists, policies to train paramedical staff for anaesthesia have been adopted without much resistance.

Regulatory mechanisms for anaesthesia providers are the next step for sustainable task shifting. By equipping trained medical officers and paramedics with appropriate administrative directives and legal protections, governments empower them to carry out their work. For example, the Government of India has recently formalised the process of task shifting anaesthesia services to MBBS doctors by including them in the National Programme Implementation Plan of Reproductive and Child Health Phase II.³⁷ However, no formal government regulations or official orders were instituted on this task shifting. Health personnel must be licensed by a competent legal authority and registered to perform anaesthesia services, including prescription of anaesthesia drugs, for them to feel protected and supported.

Successful task shifting for anaesthesia in EmOC also needs supportive managerial arrangements. Health system managers must organise support systems, provide oversight and ensure quality of care through training, monitoring and periodic evaluations. Managers must also improve access to care through careful and systematic recruitment and deployment of trained staff, and improve quality through the setting up of standards and monitoring systems. They must ensure motivation of trained staff through recognition of good work and rewards. Unfortunately in anaesthesia task-shifting efforts in India and Bangladesh, there is no systematic technical supervision or support for newly trained medical officers. There is also a lack of systems focusing on monitoring, evaluation or performance rewards. This makes the programme unattrac-

tive and burdensome to the medical officers. This in turn leads to substantial attrition of trained doctors and non-performance after training.² There must also be managers at national and state level responsible for the availability and management of anaesthesia providers, including training and supervision, in the public health care system.

Several human resource management principles need to be considered before implementing anaesthesia task-shifting programmes. Good quality competency-based training is the foundation of successful programmes and must be given careful consideration before being implemented. However, the design and implementation of training programmes has so far not been given sufficient attention in South Asia. These programmes have been project- or person-driven without the support of professional bodies or associations of anaesthetists except in Sri Lanka. There has been no refresher training, continued mentoring or technical support for trained personnel. The nature of the training programme, the duration and quality and other educational requirements must be determined through consultation with experts in the field, managerial staff, providers and professional societies. Some efforts have been made in this direction. For example, in India, the Ministry of Health and Family Welfare has developed operational guidelines and modules, which specify guidelines for the training programme, requirements for sites, duration, content, skills, selection of trainees and assessment.³⁶ When such guidelines are available the main concern is that they be implemented meticulously.

Job descriptions and job clarity form an important part of human resources management. Policymakers must consider the ways in which the services that have shifted to a lower cadre fit with the job descriptions of that cadre. In Nepal, only 54% of interviewed anaesthesia assistants were aware that they had a job description.²⁸ In Bangladesh and India, trained MBBS doctors are asked to provide anaesthesia in addition to their regular work load as medical officers without any additional compensation.² This may overburden them and reduce motivation following training. Policymakers should consider giving additional remuneration to medical officers who are providing anaesthesia services or relieve them, at least partly, of their regular duties. A definitive career path is also important to the

motivation, performance and retention of health workers, given their additional skills.

Given the risky nature of anaesthesia, it is important to incorporate quality assurance and safety measures into any task-shifting programme. A combination of substantive hands-on training, use of standard clinical protocols, supportive supervision, adequate equipment and supplies can contribute to increased quality of service provision. In the Life Saving Anaesthetic Skills programme in India there is some quality assurance through independent examination of the trained doctors at the end of the course. However, there are very few quality assurance mechanisms in rural areas where the doctors practise. Hardly any data are collected and analysed to compute complication rates and monitor quality in India or Bangladesh. In Sri Lanka, the medical officers are under supervision of the qualified anaesthetist directly or indirectly, which provides a measure of safety and quality.

Resistance to task shifting has come from two main channels – professional societies and government policymakers. Professional societies often protect the interests of their members and

have the power to protest against the use of mid-level providers,³⁸ and policymakers are often influenced by them. For example, in 2006, a court case was lodged in the Delhi High Court in India against the Life Saving Anaesthetic Skills programme on the grounds that government is applying double standards to urban and rural areas. (Ministry official, personal communication, 15 January 2009). No other such legal challenges have been observed in other South Asian countries. If the professional societies are well oriented to public health perspectives and understand the need of anaesthesia and EmOC skills in the rural areas, they can actively support task shifting. For example the Federation of Obstetric and Gynaecological Societies of India, and Bangladesh Obstetric and Gynaecological Society are both supporting task shifting for EmOC skills. In contrast, the Indian Society of Anaesthesiologists has resisted the Life Saving Anaesthetic Skills training of MBBS doctors for rural areas. In Nepal, there is no documentation of the involvement of professional societies in task-shifting efforts. In India and Nepal, in order to develop a public health

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Orissa, a woman gives birth to her first child, breech delivery, 2005

orientation among professional bodies, governments could explore strategies such as creating consultant positions for anaesthetists in public health departments to design and develop strategies and plans for rural areas.

To sustain and consolidate task shifting, the cadres involved must be professionally organised into a professional society with the approval of regulatory bodies and other forms of professional recognition. Non-specialist anaesthesia providers in Afghanistan, who have been informally trained, are attempting to create a professional society to increase advocacy for anaesthesia training and other support mechanisms (Development partner official, personal communication, 26 October 2008).

The availability of proper drugs and equipment for service delivery are essential to a sustainable system of anaesthesia provision. Many developing countries lack the necessary equipment, drug procurement systems and other facilities required to provide anaesthesia safely. A study conducted in Uganda found that only 6% of anaesthesia providers had adequate drugs and equipment to provide safe anaesthesia for caesarean section. Fifty-nine percent of the providers did not have drugs and medication for spinal anaesthesia on occasion, and several did not have spinal needles readily available. Only 36% of the anaesthesia providers worked in facilities where there was access to individuals who were trained to repair equipment.³⁹ Unfortunately,

no such studies have been published in South Asia, but anecdotal evidence indicates that similar problems exist in most countries in the region. It is important that governments support anaesthesia providers in rural areas with functional equipment and a sustainable drug procurement system.

Structured task shifting programmes in anaesthesia for EmOC must be scaled up in South Asia in order to provide the full range of services necessary to reduce maternal and neonatal deaths. Further systematic research must also be done on the effect of these task-shifting programmes on indicators related to anaesthesia complications, maternal mortality and neonatal mortality in order to fully assess their impact. Task shifting must not be seen as a “stop-gap” measure until the coverage of anaesthetists increases in rural areas – it must be seen as a cost-effective, safe and preferred strategy and implemented concurrently with much needed reforms in the production and placement of specialist doctors.

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Résumé

Certains soins obstétricaux d'urgence, comme une césarienne ou la réparation d'une perforation utérine, nécessitent une anesthésie. En raison de la pénurie aiguë d'anesthésistes, des hôpitaux ruraux du secteur public d'Asie du Sud pratiquent la délégation des tâches, mais cela a suscité peu de recherches. Cet article examine les publications sur la question et documente les programmes de délégation des services anesthésiques aux prestataires de niveau intermédiaire en Asie du Sud pour élargir l'accès aux soins obstétricaux d'urgence et réduire la mortalité maternelle. Nous avons constaté que la délégation des services d'anesthésie a permis d'élargir la couverture et l'accès aux soins, mais la plupart des programmes n'ont pas été appliqués systématiquement dans le cadre d'une stratégie globale des ressources humaines. Pour optimiser les avantages de ces programmes, une approche d'ensemble recommande les mesures suivantes aux pays: nomination d'un directeur national ou au niveau de l'État qui sera responsable de la disponibilité des services anesthésiques dans les zones rurales; mesures de protection juridique, enregistrement et autorisation par une autorité compétente de la réalisation des actes d'anesthésie, notamment la prescription d'anesthésiques; dispositions administratives positives, formation, suivi et évaluation fondés sur les compétences; primes à la performance, plans d'avancement et description claire des postes; fournitures et équipements adaptés; soutien des anesthésistes spécialisés et assurance qualité pour la sécurité.

Resumen

La anestesia es necesaria para ciertos procedimientos en los cuidados obstétricos de emergencia, como la cesárea y la histerorrafia. En los últimos años se han cambiado las tareas para el suministro de anestesia en hospitales públicos rurales de Asia meridional debido a la considerable escasez de anestésistas, pero ha habido pocas investigaciones al respecto. En este artículo se revisa el material publicado sobre este tema y se documentan los programas para reasignar las tareas en los servicios de anestesia a los prestadores de servicios de nivel intermedio en Asia meridional, con el fin de ampliar el acceso a los cuidados obstétricos de emergencia y disminuir las tasas de mortalidad materna. Encontramos que al cambiar las tareas de los servicios de anestesia se ha logrado ampliar la cobertura y el acceso a los servicios, pero la mayoría de los programas no han sido implementados sistemáticamente como parte de una estrategia general de recursos humanos. El enfoque integral para maximizar los beneficios de estos programas requiere nombrar a un director, a nivel nacional o estatal, que sea responsable de la disponibilidad de servicios de anestesia en zonas rurales; protecciones jurídicas, permiso de una autoridad competente y registro para proporcionar servicios de anestesia, incluido recetar anestésicos; acuerdos administrativos de apoyo, capacitación basada en la competencia, monitoreo y evaluación; recompensas por el desempeño en el trabajo, estructura profesional y claridad laboral; equipo y suministros adecuados; apoyo de anestésistas especializados y garantía de la calidad para la seguridad.