Skilled attendants for pregnancy, childbirth and postnatal care

Luc de Bernis, Della R Sherratt, Carla AbouZahr and **Wim Van Lerberghe**

World Health Organization, Geneva, Switzerland

This paper sets out the rationale for ensuring that all pregnant women have access to skilled health care practitioners during pregnancy and childbirth. It describes why increasing access to a skilled attendant, especially at birth, is not only based on legitimate demand and clinical common sense, but is also cost-effective and feasible in resource-poor countries. Skilled attendants need to be supported by a health system providing a legal and policy infrastructure, an effective referral system and the supplies that are necessary for effective care. A skilled attendant providing skilled care will help achieve the goals of reducing both maternal and child mortality. Health care professionals as individual practitioners, leaders and informers have an important role in making this a reality.

Introduction: the case for skilled attendants for pregnancy, birth and the postnatal period

Of all health statistics, those for maternal mortality show the greatest disparity between developing and developed countries: more than 99% of maternal deaths occur in poor countries[1], where women run a lifetime risk of dying from a pregnancy-related complication about 250-fold higher than women in developed countries. Of the 210 million women who become pregnant each year some 30 million, or about 15%, develop complications, which are fatal in 1.7% of cases, giving 529,000 maternal deaths per year. In addition, almost 4 million infants do not survive childbirth or the immediate postnatal period, and millions more are disabled because of inadequately managed pregnancies and births—a situation that has remained almost unchanged for many years[2]. Current studies show that deaths within the first week of life account for almost 40% of all deaths among children under 5 years[3]. Today, we know how to prevent and manage pregnancy-related complications and there is increasing recognition that pregnant women should be assisted by a professional health carer with the necessary skills, drugs, supplies, equipment and back-up, particularly during and immediately following

Correspondence to: Della R Sherratt, Midwife, Making Pregnancy Safer, Department of Reproductive Health and Research, World Health Organization, Geneva, Switzerland. E-mail: Sherrattd@who.int

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childbirth. In the absence of such professional assistance, women pay a heavy price—maternal ratio rates of 1000–2000 per 100,000 births.

The clinical rationale for skilled care during pregnancy and childbirth is unassailable. Skilled attendants—people with midwifery skills, such as midwives and doctors and nurses who have been trained to proficiency in the skills to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and identify, manage or refer complications in the woman and newborn[4]—are best placed to ensure the survival and safety of pregnant women and their infants[5–7]. Whatever their professional title, health professionals functioning as skilled attendants should be able to identify early signs of complications, and offer first-line emergency obstetric care (including emergency newborn care) when needed. Despite the absence of evidence from randomized controlled trials due to the practical and ethical constraints, it is a reasonable working hypothesis that it is better for women and their newborns to have care from a skilled health care worker than from someone without skills. That hypothesis gains strength from the experience of countries that have succeeded in reducing maternal mortality in both the developing and developed world.

Early in the twentieth century, maternal mortality levels in Western Europe and North America were similar to those in the developing countries today. Some countries achieved impressively low maternal mortality very quickly (Sweden, Norway, The Netherlands and Denmark)[8–10]; others were unable to show marked reductions in very high maternal mortality until the Second World War (*e.g.* the USA) or remained between these extremes (*e.g.* England and Wales). The differences between those who managed to lower their maternal mortality rate quickly and those who lagged behind appears to have been in the way in which skilled care was organized. Sweden, Norway, The Netherlands and Denmark focused their efforts on providing skilled care close to where women lived, mainly by strengthening the skills of community midwives. In the USA, on the other hand, a hospital model of care for all births was followed. Maternal mortality remained high despite the fact that women were delivering in health care institutions (usually attended by doctors) because the quality of care was poor and there were high levels of iatrogenic complications, particularly infections[11–13]. More recent examples of countries that have successfully lowered maternal mortality, such as Cuba, Egypt, Iran, Jamaica, Bangladesh (albeit only in Matlab district[14]), Thailand, Sri Lanka and Malaysia[15], demonstrate that maternal mortality can be reduced using a variety of different models of care. Furthermore it is clear that such reductions are possible, even when resources are limited. The common feature in all these countries is that they all focus on ensuring that a skilled attendant attends the majority of births. The Thailand experience in particular shows how providing

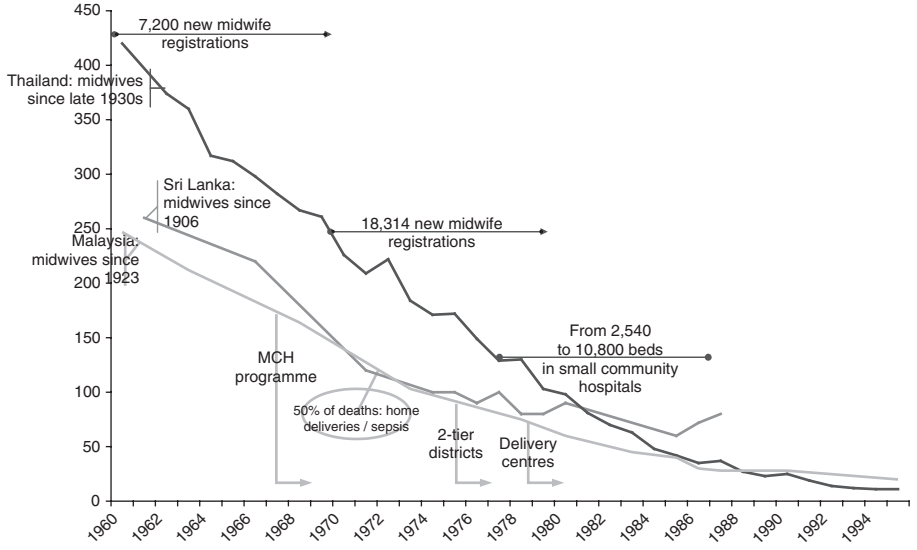

Fig. 1 Maternal mortality since the 1960s in Malaysia, Sri Lanka and Thailand[12] (reproduced with permission).

skilled attendants, in this case midwives, resulted in dramatically reduced maternal and newborn mortality (Fig. 1). In Egypt, higher use of skilled care during delivery was achieved through a dual strategy involving improved quality of care in health facilities coupled with information targeted to decision-making at the household level, which led to an increase in women and families seeking skilled care.

Clinical rationale

There are sound medical reasons why governments should invest in skilled attendants, especially for the time of birth. Most maternal and newborn deaths—with the significant exception of those associated with unsafe abortion which is responsible for an estimated 13% of maternal deaths—occur around the time of childbirth or shortly thereafter (Table 1)[16]. Globally, some 80% of maternal deaths are due to a few direct obstetric

Table 1 Timing of maternal deaths

Time of death	% of all maternal deaths
During pregnancy	24
During delivery	16
After delivery	61

Figures more than 100% due to rounding up to nearest whole numbers.

complications—sepsis, haemorrhage, eclampsia, obstructed labour and unsafe abortion; most could be prevented or managed if the woman had access to a skilled attendant with the necessary back-up and support. The remaining deaths, those caused by underlying conditions exacerbated by pregnancy, *e.g.* severe anaemia, tuberculosis (TB), malaria and HIV/AIDS[17], also require the assistance of a skilled health care provider during pregnancy, birth and the immediate postnatal period for appropriate management and treatment. Complications that result in maternal mortality and morbidity also contribute to the majority of newborn mortality and morbidity. Some of these complications can be prevented with appropriate management of labour and birth (*e.g.* clean birth and monitoring of labour to recognize prolonged and obstructed labour as well as signs of fetal distress). Even when they cannot be prevented, like the vast majority of maternal complications they can be effectively managed. However, this requires health care providers who have the requisite skills, as well as a functional referral system.

Skilled attendants are required to deliver known cost-effective interventions

The World Health Organization (WHO) has identified a number of cost-effective interventions for the management of the major causes of maternal death[18] and has made the information available through the WHO Reproductive Health Library (RHL)[19]. These interventions require a person with midwifery competencies and selective obstetric skills and back-up during the critical period of labour, birth and the immediate post-partum period, in order to prevent, manage or refer in a timely way. The same is true for prevention and management of endemic diseases known to complicate pregnancy, such as malaria, tuberculosis and hepatitis. Managing these conditions requires drugs, equipment and medical skills similar to those needed for the management of obstetric conditions.

Women want skilled assistance at birth

In large parts of the world skilled attendance is not the rule. Table 2 shows currently available data from Demographic and Health Surveys (DHS) on assistance during childbirth by major regional groupings. While the regional aggregations hide important differences both between and within countries, it is clear that doctors attend most births in the Middle East/North Africa and Latin America/Caribbean regions. In sub-Saharan Africa, other categories of professional health care providers (midwives, nurses and other formal health care workers) attended 39% of births, while relatives assisted 27% of births. In Asia, it is the traditional birth attendants (TBAs) who are the largest single group of carers (41% of

Table 2 Attendants at delivery, by region (data from most recent DHS surveys)

Region	Doctor	Other skilled attendant	TBA	Relative	No one	Don't know	Total
Sub-Saharan Africa	5.8	39.1	22.2	26.8	5.9	0.4	100.0
Middle East/North Africa	45.2	21.2	16.2	15.6	1.6	0.3	100.0
Asia	16.6	24.6	40.8	16.4	1.6	0.3	100.0
Latin America/Caribbean	47.8	16.4	24.4	9.7	1.4	0.4	100.0

births), however the regional differences are vast. Sri Lanka, for example, has a very high proportion of births attended by midwives and in Indonesia efforts are currently focused on making midwives available in the rural areas[20] while Thailand, as already mentioned, has made a deliberate and concerted effort to ensure all women have access to maternal care provided by a skilled attendant. Although, in most countries, more and more births benefit from assistance by a health care professional with midwifery skills, sadly, there remain large parts of the world where women have either no one, or only family members, to assist them during childbirth. The situation is worst in sub-Saharan Africa partly due to the devastating effects of HIV/AIDS on the available human resources for all aspects of health care.

Those studying the trends and uses of skilled attendants have noted that the more educated and wealthier women are, the more likely they are to have their births attended by a professional health practitioner[21]. In this regard, it appears women in resource-poor countries are no different from those in rich countries: provided they have the option, they choose the most skilled carers they can find—skilled attendants if these are available, accessible and affordable. Examples abound of women in resource-poor countries who spend much money and effort to go straight to a large referral hospital, even when there is no clinical reason for referral-level care, bypassing the lower levels of care, sometimes even the district hospital, because they expect to get more skilled care.

As Kunst and Houweling graphically represent in their diagram (Fig. 2), in many resource-poor countries as many as 80–90% in the highest economic groups already benefit from a skilled attendant at birth. For the other countries, such options are not yet available, or are no longer an affordable option. Examples from countries such as Tajikistan and Mongolia show what happens when there is rising impoverishment and a breakdown of the health care system—an increasing recourse to home births without skilled attendants—and, in the case of Mongolia between 1991 and 1994, to a rise in maternal mortality ratio from 120 to 210 per 100,000 live births[22]. Unless skilled care is made available at a cost that poor families can afford, many women and their newborns will face

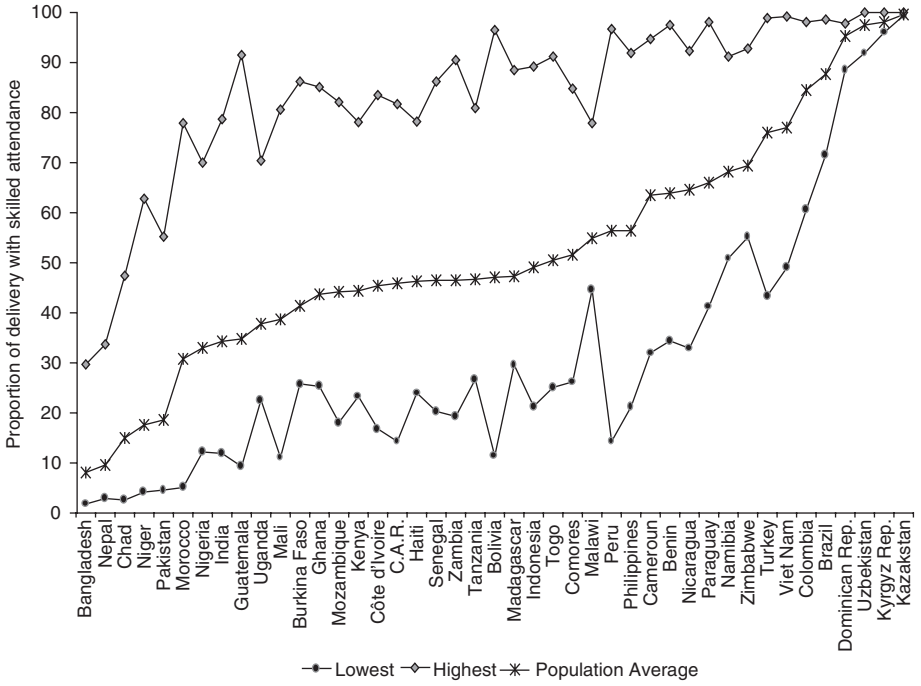

Fig. 2 Delivery attendance (%) in the poorest quintile, the richest quintile and the total population[21] (reproduced with permission).

complications and potential tragedy during the time they need care most, during birth and the period immediately around birth. That this is allowed to continue without outrage, especially from those professionals who purport to have the best interests of women and newborns uppermost, can only be described as tragic.

The limitations of lay referral for obstetric complications

If deaths due to pregnancy-related complications are to be averted, women with all types of complication need to be able to reach appropriate care in a timely manner. Delays in reaching care are often summarized as the 'three delays'—delay in recognizing complications, delay in reaching care and delay in receiving appropriate care at the health facility.

There has been much interest in reducing the first two types of delay for women with complications whose births were attended by lay carers: family members or TBAs, trained or untrained. The term TBA is one around which there is currently a lot of controversy and debate. It is

used to define a wide and heterogeneous group of traditional carers most of whom operate in the informal sector, and their individual competencies and skills can vary considerably, as can the names/titles by which they are commonly referred to, depending on the specific country context. Although in some countries it is clear that woman utilize the skills of such carers, research findings indicate that training TBAs is not an effective strategy for reducing maternal mortality. For example, a study comparing maternal mortality and morbidity in two urban populations in Senegal showed that even trained TBAs were unable to accurately recognize signs of complications early, or were unable to make a correct diagnosis and take appropriate action for managing complications[23].

Lay identification of early warning signs is not feasible

Investments in two of the 'three delays', namely early identification of so-called danger-signs or signs of complications and timely self- or community-referral resulted in a focus on strengthening the skills of TBAs, and educating women, families and communities to recognize when to seek medical care. This approach was based on an assumption that early recognition and referral of complications is possible at the household level. This assumes that the woman herself, or family members or TBAs, can acquire the information and knowledge needed for making a timely referral, *i.e.* early detection of complications. Yet, in reality, most pregnancy-related complications, with the exception of bleeding in pregnancy before labour commences, are difficult to recognize until the condition is severe, or are so sudden in onset and quickly progress to become life-threatening that timely referral is difficult to achieve—except for those fortunate enough to have specialized means of transport, or who live close to a referral centre. For example, recognizing early signs and symptoms of severe pre-eclampsia so that appropriate action can be taken is almost impossible without appropriate diagnostic techniques and equipment. Even where complications do start with early signs and symptoms, they are often ignored because they may be considered 'normal'—for example, heavy post-partum bleeding in some cultures is seen as a positive process for purging of impurities in the woman's body[24]. Early recognition of fetal and newborn complications is equally difficult. Thus, reliance on educating women, families and communities to respond to early signs and symptoms, without this being part of a larger strategy for increasing access and utilization of professional skilled care is problematic and may even be morally questionable. Effective timely referral and management of complications requires specific knowledge, skills and training.

Primary health care alone is not sufficient

As with any medical emergency, the chances of survival in the event of an obstetric emergency are directly related to the effectiveness of initial triage—action taken at the time of onset or as close to it as possible. Unfortunately, due to the heavy reliance on primary care since the mid to late 1970s, very little attention has been given in many resource-poor countries to addressing the need to build adequate and appropriate emergency response systems, including referral systems and facilities that can deal with all types of medical emergencies, especially obstetric emergencies[25]. A skilled attendant would however be able to provide appropriate triage and thus help minimize delays in receiving appropriate treatment, as well as institute timely action at all points of the potential delay chain.

Teamwork is crucial

To be effective, the skilled attendant has to work in close collaboration, not only with others in the obstetric team and other health care providers, but also with lay care-givers: TBAs, traditional healers and family members. These lay care-givers play an important social and cultural role, and often control and facilitate access to skilled attendants and referral care[26]. They cannot replace skilled attendants, they do not have the skills or training, nor do they have any mechanisms for regulation and accreditation of their practice. However, where they do function, they should do so as part of the team, operating in close collaboration with, or under the supervision of, a skilled attendant to ensure that women and newborns can access skilled care. In addition, where they exist, traditional healers and TBAs often have local social and cultural knowledge that the skilled attendants can learn from, and so a relationship, which is mutually beneficial, is possible and should be developed. For this relationship to work, however, it must be based on mutual trust and respect.

Skilled care is needed during pregnancy as well as at birth

Whilst skilled care during childbirth and management of complications must surely be a priority, safe motherhood and maternal and newborn health programmes should not neglect the potential benefits to be had from some of the elements of antenatal care.

Antenatal care has long been viewed as a screening tool to identify women most at risk of developing severe complications—but recent

debates have questioned its efficacy in terms of reducing maternal mortality[27,28]. Despite these limitations as a screening tool, better understanding of fetal growth and development and its relationship to the mother's health has resulted in increased and renewed attention to the benefits of a more 'focused' model of antenatal care, such as the one tested by WHO[29]. For example, tetanus immunization, prevention and treatment of malaria, management of anaemia during pregnancy, and treatment of sexually transmitted infections can significantly improve fetal outcomes (including low birth weight) and maternal health. More recently, the potential of the antenatal period as an entry point for HIV prevention and care, including prevention of mother-to-child transmission of HIV, has led to renewed interest in access to and use of antenatal care services. All this requires care by a skilled professional provider—a skilled attendant.

Besides its direct contribution to better health outcomes, a focused antenatal care model provided by a skilled attendant can also contribute to safer childbirth. First, because women who attend antenatal care are more likely to seek care from a skilled attendant at the time of birth[30,31], particularly if the attendant at the antenatal consultation is the same as the one who also offers care for childbirth. Second, because antenatal care is an opportunity for assisting the woman and her family to make a 'birth and emergency preparedness plan'. Such a plan can help ensure that everyone in the family is familiar with when, why and how to seek immediate medical care as well as the preparations required for and action to be taken when labour commences. Combined with schemes to cover direct and indirect costs of transportation and to ensure that women have access to transport when they need it—irrespective of their ability to pay at the time of need—such 'birth and emergency preparedness plans' can be of great help to women when problems arise[32]. Although any knowledgeable person could assist the family develop these plans, it is crucial for the family to have the opportunity to review the plan with a skilled attendant, and this is considered a fundamental component of the new WHO Antenatal Care Model[33].

Skilled attendants value for money

Skilled care is not only a matter of clinical common sense, but it has advantages in terms of value for money—a critical factor for all countries not just those where economies are flagging or resources are lacking. Cost-savings are not just related to the numbers of deaths averted. Providing women with appropriate skilled care, especially at and around the time of birth, has the potential of reducing the incidence of morbidity. It is estimated that the global burden of disease (measured

Table 3 Cost estimates for using oxytocin for prevention of post-partum haemorrhage in Uganda

Population	1,094,000	
Pregnancies	64,863	
Incidence of PPH	10%	
Potential cases	6486	
Intervention's effectiveness	50% (3243 fewer cases)	
	Scenario 1: no preventive intervention	Scenario 2: with preventive intervention
Unit cost of treatment for PPH	$56	$56
Cost of treatment for cases of PPH	$364,011	$182,006
Savings		$182,006
Total programme cost		$1,800,000
Potential savings[a]		10%

Rounded to nearest whole numbers.

Figures taken from two Districts Iganga and Mbarara.

[a]Actual savings depend on factoring, such as additional costs, savings from all types of complications averted, *etc.*

in terms of disability-adjusted life years[34]) from maternal and newborn complications is approximately 10%. Thus, if cost calculations also included cost-savings to the health sector and health gains to the individual women and their families as a result of averting morbidity as well as mortality, there is little doubt that providing skilled attendants for pregnancy, birth and postnatal care would be shown to be a cost-effective intervention.

Although the evidence remains patchy, the costing studies that are available consistently demonstrate the potential benefit of skilled attendants in terms of costs of treating complications[35]. In Uganda, for example, about 10% of expenditure for maternal health can be avoided through implementing active management of the third stage of labour by a skilled attendant and so avoiding the cost associated with treating such cases[36] (Table 3).

Thus the costs of implementing a skilled attendant strategy can be offset against savings made, especially savings gained from averting complications. In addition, cost can be kept low by implementing quality, low-technology skilled care rather than skilled care in a highly medical referral facility, which should be kept for management of complications.

Finally, the benefits to be gained from implementing a skilled attendant model of care for pregnancy and birth, in terms of strengthening the whole health care system should not be underestimated. A functioning referral system to deal effectively with maternal and newborn complications can be utilized by all others in the community when needed. For example, emergency transportation systems for use by obstetric patients can also be used to transfer non-obstetric emergency cases.

Making it happen—what health professionals can do

Advocacy and action

Health professionals, armed with knowledge and political will, not only can bring this issue to the attention of the appropriate policy-makers, leaders and health planners, but also can advocate for and take positive action at all levels of the health system.

National commitment

By forming alliances with women's groups and with other health professionals, professional associations can bring a unified voice to call for national action to ensure all women and their newborns, including the poorest, have access to a skilled attendant for pregnancy, childbirth and for the postnatal period. The first problem that must be addressed in order to make skilled care available to all is for those in positions of power—especially political leaders—to recognize that reducing maternal and perinatal mortality cannot be addressed only at the primary care level. Lack of minimal life-saving skills and equipment at the first referral level, and inappropriate patient management combined with poor quality of care, can actively contribute to maternal mortality[37].

Improving quality of care

Not only does inadequate and inappropriate care lead to higher incidence of iatrogenic incidents, including leaving women and newborns with severe disability or chronic illness, but it also leads to lack of confidence in the system and low utilization. Although more investment is needed to strengthen the referral facilities within the health system and to ensure that increased access to skilled care goes hand in hand with improved ability of the system to provide quality life-saving care, health providers themselves must become more accountable for the quality of the care they provide. There are many ways in which health professionals can have an important and critical role to play in improving quality of care.

First, it is essential to promote the principles of evidence-based care, including evidence-based decision-making. Health professionals have a duty not only to ensure they themselves keep up-to-date and base their care on sound evidence and clinical reasoning, but should also assist and facilitate others to do the same. Setting clinical protocols and standards based on evidence is essential for any quality improvement initiative.

Secondly, health professionals should try to influence health managers to develop appropriate systems based on evidence, including use of

evidence for rational purchasing and use of equipment and drugs. Here WHO has been proactive in making a great deal of the recent evidence for best practice in the field of maternal and newborn health freely available to health practitioners in resource-poor countries—through the various manuals and guidelines, as well as through the provision of Cochrane systematic reviews in the electronic journal *WHO Reproductive Health Library* (RHL). In addition, WHO has been an influential part of the movement which successfully managed to persuade the publishing companies to distribute over 200 medical journals free to resource-poor countries. However, it is the responsibility of each and every professional individual to utilize such evidence and put it into their own practice, as well as promote changes in peers. One example could be to bring the evidence for use of magnesium sulphate as the drug of first choice for control of eclampsia[38], as well as its use in prevention of eclampsia as shown by the result of the recent *MAGPIE* trial, to the attention of those responsible at the national level for the essential medicines list. A recent unpublished review of national essential drug lists by WHO showed that despite the evidence for this low-cost intervention, magnesium sulphate was not on 50% of the national lists reviewed.

One crucial way for health professionals to improve the quality of care is to review regularly and audit their practice. Clinical audit has many positive advantages if the process is undertaken correctly and does not become a blaming or punitive process. Many tools are now available to assist professional practitioners improve their skills. Clinical audit, for example, is one of the several methods discussed in WHO's *Beyond The Numbers*[39]—a guide to help investigate the causes of maternal mortality and near-miss cases in such a way as to lead to improvements of quality of care. WHO South-East Asia Region (WHO SEARO) have produced a set of standards for midwifery practice[40] which also includes a tool for auditing practice, but there are many other tools which can help guide practitioners fulfil this important function and take positive action to improve the quality of care.

Standards are required not just for clinical care

Upgrading of facilities to provide basic or comprehensive obstetric and neonatal care may require both substantial renovation and a programme of regular maintenance. Here again health professionals can both advocate for and be actively involved in developing and implementing evidence-based standards. Standards are required not just for clinical care but also for regular and effective maintenance, cleanliness and management, and for renovating or refurbishment of facilities. Indeed in the latter it is imperative that clinicians are actively involved, as it is at such times when

workload activities, patient management systems and even daily routines can be reviewed to improve quality of care and client satisfaction. Too often, clinical staff abdicate the development of such standards to others or they do not foster helpful and collaborative working practices whereby such standards can be developed in a healthy multiprofessional ethos. Unhealthy rivalries can arise between the different health staff and these have an unhelpful and sometimes demoralizing effect on all concerned, as well as leading to poor quality of care.

Team work

All health professionals should be mindful of the importance of working together and that they must operate as team members at two levels, working with other formal health care providers and with the local community, to ensure that all women can access quality maternity services. For services to be truly accessible, all the barriers that impact on utilization must be addressed. Provision of funds for emergency care has been shown to have a positive effect on utilization of services, and although health practitioners cannot be expected to operate such funding schemes, they can advocate and promote such schemes—by helping local leaders and communities explore options for emergency transport systems with local health planners.

Provision of quality maternity care requires a team approach. Whilst the midwife or nurse with midwifery skills can provide care for the woman and her newborn where there are no complications, they must have the support of their medical colleagues—obstetricians or medical doctors with obstetric skills, or at least with surgical skills to be able to undertake a caesarean section. These colleagues must be available at all times in a facility able to manage major complications. Where resources permit, other specialist health providers, social workers, *etc.*, also have an important role to play.

Upgrading skills

To ensure that all women and newborns have access to a skilled attendant at birth there is an urgent need for upgrading the skills of various cadres of health provider based on the available resources and on a 'fitness-for-purpose' curriculum[41]. Strategies to achieve this can include training: (1) nurses in midwifery competencies, (2) general medical staff in basic obstetric surgery, and (3) nurses and midwives in anaesthetic skills. Sometimes it is professional interest groups who, either historically or by accident, erect barriers against others being able to offer appropriate

care. Protectionism of professional self-interests can lead to unhelpful conflicts and is counterproductive to removing barriers to providing effective care. The legal and regulatory barriers in particular are often the most difficult to address and can have a negative impact on national action to ensure 'the skilled attendant for all' strategy is implemented. An example of such a barrier with a negative impact is the situations where nurses and midwives are not allowed under national or local regulations to carry out certain life-saving procedures, even when these are taught as part of the pre-service curriculum.

Skilled care for all requires increased coverage

In terms of ensuring there is sufficient, well-qualified and appropriately skilled staff to deliver the services, all health practitioners have an important role in training and supervising less experienced staff, as well as in induction of new staff. It is not only more or better training that is required, although both are crucial, but also more attention is needed to deployment and retention of staff. Individual staff working at the primary level of care cannot be responsible for national policies, but staff working in referral facilities can actively link with their colleagues in the periphery, offering them supportive assistance—inviting them to seminars, updates or in-service activities. In some instances, it may also be possible for staff in referral facilities to share the responsibility of updating staff in the periphery by agreeing to swap positions for a short time, thus allowing peripheral staff the opportunity of spending periods of time working in the referral centres.

Research

Health professionals can also be proactive in research, especially operations research, to explore and critically look at various issues surrounding provision of skilled care—such as mapping where women give birth, whether they have a choice of place of birth and/or type of assistant they have for birth, and which women have access to skilled care, as well as which women are the ones having pregnancy-related complications. All of these and much more need careful investigation to be able to understand some of the complex contextual issues impinging on access to, and utilization of, skilled care. For example, there may be a number of advantages in suggesting that all women give birth in a health care facility, especially where there is a shortage of skilled attendants. However, this proposal needs careful consideration, not only on the grounds of denying women the right to choose, but also on feasibility. The cost of building and maintaining large maternity facilities, and the potential that exists

for facility care leading to over-medicalization of care also need to be addressed.

Challenges for health professionals and their associations

It should not be underestimated that health practitioners in resource-poor countries face numerous and difficult barriers to providing effective evidence-based skilled care in pregnancy, childbirth and the postnatal period. Faced with declining national economies and lacking a good standard of remuneration, many health practitioners will be tempted to seek employment in the private sector, or even to leave the health service to take up other work that offers them better economic rewards. This situation will only be exacerbated where poor working relationships exist and where there is not a sense of shared understanding and pooling of resources, including pooling of political will and action to begin to address the situation.

Whilst individuals may be helpless to impact on the development of 'staff-friendly' human policies, professional associations can however work together to advocate for, and assist in, the development of equitable human resources policies at all levels. In addition, those professions with greater political voice can collaborate with those with less power and voice, so that the service as a whole can be improved to benefit all women and newborns.

Women's empowerment

In many countries, the greatest barrier to creating an enabling environment where 'skilled care for all' can become a reality is the low status of women and their lack of opportunities to begin to demand skilled care and hold governments accountable for the services they receive. Here again, health professionals can contribute to changing the general lack of women's political power and opportunities to have their concerns heard at all levels of decision-making, by bringing to the attention of all the need for better education of girls and women and the contribution this makes to maternal and newborn health[42]. Skilled attendants–health professionals, at both the individual provider–client interaction level, but also at a collective level, have an important opportunity to begin to influence and promote an empowering climate for women.

At the provider–client level practitioners can give more attention to providing support and education to women and can encourage women to make informed decisions about their care. This will require practitioners to adopt a partnership model of care—one where women and their families are seen as legitimate decision-makers in their health care.

At the collective level, health professionals can act as women's advocates by working with, supporting, or even encouraging the setting-up of local women's networks, postnatal support groups, *etc*., to lobby for skilled care and improvements to maternity services. In addition, health professionals can assist women by ensuring that the issues that hinder access to skilled care for all are brought to the attention of the general public and political leaders, with a demand for political action to help reduce maternal and newborn mortality and morbidity. In particular, the needs of the poorest must be addressed, as it is they who are too frequently too busy and burdened with the daily concerns of living to be able to politically advocate for their own needs. They are also among the voiceless and are frequently uninformed about the need for skilled care and about how to access such care even when it does exist.

To meet the human resource demands to ensure that there are sufficient skilled attendants to be able to offer all women and their newborns access to skilled care requires a more systematic approach than has hitherto been the norm. Professionals, professional groups (such as midwives, nurse-midwives, nurses and obstetricians) and their associations can assist by:

- Working together—not simply protecting their own territory.
- Developing and instigating clear codes of conduct, with professional accountability for provision of quality care.
- Advocate for the removal of barriers that place women and newborns at risk because of inadequate levels of care, including lack of coverage by a skilled attendant.
- Advocate for adequate and appropriate recompense for skilled attendants working in rural areas (including the need for career enhancement opportunities), as well as attention to be given to security and protection issues, especially for the lone female workers.

Finally, professionals and their associations have the greatest potential for making an impact on *quality of care*, especially by making sure that care provision conforms to national and international standards. The challenge they face is also to ensure that care is acceptable to the local population. Given the competing demands for resources at the household level, it will not be possible to increase demand for, and thus access to and utilization of, skilled care without addressing costs to the individual. Greater attention therefore needs to be given to educating communities that investments for strengthening the emergency referral system will not only benefit women and newborns, but that such systems can also be utilized for dealing with other medical emergencies, accidents, *etc*. This will only be possible, however, if the community members can see for themselves that the care they are offered does lead to noticeable

results, including the feeling that they are treated with dignity and respect when accessing services.

Above all, to implement a skilled attendant model of care for pregnancy, childbirth and the postnatal period, health practitioners must engage with local communities—first to identify what are the local customs, beliefs and behaviours surrounding pregnancy, childbirth and postnatal including early newborn care, and then to address these with local leaders, community influencers, *etc*. In many instances, local beliefs and customs that are not harmful can be incorporated sympathetically in modern western practices; these issues are dealt with in greater detail in the paper by Portela and Santarelli in this volume. Health professionals must recognize that women's desire for safe, yet respectful and friendly care—care that takes account of their emotional, cultural and spiritual needs—is possible, but to do so takes ingenuity and a willingness on the side of the health professional to be flexible.

Conclusion

Global health policy has long overlooked the need to develop effective systems for dealing with medical emergencies, including obstetric emergencies. This has contributed to the lack of successfully reducing maternal mortality. Evidence shows that improving the education and training of health care workers with midwifery skills is an important first step in any maternal mortality reduction strategy, and can begin even before other improvements to the health care system have been achieved—but both are needed. Sadly, previous strategies have not paid attention to either building a midwifery cadre or building good health systems, in particular, systems that can adequately deal with obstetric emergencies. If the millennium goals of improving health of women, for which reduction in maternal mortality is paramount, and for reducing child mortality, for which greater attention is required through reducing newborn deaths, then concerted action is urgently needed to promote and achieve increased access to, and utilization of, skilled care for pregnancy, especially for childbirth and the immediate postnatal period. Skilled care requires a health professional with midwifery skills who is equipped with the essential drugs and is equipped and supported by a policy and regulatory framework to allow them to function effectively. At the very least, all skilled attendants must be able to recognize early signs of complications, provide first-line obstetric management (including first-line management of newborn complications) and make an effective timely referral to a facility where the complication can be appropriately managed.

It is clear that all the above is not easy to achieve, but the consequences of not achieving them should be kept in mind—the unacceptable number of women, newborns and families who will continue to be subject to such human tragedy, the costs of which are almost incalculable, the suffering of those left almost inconsolable and, most tragic of all, the fact that much of this suffering could have been averted. Thus, providing a skilled attendant for all women and their newborns in pregnancy and childbirth needs to be seen by all as a priority at national and global levels, especially by those concerned with human life, health and the rights of all individuals to live a healthy, sexual and reproductive life, *i.e.* health practitioners working in the field of reproductive health care.

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