DFID HEALTH RESOURCE CENTRE

Achieving skilled attendance for all; a synthesis of current knowledge and recommended actions for scaling up

Sandra MacDonagh

12th August 2005

DFID Health Resource Centre
5-23 Old Street
London EC1V 9HL
Tel: +44 (0) 207 251 9555
Fax: +44 (0) 207 251 9552

The DFID Health Resource Centre (HRC) provides technical assistance and information to the British Government's Department for International Development (DFID) and its partners in support of pro-poor health policies, financing and services. The HRC is based at HLSP's London office and managed by an international consortium of five organisations: HLSP Ltd, UK; Ifakara Health Research and Development Centre, Tanzania (IHRDC); ICDDR,B - Centre for Health and Population Research, Bangladesh; Sharan, India; Swiss Centre for International Health (SCIH) of the Swiss Tropical Institute, Switzerland.

Title: Achieving skilled attendance for all; a synthesis of current knowledge and steps to take

Author: Sandra MacDonagh

DFID Health Resource Centre
5-23 Old Street
London EC1V 9HL
Tel: +44 (0) 20 7251 9555
Fax: +44 (0) 20 7251 9552

Table of Contents

BOXES, FIGURES AND TABLES

ABBREVIATIONS

ANM	Auxiliary Nurse Midwife
BEmOC	Basic Emergency Obstetric Care
CEmOC	Comprehensive Emergency Obstetric Care
DFID	Department for International Development
EDPs	External Development Partner
EmOC	Emergency Obstetric Care
FIGO	International Federation of Gynaecologists and Obstetricians
HRM	Human Resource Management
ICM	International Confederation of Midwives
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MNH	Maternal and Newborn Health
PHC	Primary Health Care
PPH	Post Partum Haemorrhage
PSMNH	Partnership for Safe Motherhood and Newborn Health
SBA	Skilled Birth Attendant
SSMP	Support and Safe Motherhood Programme, DFID funded programme in support of the Nepal National Safe Motherhood Programme
TBAs	Traditional Birth Attendants
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

ACKNOWLEDGEMENTS

The author is grateful for the contributions made to this report by the Partnership for Safe Motherhood and Newborn Health, their steering committee and other partners. Particular acknowledgment is due to Gaynor Maclean for the literature review she provided on skilled attendance, upon which this paper is based. Thanks also to Fran McConville, DFID, for her inputs and comments on earlier drafts and to Eloise Glew at Options and Martine Donoghue and Cindy Carlson at HSRC for their administrative and editorial support.

EXECUTIVE SUMMARY

The UK Department for International Development's strategy on reducing maternal deaths highlights the benefits to maternal and newborn health of increasing skilled attendance. This report, compiled under the umbrella of the Partnership Safe Motherhood and Newborn Health, provides a synthesis of the evidence for the drive towards 'skilled attendance for all' and suggests steps that need to be taken to achieve this vision.

Box 1a: Definitions of Skilled Attendant and Skilled Attendance

Skilled attendant – A joint WHO/ICM/FIGO statement, endorsed by UNFPA and the World Bank defines a skilled attendant as 'an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns' (WHO 2004a).

Skilled attendance – skilled attendance has been described as a partnership of skilled attendants AND an enabling environment of equipment, supplies, drugs and transport for referral to EmOC. The political, policy and socio-cultural environment can also enable or prevent 'skilled attendance' (Graham et al 2001).

Experiences drawn from retrospective reviews of the interventions taken in countries that have reduced maternal mortality underpin the recommendation for investment in skilled attendants. Professionalisation of delivery care, usually by midwives, was a common factor in reviews of maternal mortality reduction in Europe during the late 1800's and early 1900's, in Sri Lanka and Malaysia since the 1950s, and in the more recent examples that span from Honduras to Egypt and Indonesia (Section 2).

These historical reviews are complemented by epidemiological studies, evaluations of intervention programmes and data modelling. Although none provide 'gold standard' evidence, valuable lessons to guide programme design and implementation can be drawn. These include:

- The development of skilled attendants and referral/emergency obstetric care delivery systems that are not competing alternatives but complementary strategies.
- Training of skilled attendants needs to be competency based, prioritise both clinical and interpersonal skills development, and be provided by skilled trainers. This is also essential for retraining and supportive supervision, where Professional Associations can play a key role.
- Production of skilled attendants must go hand in hand with improvements to the human resource management systems that impact on deployment, motivation and retention.
- Plans for training and deploying skilled attendants must take account of the need to ensure availability of, and access to, both midwifery and obstetric skills.
- Achieving skilled attendance for all requires attention to the political, social and legal actions that address women's human rights;
- Equity concerns must be central to policy development and implementation strategies if provision of skilled attendance is to impact on the health outcomes of poor people.

Section 3.1 of the report explores the human resource management issues that require attention in order to develop and empower skilled attendants. Key steps to be taken are outlined; examples and case studies of ways these have been addressed elsewhere are presented. Key steps identified are:

- Gain policy consensus on which cadre(s) of health staff will be designated as, or developed as, skilled attendants.
- Empower nursing and midwifery staff with the skills and legal rights to provide basic emergency obstetric care (BEmOC) services in addition to essential midwifery care.
- Develop plans for human resource production and develop human resource capacity in human resource planning and management.
- Assess and address context specific barriers to recruiting trainees.
- Commit to and develop strategies to increase equitable distribution of skilled attendants.
- Increase the pace and quality of production of skilled attendants. This is likely to require reform of the health worker education system.
- Initiate action within and across national governments and international organisations to address the push and pull factors affecting retention.
- Develop appropriate and supportive supervision systems and address issues affecting morale and motivation.

Section 3.2 explores the specific aspects of health system organisation and development that must be addressed to provide an enabling environment for the provision of skilled attendance. These include the need for:

- Clear policy guidance on the place and type of attendant providing delivery care, the transition strategy from unskilled to skilled care and the provision of emergency obstetric services. These need to be guided by the available evidence, the resource implications, the socio/cultural norms and beliefs surrounding childbirth, and the physical access challenges of the particular context.
- A responsive emergency referral system that links levels of care.
- Inclusion of equipment and medicines necessary for skilled attendance on national procurement and essential drug lists.
- Adoption of available tools and guidelines that enable and guide quality assurance in MNH service delivery.
- Inclusion of key indicators in the health management information system and emphasis on the analysis and use of data at a facility and district level to ensure an equity focus in the availability and provision of care.
- Interventions to improve the financial access to care through adoption of approaches to health care financing that protect the poor, and ensure equitable access to skilled attendance.

The level of reform, necessary to ensure skilled attendance for all, required in human resource management, health provider education and heath systems can only be achieved if there are changes in the ways that governments of low resource countries and the external development partners that support them work. Two important approaches that need to be pursued are:

- Taking rights based approaches to all policy, planning and programming through adoption of and commitment to the principles of participation, inclusion and obligation (3.3.1).
- Ensuring harmonised and integrated working partnerships that engender country ownership, work with national policies, strategies and programmes, are sensitive to the country context, and support the development of effective and accountable systems (3.3.2).

There is a need to build the skills of international and national technical assistance in maternal and newborn health to be responsive to and supportive of these approaches. There are some information gaps that it would be useful to fill. These are outlined in Section 4 and pertain to the role of professional associations in supporting and empowering skilled attendants; strategies and

approaches that enable recruitment to the midwifery profession and lessons learnt about financing mechanisms that improve access to skilled attendance.

1. INTRODUCTION

Each year, 120 million pregnancies occur, over half a million women and more than a million newborns die due to complications of pregnancy and childbirth. Most would survive if they had access to a skilled attendant (Box 1a), essential midwifery care and emergency obstetric care (EmOC). For every woman who dies up to 50 more suffer avoidable and debilitating health problems such as fistulae, prolapse of the womb and infertility. At the current rate of progress, the Millennium Development Goal (MDG) for maternal health (Box 1b) will not be met[1].

Box 1a: Definitions of Skilled Attendant and Skilled Attendance

Skilled attendant – A joint WHO/ICM/FIGO statement, endorsed by UNFPA and the World Bank defines a skilled attendant as 'an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns' (WHO 2004a).

Skilled attendance[2] – skilled attendance has been described as a partnership of skilled attendants AND an enabling environment of equipment, supplies, drugs and transport for referral to EmOC. The political, policy and socio-cultural environment can also enable or prevent 'skilled attendance' (Graham et al 2001).

The UK Department for International Development's (DFID) strategy on reducing maternal deaths (DFID, 2004), highlights the benefits to maternal and newborn health (MNH) of increasing skilled attendance (Box 1a). It also examines the constraints faced by resource poor countries in doing this. DFID, in collaboration with the Partnership for Safe Motherhood and Newborn Health (PSMNH), is pursuing an understanding of *how* to increase skilled attendance in resource poor contexts.

Box 1b: Millennium Development Goal 5: Improve Maternal Health

Target: Reduce, by three-quarters, between 1990 and 2015, the maternal mortality ratio). **Indicators:** a) Maternal Mortality Ratio (no. of women dying per 100,000 live births) and b) proportion of deliveries attended by skilled health personnel

This report builds on a literature review that was carried out by the Health System Resource Centre on behalf of DFID (Maclean 2005). Sandra MacDonagh, MNH Specialist from

[1] Non-achievement of the maternal health goal will also impact on achievement of MDG 4, the Child Health Goal. Neonatal deaths account for 40% of all deaths in the first 5 years of life. The underlying factors influencing the health of newborns are closely linked with the health of their mother. Key opportunities to deliver interventions that directly impact on newborn outcome arise during pregnancy, labour, delivery and the post-natal period; an estimated 70% of avoidable newborn deaths could be averted through interventions delivered through maternal health services (MacDonagh 2003).

[2] Skilled attendance has also been defined as: "the *process* by which a pregnant woman and her infant are provided with adequate care during pregnancy,labour, birth, and the postpartum and immediate newborn periods, whether the place of delivery is the home, health centre, or hospital. In order for this process to take place, the attendant must have the necessary skills **and** must be supported by an enabling environment at various levels of the health system, including a supportive policy and regulatory framework; adequate supplies, equipment, and infrastructure; and an efficient and effective system of communication and referral/transport." (Mcdonald and Starr (2002)

Options[3], drafted this synthesis document in close consultation with the Reproductive and Child Health Team in DFID's Policy Division.

Section two presents a summary of the evidence that supports skilled attendance as the policy of choice to improve MNH. Section three outlines steps that need to be taken to move towards 'skilled attendance for all'. Section four presents ideas for further knowledge generation to enable the development and implementation of effective skilled attendance policies. Finally, section five presents a summary of the report and of the recommendations made.

[3] www.options.co.uk

2. WHAT WE KNOW ABOUT SKILLED ATTENDANTS & SKILLED ATTENDANCE?

There is good evidence on the clinical interventions required to prevent maternal deaths and morbidity. However, there is less understanding of *how* to deliver these interventions, particularly in settings characterised by high maternal mortality ratios (MMR) and failing health systems. Most of the 'evidence' that informs MNH policy and programming comes from reviews of the steps taken in countries that have successfully reduced maternal deaths.

Based on these reviews it is now widely agreed that the key factors for MMR reduction include (e.g. see Rizzuto & Rashid 2002; Lule et al 2005):

- High level political commitment to improving maternal health and saving women's lives.
- Investment in social and economic development with emphasis on achieving gender equity and on ensuring access to basic services for the poor.
- Strengthening health systems with emphasis on ensuring access, for all, to an extensive network of facilities, and on providing an essential package of evidence based care (including family planning, comprehensive abortion care, and emergency obstetric care).
- Investment in developing, deploying and supporting a cadre of health providers with midwifery skills[4] (skilled attendants), and ensuring they attend women during pregnancy and childbirth.

All of these elements are important; it is unlikely that any of them can be singularly held responsible for the decline in maternal mortality, and thus they need to be addressed in synergy. However, of specific interest in this report is a striking characteristic that is common to all reviews, and which is currently driving MNH policy due to its choice as an indicator for the maternal health MDG – **ensuring presence of a skilled attendant at delivery**. Time and time again country reviews conclude that the decision to commit to the development, widespread deployment and support of a cadre of health professionals with midwifery skills (a skilled attendant), to attend women during childbirth was critical to reducing maternal deaths:

- A comprehensive and detailed analysis of the factors behind the fall in maternal mortality in Malaysia and Sri Lanka suggest that '*an outstanding feature of both countries is the long standing professional status of midwifery… the special identity and competence of these*

[4] The International Confederation of Midwives provides an internationally agreed definition of a midwife. This is: "A midwife is a person who, having been regularly admitted to a midwifery educational programme, duly recognised in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery.

She must be able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on her own responsibility and to care for the newborn and the infant. This care includes preventative measures, the detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. She has an important task in health counselling and education, not only for the women, but also within the family and the community. The work should involve antenatal education and preparation for parenthood and extends to certain areas of gynaecology, family planning and child care. She may practise in hospitals, clinics, health units, domiciliary conditions or in any other service." (ICM: http://www.internationalmidwives.org/Statements/Definition%20of%20the%20Midwife.htm)

The International Confederation of Midwives has also taken the lead in defining the essential competencies for midwives. These can be found at:
http://www.internationalmidwives.org/modules.php?op=modload&name=News&file=article&sid=27

workers are well recognised by communities and professionals in both communities' (Pathmanathan et al 2003).

- Recent reviews of maternity services in Bolivia, China, Egypt, Honduras, Indonesia, Jamaica and Zimbabwe found that '*in all the historical and present case studies there is high availability of both skilled birth attendants and birthing facilities.….'* (Koblinsky Ed 2003).
- Detailed reviews of the different ways in which maternal mortality was addressed in industrialised countries such as the USA, England, Wales and Sweden during the 1870s – 1937 period (when MMRs were similarly high to many of the low income countries in Asia and Africa today), found that the speed of MMR reduction was '*.related to the way professionalisation of delivery care was determined first by the willingness of decision makers to take up responsibility; second by the strategy adopted for making modern obstetrical care available to the population (and particularly by the encouragement or dissuasion of midwifery care)…...'* (Van Lerberghe and De Brouwere, 2001).

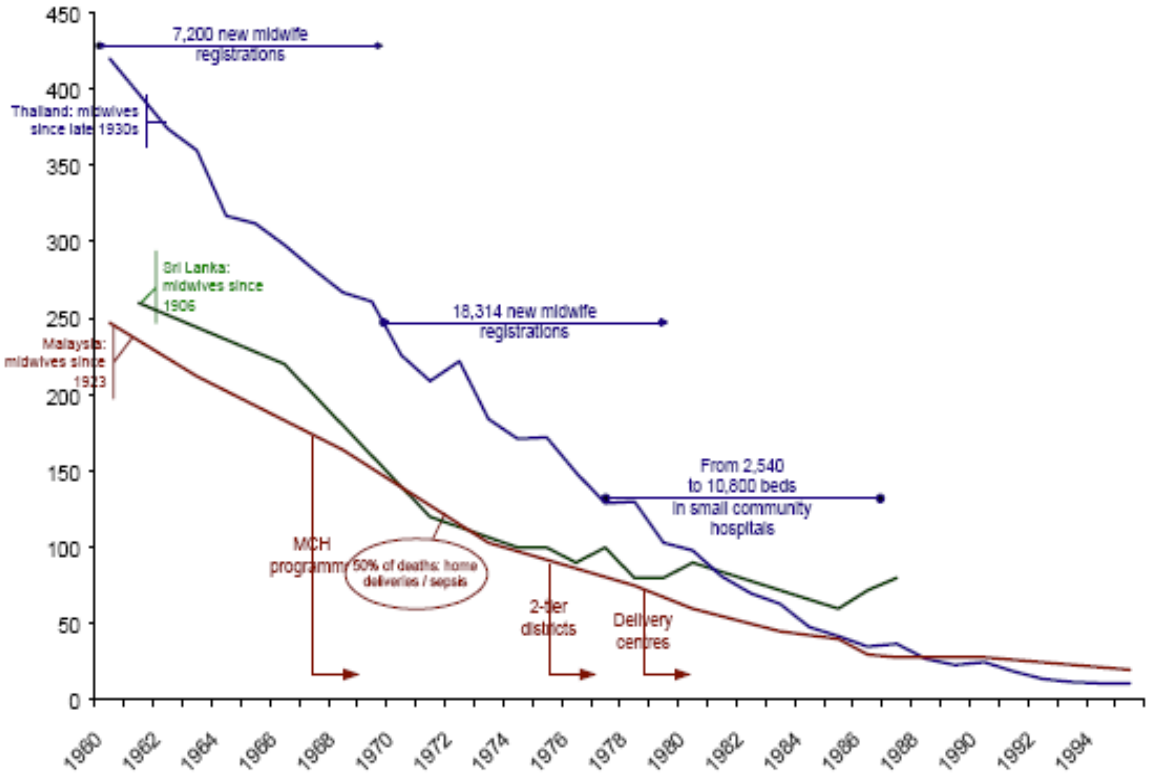
These statements and the graphs that can be produced to illustrate the fall in maternal deaths after midwifery skills were introduced are persuasive (see Figure 1 – over page). However, implementing any new policy, particularly where resources are limited, poses opportunity costs. Therefore, it is critical to bear in mind the nature of the evidence on which decisions are based. Graham et al (2001) urges MNH policy makers and practitioners to practice caution when interpreting historical data, which, reviewed retrospectively, fail to control for confounding factors, such as changes in other health care practices or the status of women in society, and therefore are inherently a weak form of evidence. Also, Egypt, Honduras and other countries have experienced a much more rapid reduction in maternal mortality rates than seen in Sri Lanka and Malaysia. The reasons for this remain obscure.

Country case studies are complemented by epidemiological studies, evaluations of intervention programmes and data modelling. Similarly to the reviews, all of these studies provide relatively weak forms of evidence[5] (e.g. quasi-experimental or descriptive studies). Nonetheless lessons emerging from these sources, many of which echo factors noted in the country reviews, could be used to guide the 'how' of programme implementation:

- In Indonesia the presence of a skilled attendant at birth increased dramatically between 1996 and 1999; however, use of life saving EmOC fell during the same period. Reasons for this are suggested as lack of responsive referral systems (e.g. transport), low cultural acceptability and the high costs of EmOC services (Ronsmans et al 2001). Interestingly, in the Maternity Care Programme in Matlab Bangladesh, a significant decline in maternal mortality was found to take place in the intervention area where the number of skilled attendants increased, together with development of a referral chain allowing access to EmOC facilities. This decline was not found in the control area; however similar gains in maternal mortality reduction occurred in a comparison area that had not benefited from the intervention, but did have access to a facility providing EmOC (Ronsmans et al 1997).

[5] 'Gold standard' evidence can only be provided by randomised controlled trials and it would be unethical today to consider randomising women to skilled or unskilled care at delivery.

Figure 1: Maternal mortality since the 1960s in Malaysia, Sri Lanka and Thailand. Source: Van Lerberghe and De Brouwere 2001.



Message 1: Skilled Attendants & the 'How' of Programme Implementation

Investment in the development of skilled attendants and of referral and EmOC services should not be treated as competing alternatives but as complementary strategies –both are required for the achievement of skilled atten*dance*. This requires attention to health system development with a focus on the elements required for maternal mortality reduction. There is no short cut to comprehensive health system improvements.

- In Nepal, midwifery care providers often lacked even basic midwifery skills despite having received pre-service and in-service training in basic and advanced maternal care. As such they could not be considered to be skilled attendants. Following the introduction of competency-based training, complemented with quality assurance guidelines and facility based supervision, providers demonstrated the skills to provide both normal midwifery and EmOC services (ODC, 2004,NSMP). In some settings staff graduate without any 'hands-on' clinical experience in their training (Tinker and Huque 1998 provide an example from India). There are examples from Indonesia and Pakistan of tutors without any midwifery skills being given responsibility for midwifery training (Maclean and Sweet 1995a, Kamal 2000). An evaluation in Indonesia raised concerns about the short in-service training programmes to produce competent midwives and suggests that such an approach cannot replace adequate pre-service training (Ronsmans et al 2001). Interpersonal skills are also important and are known to influence uptake of care (Jewkes et al 1998, Ashwood-Smith & Simpson 2003).

Message 2: Skilled Attendants & the 'How' of Programme Implementation

Although there is a sense of urgency to increase the number of skilled attendants rapidly, it is a waste of resources to invest in poor quality training. **Training needs to be competency based**, to prioritise both clinical and interpersonal skills development, and must include extensive 'hands on' exposure to clinical environments, and needs to be provided by skilled and experienced trainers. Health provider education systems must receive adequate attention if skilled attendance is to be achieved.

- Even where there are efforts to ensure the presence of competent skilled attendants, referral systems and EmOC performance may be poor unless there is attention to the basic working environment and health provider morale (e.g. please refer to the experience in Tanzania described by Mbaruku and Bergstom 1995). This is particularly critical in the current human resource crisis of health workers fuelled by the impact of HIV/AIDS and regional/international and internal migration (outside the health system, or from the public to private sector) of health workers (see for example, Chen 2005).

Message 3: Skilled Attendants & the 'How' of Programme Implementation

A focus on increasing the production of skilled atten*dants* without attention to **improving broader human resource management systems** that impact on the recruitment, development, deployment motivation and retention of health workers, is unlikely to be successful.

- Graham et al (2001), in a paper that critically analyses the evidence for skilled attendance, suggests that it is the mix ratio between different types of skilled attendants that is important to maternal mortality reduction. Plotting the ratio between midwifery and medical attendance at deliveries against the countries MMR, they find the medical/midwifery 'partnership ratio' to be a powerful correlate of maternal mortality. Interestingly, it would appear that the countries that have reduced maternal mortality have focused on increasing the midwifery and obstetric

skills in both midwifery and medical personnel. For example, in Tunisia all medical practitioners have a mandatory four-month training in obstetrics and gynaecology; in Botswana efforts to increase skilled attendance have focused on developing complementary skills in midwives and doctors (Rizzuto & Rashid 2002). In Malaysia all medical officers posted to district hospitals have four to seven months training in obstetrics, including obstetric emergencies, and in Sri Lanka midwifery training has been compulsory for doctors since 1915. Some countries that have difficulty in making rural posts attractive to medical personnel, or who have insufficient numbers of doctors, have built the skills of allied health professionals to deliver procedures, such as anaesthesia, abortion care, assisted delivery or surgery.

Message 4: Skilled Attendants & the 'How' of Programme Implementation

It is essential to plan the training, skills level and deployment of different types of skilled attendants (in particular those with normal midwifery skills and those with obstetric skills), so that an ideal **'partnership' of midwifery and obstetric skills** is achieved.

- Social and cultural norms that place women at a lower status than men limit the political commitment necessary to develop the human resources and systems necessary for skilled attendance. In addition, the same norms played out at household level constrain care seeking even when services are available. For example Amowitz et al (2002) reports that 87% of Afghani women require the permission of their husbands before seeking health care, and 45% believed a husband has the right to beat his wife if she disobeyed his orders. A recent review by DFID highlights the impact of failure to address women's human rights on the development of maternity services (Hawkins et al 2005).

Message 5: Skilled Attendants & the 'How' of Programme Implementation

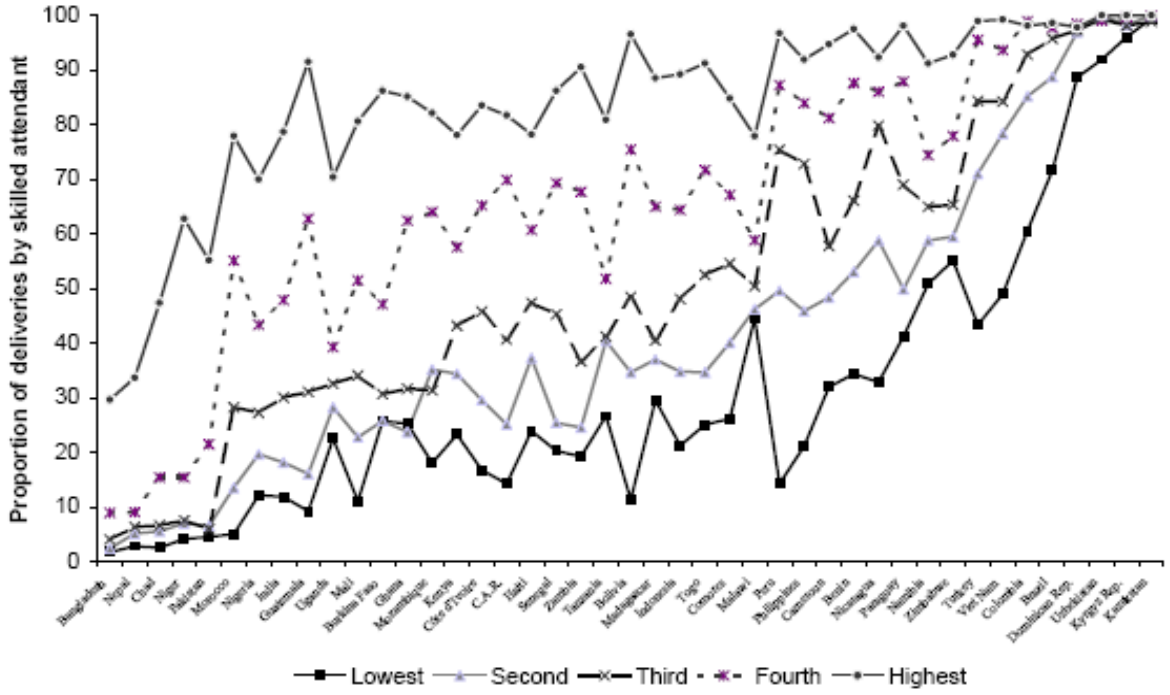
Achieving skilled attendance for all requires **political, social and legal actions that address women's human rights**. Attention needs to be paid to addressing the three human rights principals of participation, inclusion and fulfilling obligation (see DFID 2000), in parallel with increasing the numbers of skilled attendants and the availability of skilled attendance.

- Poverty is a key factor limiting access to skilled attendants and skilled attendance. Examination of utilisation of professional or trained attendants at delivery demonstrates large disparity in utilisation between the poorest and richest quintiles. It is also salient to note, that there is currently no good measure of *skilled attendants*, and the professional titles of nurse, midwife, doctor are used as proxy measures. The relationship differs depending on the overall prevalence of delivery attendant rates but in every case the poor are least likely to have a trained attendant with them at childbirth. '*In countries with the lowest national prevalence rates (Bangladesh, Nepal, Chad, Niger), there is a gap between the elite with relatively high attendance rates and the rest of the population where delivery attendance by a trained person is rare. In Turkey, Vietnam, Columbia and Brazil, rates of attendance are fairly high for all women except the poorest women'.* (Kunst & Houweling 2001). See Figure 2.

Message 6: Skilled Attendants & the 'How' of Programme Implementation

Equity considerations need to be central to all policy development, implementation strategies, and monitoring/evaluation mechanisms, if the production of skilled attendants and provision of skilled attendance is to impact upon maternal and newborn health outcomes for poor people.

Figure 2, Delivery Attendance (%) by wealth quintile. From Kunst & Houweling 2001.

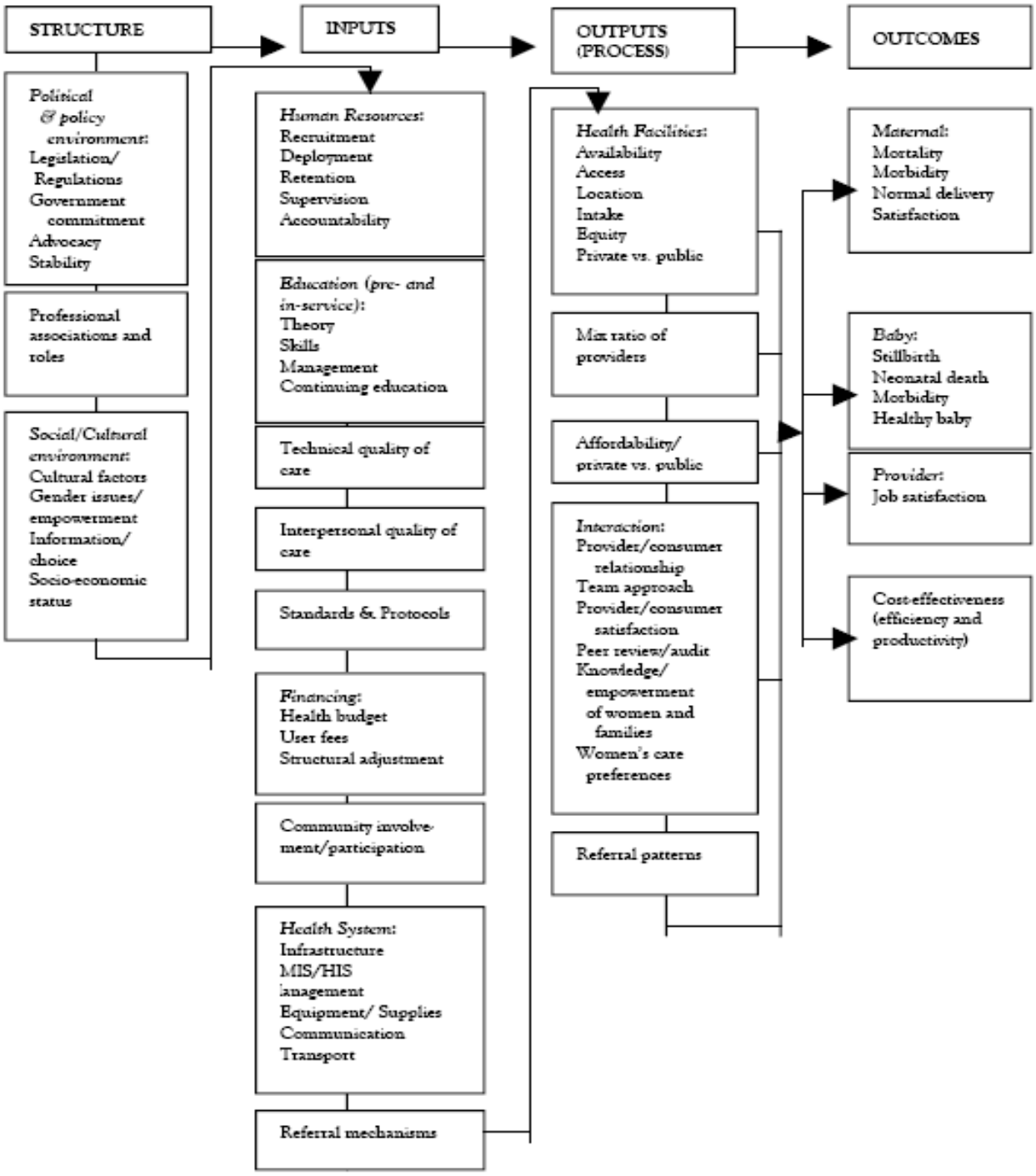


The message 'ensuring a skilled birth attendant for all' is core to reducing maternal deaths. However, the route to achieving this must embrace the complex range of issues that impact on health provider education, health system organisation and functioning, human resource management as well as the social, cultural, political and economic environments that impact on women's access to care. Each of these is explored in more depth in Section 3. However, MNH policy makers and professionals have expressed concerns (Maclean 2005) that the choice of an MDG indicator that focuses on the presence of a skilled atten*dant* at delivery is driving singular thinking in programming and risking investment in the production of skilled attendants without attention to the wider environment, systems and processes necessary to ensure they can provide skilled atten*dance*. The final report emerging from the Millennium Project has suggested that additional indicators, provided in Table 1, are incorporated to the maternal health MDG to better reflect the efforts required to meet the goal (Freedman et al). This recommendation should be strongly endorsed.

Table 1: Proposed Targets and Indicators for the MDG on Maternal Health		
Goal: Improve maternal health	**Targets:** Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio, ensuring faster progress among the poor and other marginalised groups Universal access to reproductive health services by 2015 through the primary health care system, ensuring faster progress among the poor and other marginalised groups.	**Indicators:** Maternal mortality ratio Proportion of births attended by skilled health personnel Coverage of emergency obstetric care Proportion of desire for family planning satisfied Adolescent fertility rate Contraceptive prevalence rate HIV prevalence among 15- to 24-year-old pregnant women (see Goal 6 indicator)

The conceptual framework developed by Graham and Bell (Figure 3) illustrates the complex relationship between structures (the policy, professional, social and cultural environment), inputs (human resources and the health system), processes (health service delivery), required to achieve skilled attendance and thus reduce maternal and newborn mortality and morbidity. The next section explores these issues in more depth.

Figure 3: Conceptual framework for skilled attendance at delivery.



*SOURCE : Graham and Bell 2000a

3. CRITICAL STEPS: MOVING TOWARDS SKILLED ATTENDANCE FOR ALL?

Globally, as few as one third of deliveries take place in a health facility and most births, around 60 million each year, are attended by an unskilled attendant or nobody at all. The challenge of moving toward skilled attendance for all should not be under-estimated. This section of the report briefly outlines some of the key issues that need to be addressed and steps that will have to be taken if skilled attendance for all is to become a reality.

High level political will is an essential pre-requisite in order for any of the issues examined in this section to be addressed. If there is low political will for increasing skilled attendance then it needs to be created. Possible steps for creating higher level political will include:

- Identifying advocates (e.g. the Partnership for Safe Motherhood and Newborn Health, the White Ribbon Alliance, Presidents/prime ministers wives, and other `champions');
- Using data more effectively;
- Using the media to draw greater public attention to the problems associated with poor pregnancy and childbirth care, and possible solutions.

Box 3a: Family Care International's approach to creating political will

One of the approaches FCI has been taking in their advocacy work for skilled care is simply to take a government's stated policy commitments in maternal health, which often include, for example, setting a target for coverage by skilled attendants, and then calculating how many skilled providers would be needed nationally in order to meet that target. They have found that the gaps are often huge. This can be intimidating for governments, but it also helps them to face up to the real implications of the policy commitments that they have already made and that are already enshrined in national plans and statements. If they are saying that they want 60% or 75% or even 90% coverage by Year X, then they need to start training (and retaining) the workers who will be necessary to reach that goal. (Starrs 2005)

3.1 Human Resources: Developing and Empowering Skilled Attendants

'*Appropriate workforce strategies can generate enormous efficiency gains. Successful strategies must be country-based and country-led, focusing on the front lines in communities and backed by appropriate international reinforcement'.* Chen et al 2004b

The pursuit to 'ensure a skilled attendant at every birth' highlights the need for changes in human resource management (HRM). Many health systems, particularly in countries with high MMRs, are characterised by an overall lack of qualified staff, inequitable distribution of providers, high levels of absenteeism, and increasing attrition of skilled workers due to the impact of HIV/AIDS and regional/international migration. Interventions to develop and manage skilled attendants need to take account of and work to address these very challenging HRM realities. Key steps that need to be taken are outlined in Box 3a and elaborated upon in the text below.

Box 3b: Key Steps for Developing Skilled Attendants

1. Gain policy consensus on which cadre(s) of health staff will be designated as or developed as 'skilled attendants'.

2. Policy changes need to ensure a midwifery and obstetric skill mix and consider ways to empower nursing/midwifery staff to provide BEmOC.

3. Develop plans for the necessary human resource production. It may be necessary to develop capacity in human resource planning and management.

4. Assess context specific barriers to recruiting trainees and develop strategies to address these.

5. Commit to and develop strategies to increase equitable distribution of skilled attendants.

6. Increase the pace and quality of production of skilled attendants. This may require reform of the human resource education system in addition to curriculum and teaching methodology changes.

7. Initiate action within and across national governments and international organisations to address the push and pull factors affecting retention, for example remuneration.

8. Develop appropriate and supportive supervision systems and address issues affecting morale and motivation.

1. Gain policy consensus: A first important step is to gain policy consensus on which cadre/s of health service staff will be designated as 'skilled attendants'. This needs to take account of the short, medium and long-term needs to increase availability of skilled attendants. One critical difference in the human resource needs for MNH service delivery compared to, for example, TB or child health programming, is the level and type of skills required by front-line workers. Most primary health care (PHC) front-line workers are not sufficiently skilled to deliver a minimum MNH service package. Adding on a few weeks or even months of in-service midwifery training for these workers may seem to be a useful short cut to producing skilled attendants. However, this is unlikely to be a successful strategy. There is a lot of information available for policy makers to draw on, that provides guidance on the competency and skill levels that must be achieved before the title 'skilled attendant' can be earned (e.g. WHO 2004a, WHO/SEARO 1998).

Box 3c: A Case Example - Developing Policy Consensus on Skilled Attendants in Nepal

In the early 2000s, in an effort to rapidly produce skilled attendants, Nepal invested in skills upgrading of community based Maternal and Child Health Workers through a short "refresher" training course in obstetric first aid. However, they did not attain the competency levels set out in international definitions of skilled attendants. The auxiliary nurse midwife (ANM) programme was not competency based and failed to provide adequate clinical experience during training, producing graduates who also did not meet the criteria for skilled attendants. Recognising Nepal was no closer to 'a skilled attendant at every birth,' while policy decisions were delayed and scarce resources spent, a number of key external development partners (EDPs) undertook studies of the situation and outlined a range of options for producing skilled birth attendants to His Majesty's Government of Nepal.

In 2005, with the support of external technical assistance* from an experienced MNH specialist with a midwifery background and a national consultant with an obstetrics and gynaecology background, the MoH engaged in a consensus building process to decide how best to invest in developing skilled attendants from the range of options put forward. A policy advisory group that included representation from divisions of the Ministry and Department of Health responsible for human resources management, health service training and MNH service delivery, professional associations and key health provider training institutes was established to take the work forward. External consultants were asked by the policy advisory group to develop a draft based on consensus reached during two meetings after extensive debate and dialogue. The draft was finalized during a 2 day workshop and was shared with EDPs for comment and input. The following are key elements of the draft policy, which is now being finalised and endorsed:

Long term: a new cadre of "professional nurse-midwife" trained at the bachelors or master's level will be developed to provide national leadership in safe motherhood and midwifery training.
Medium term: the ANM training programme will be completely restructured to ensure ANMs are proficient in midwifery skills. The new course will be a 2-year competency-based integrated midwifery curriculum with 6 months basic nursing and 18 months of midwifery followed by a 6-month on-the-job training period. Priority for deployment will go to functioning EmOC and low Health Development Index districts.
Short term: there will be opportunities for nurses, with priority given to those already serving and committed to returning to underserved areas, to undertake competency assessments and, if successful, enrol in a refresher course to become registered as an SBA. The length of the refresher course will be determined by the prior training, skills and experience of the enrolees.
Skill mix: obstetric courses will become mandatory prior to district placements for medical officers, EmOC will be incorporated in the medical curriculum, Nepal will continue to empower midwives and SBAs through supporting them to be trained in and provide basic EmOC and anaesthesia in the absence of a medical doctor.

*Key MoH players were involved in drafting/agreeing the consultants TORs and in the selection of the consultants
(Personal Communications, SSMP team Nepal).

2. Changing policy: Policy decisions need to consider the midwifery and obstetrics skill mix required among skilled attendants. In many countries the skill mix places too much reliance on doctors. Not only are doctors more expensive than professional midwives it is often is more difficult to attract doctors to work in remote areas. One solution that has helped in many countries is to advocate for practice and legal changes that enable nurses/midwives or other allied health professionals to provide services (e.g. anaesthesia, manual removal of the placenta) that are traditionally only provided by doctors (see Box 3c). Careful involvement of professional associations is necessary to engender support for and to limit 'turf wars' that prevent the necessary legal, policy and practice changes.

Box 3d: Country Examples of Advanced Skill Holders & Service Provision

A wide range of countries have successfully taken the step to empower allied health professionals, usually nurses, to provide services that are normally considered the domain of medical practitioners. Most have, to date, produced these advanced skill holders only in small numbers, and these strategies need to be scaled up. Evaluations indicate that advanced services can be provided safely and effectively by non-doctors. Examples include:

Nursing staff with all the skills to provide BEmOC - Nepal, Ethiopia and Tanzania
Nursing staff providing manual vacuum extraction for provision of safe abortion - South Africa, Zambia and Nepal
Nursing staff providing anaesthesia for surgical operations – Malawi, Ghana, Nepal, Tanzania, Zambia
Allied Health Professionals providing surgery, including caesarean section – Mozambique, Ghana, Congo (nurses in the 1950s)

(Dovlo 2004; personal communications)

3. Planning for human resource development: Plans to develop skilled attendants need to be included in, and central to, the overall human resource master plan for the health sector. This is likely to require investment in developing human resource planning and management specialists. The International Confederation of Midwives (ICM) and International Federation of Gynaecologists and Obstetricians (FIGO) suggest that there should be one skilled attendant per 5000 population. Assuming a crude birth rate of 40 this would be 200 deliveries per annum per skilled attendant –a level at which competency could be retained. One analysis suggests that the prospects of achieving 80% coverage of skilled attendants at birth is enhanced where health worker density exceeds 2.5 per 1000 population (Chen, 2004b). However, in some parts of the world, notably in Asia and Sub Saharan Africa, there is estimated to be as few as one skilled attendant per 300,000 people (Lule et al, 2005). Planning needs to take into account the countries' existing workforce situation and build on this in a sustained manner.

4. Assessing barriers: Innovative approaches to recruiting trainee skilled attendants are required. In many countries, particularly in rural areas, there are insufficient girls graduating from secondary school with the necessary qualifications to enter midwifery training. This situation has worsened where the effects of HIV/AIDS have undermined education systems and school attendance. In addition, the midwifery profession has a low status in many parts of Asia and increasingly in high HIV prevalence countries may be seen as a 'risky' job. The context specific barriers to recruitment of skilled attendants need to be assessed and addressed. Increasing investment in girls education, including secondary education, is essential in the long term. In the shorter term it may be necessary to provide basic education upgrading opportunities to young women who would like to pursue a career in midwifery but who have not had the opportunity to achieve entrance level qualifications. In addition there may be ways to attract skilled attendants who have left the profession e.g. retired nurses and midwives back to work. Transparency and community participation in the provision and uptake of training opportunities may increase utilisation and retention of skilled attendants. For example, in Bangladesh problems with acceptance of skilled attendants were attributed to the fact that the community had not been consulted in the selection of trainees (Murakami et al 2003).

5. Ensuring equitable distribution of skilled attendants: Attention needs to be given to ensuring equitable deployment of skilled attendants. Even where workers are available, their distribution is often inequitable (Freedman et al 2005). To reduce maternal and newborn mortality, skilled attendants must be available where women are giving birth – in rural areas and urban slums as well as the more attractive middle class suburbs. This requires commitment, transparency and innovation on the part of governments to make shifts in the way health

workers are deployed. Box 3d below illustrates the range of strategies developed and implemented in Thailand to ensure equitable distribution of rural doctors.

Box 3e: Ensuring Equitable Deployment of Rural Doctors in Thailand

Between 1986 and 1996 the differences in doctor-to-population ratios between the poorest North-Eastern Region and Bangkok rose from 8.6 to 13.8. This inequitable distribution of rural doctors was recognised to have multiple root causes including international migration, internal migration to the private sector, high workloads driving doctors away from rural areas and the economic climate. A range of strategies were put in place to enable more equitable deployment. These included:

- *Development of a rural infrastructure* through a shift of resources from urban to rural areas. This made placements more attractive through the provision of good logistic support and housing.
- *Educational strategies* such as rural recruitment, training in rural health facilities and hometown placement. Career development incentives such as special quota for speciality training for rural doctors were also initiated.
- *Administrative mechanisms* such as bonding contracts for two to four years' public sector employment in the province of recruitment and training. Training and living expenses during training were highly subsidised, recruitment was done through transparent and participatory mechanisms. Flexible working arrangements were also developed to enable part-time return to work by retired doctors.
- *Financial strategies* such as increasing tuition fees and allowing payback by rural public work; non-private practice allowances; non-official work-hours services with special workload related payments and remote area allowances.

(Wibulpolprasert and Pengpaibon 2003)

6. Increasing the pace and quality of skilled attendant training: Most countries need to increase the pace of production of skilled attendants. Many also need to improve the quality of provider education. Both are major challenges and progress may require addressing underlying factors such as the organisation and regulation of the health education system as well as changes to the curriculum and improving training methodologies. For example in Democratic Republic of Congo the government recognises 254 nursing schools; however the quality of training varies dramatically between them. The underlying reasons are complex and Parent et al (2004) present a model that can lead to a better understanding of the educational determinants and the factors necessary to achieve a better match between training in health and the competencies required by health professionals. It is likely that policy makers will need to step back and take such an analysis of health provider education systems in order to make the changes necessary to educational systems and processes to produce the skill and competency levels necessary for skilled attendants.

7. Retaining skilled attendants: Retention of existing workers is a key issue and very pertinent to skilled attendants. There is a global shortage of midwifery skills and many skilled attendants are drawn to migrating to countries such as the UK or USA where their skills are in demand. In other settings skilled attendants are available but are so poorly paid and motivated that their engagement in dual practice[6] means they are largely unavailable to the public sector and thus to poorer clients (see for example Ferrinho et al, 2004). HIV attrition has further exacerbated the human resource crisis in high prevalence countries. There are many push and pull factors affecting retention and although wage concerns are important, they are not the only motive. Other important factors include professional fulfilment and career advancement opportunities, and working and living conditions such as safety, transport and housing (see for example Vujicic et al 2004). Not all these issues are under the control of Ministry of Health and

[6] Skilled Attendant holding more than one job – usually working in both public and private sectors

there are key links between health worker retention and broader development issues (e.g. development of rural infrastructure such as communications, schools) and civil service reforms (e.g. salaries, hardship allowances, compulsory public work etc). If skilled attendance for all is to be a reality EDPs and Governments from resource rich countries, need to work in partnership with resource poor countries to ensure 'more co-ordinated working'. This is important both across resource poor country Government departments (e.g. to link the MoH with civil service reform) and between country Governments to ensure that the flow of staff to the health systems in the North does not undermine efforts to improve health system functioning and reach the MDGs in poor countries. Box 3e below explains the multi-pronged approach to improve retention of midwives in Malawi.

Box 3f: Increasing Retention in Malawi

In Malawi there is a human resource crisis with 64% of nurse-midwife and 91% of obstetrician posts vacant. There is a drain of qualified nurse-midwives due to poor pay and conditions, excessive and increasing workloads, lack of adequate supervision and support, and risks associated with HIV and AIDS.

It is estimated that between 1999 and 2002, the Ministry of Health and Population lost 278 registered nurses and midwives while its training institutions produced only 258. According to a database maintained by the Nurses and Midwives Council there are two main forms of losses of midwives: going abroad, responsible for 6% of the losses, and death, responsible for 10% of the losses, probably mostly due to AIDS. However, over one third of Malawi's qualified midwives are no longer practicing. The same database records that in 2003, Malawi had 3633 practicing midwives, 1838 non-practicing midwives and 162 midwives working abroad.

No one solution is likely to work in isolation. DFID is working with the Government of Malawi to support an **innovative package of approaches** that include: introducing a more attractive package of benefits and incentives, providing care and treatment for health workers infected with HIV/AIDS, mobilising staff who have left the system to re-enter (e.g. retired midwives), devolving responsibilities to other cadres of staff, expanding pre-service training capacity and bringing in expatriate volunteers to provide stop-gap support as specialist physicians and nurse tutors. In addition the UK has introduced a code of practice to prevent the active recruitment of health staff from developing countries.

(Malawi Demographic and Health Surveys 2000; Malawi Nurses and Midwives Council Database; MoH Malawi 2004)

8. Assess supervision and other means of influencing morale and motivation: Supervisory systems and working conditions also require attention if skilled attendants are to achieve their potential. A study in Vietnam illustrated that health workers perceived supervision as control, selection processes for in-service training unequal and performance appraisal as unhelpful (Dieleman et al 2003). The way in which context specific socio-cultural norms and values affect the treatment of health service workers needs to be explored and challenged. For example, in Pakistan, Mumtaz et al illustrated how the dominant feudal values and culture of gender discrimination demeaned and undermined Lady Health Workers and Lady Health Visitors, negatively impacting on their work and interaction with women clients (quoted in Freedman et al 2005). In South Africa the ideology of apartheid led to entrenched inequality along race lines in human resource management (Pick cited in Gilson et al 2004). Gilson & Erasmus suggest that 'health workers' performance is a very tangible manifestation of the values and norms not only of the health system but also of the government itself…. health workers act as 'street bureaucrats' with the power to interpret, implement or sabotage health policies and programmes' (in Freedman et al 2005). Findings in Zimbabwe, Mali, Benin, Vietnam and Armenia all confirm the importance of 'a sense of achievement', 'professional and public/community recognition' and

'having the tools for the job' (e.g. being empowered with necessary skills, having the necessary equipment and supplies etc) as key motivating factors (Dielman et al 2003, Fort & Voltero 2004). This may require attention to fundamental changes to the underlying values and norms in the way the health system operates as an institution. Box 3f below illustrates how a professional association supported rural doctors and enabled their 'voice' to be heard in the policy arena.

Box 3g: Professional Associations - The Rural Doctor's Society in Thailand

In 1978 Thai rural doctors created their own society. The Rural Doctor Society designed activities to support rural doctors including developing management courses and handbooks, rewards and public recognition for excellence, arranging visits to rural hospitals by senior doctors for coaching and moral support, distribution of newsletters etc. The Society became widely influential, facilitated the election of rural doctors onto the Medical Council Committee and influenced changes in medical education and residency training that improved the distribution of doctors. The Society *'boosted the morale of rural doctors and allowed them to work more happily in the rural district hospitals.'*

(Wibulpolprasert & Pengpaibon 2003)

3.2 Health System Development: Creating an Enabling Environment for Skilled Attendance

'Countries where health indicators for mothers, newborns and children have stagnated or reversed have often been unable to invest sufficiently in health systems. The health districts have had difficulties in organising access to effective care…… With widespread exclusion from care and growing inequalities, progress calls for massively strengthened health systems' (WHO 2005)

A few maternal and newborn health interventions can be delivered through relatively simple systems e.g. tetanus vaccination of all adolescent girls and/or pregnant women. However, the complications that result in most maternal deaths and contribute greatly to newborn mortality and morbidity cannot be managed by training skilled attendants alone. Data from Bolivia, Ghana, Malawi, Senegal and Zambia demonstrate this. In these countries the MMR remains very high despite the fact that around half of the deliveries are attended by a skilled attendant (Fikree 2000, Graham et al 2001). It is only when the skilled attendant is working within a system that can provide an effective and responsive continuum of care from community level to a referral facility that provides quality B/CEmOC, that skilled attendance is achieved. Table 2 (over page) outlines key issues specific to the provision of skilled attendance, which policy makers need to address within health system development[7].

Table 2 does not address issues of basic health service functioning that are necessary for the safe provision of all health services. It needs to be emphasised that facilities providing maternity care, and in particular delivery care, must have water, sanitation and a light source. There are numerous tragic stories of women not receiving a life saving caesarean section because there was no light, or of life threatening infections acquired because the basic needs to ensure infection prevention were not in place, and of women suffering fatal post partum haemorrhages because there was not a toilet for them to use (a full bladder can cause a post partum haemorrhage, i.e. PPH). This is unacceptable and must be addressed.

[7] It is important to note that the greatest gains will be made in reducing maternal death where other key evidence based services including family planning (for reduction in the overall number of pregnancies) and comprehensive abortion care (to manage unwanted pregnancy) are also prioritised. Both services could be provided by skilled attendants.

Table 2: Key points for ensuring 'skilled attendance for all'	
Service Organisation	Decisions about where births take place need to be guided by the available evidence, the resource implications and the socio/cultural norms and beliefs surrounding childbirth. Koblinsky et al (1999) presents four models for provision of delivery care: - Model 1, delivery at home with an unskilled attendant, linkages to referral for EmOC. There are no examples of the MMR being reduced below 100, and even then only under exceptional circumstances. - Model 2, delivery at home with a skilled attendant and Model 3, delivery in a BEmOC facility with a skilled attendant can reduce MMR to 50/100,000 live births. In both cases there are linkages to referral for EmOC. - Model 4, delivery takes place in a CEmOC unit. MMR can be reduced to developed country levels, however, there are examples where MMR remains as high as 114/100,000 live births. In most settings there is need for a transition period from the current mode of care to care with a skilled attendant. In many settings this means a shift from traditional birth attendants (TBAs) to skilled attendants. Successful transition requires building strong community links and commitment to change; this includes respecting the role played by TBAs (e.g. as a link between the community and formal heath system) during the transition period (see Bergstrom & Goodburn 2001). A minimum requirement for skilled attendance to be achieved is access to EOC. Recommended minimum levels are one CEmOC and four BEMOC facilities per 500,000 of the population (UNICEF, WHO & UNFPA 1997). In most settings where MMR has been substantially reduced a higher EOC: population ratio was achieved. It is essential to ensure equitable distribution of these services and in areas where physical access is very challenged there are three options: • Provide more services so that they are closer to women e.g. midwife led BEMOC units in rural areas • Move the women to services in advance of childbirth e.g. provision of maternity waiting homes beside EOC facilities for women from outlying and underserved areas (Wessel 1989, Poovan et al 1990, Who 1996b). • Move emergency services to the women. For example air ambulances in Australia or 'obstetric flying squads' in ambulances in the UK can move to a woman with a complication rapidly.
Referral Mechanisms	The obstetric emergencies that lead to most maternal deaths are often unexpected. Ensuring skilled attendance requires developing a responsive referral system which provides effective links between levels of care (home – BEmOC – CEmOC) on a 24-hour basis. The elements that require attention in order to develop an effective referral system include (Murray et al 2001): • An adequately resourced referral centre • Communications and feedback systems • Designated transport • Agreed setting-specific protocols for the identification of complications • Personnel trained in their use • Team work between referral levels • A unified records system • Mechanisms to ensure that patients do not bypass a level of the referral system
Logistics, Supplies and Medicines	Essential equipment, supplies and medicines necessary to provide skilled attendance need to be included in national procurement lists and essential drug lists. For example magnesium sulphate is often absent from essential drug lists and yet is an inexpensive life saving drug for women experiencing high blood pressure in pregnancy.
Quality	Sub-standard care is cited repeatedly as a major cause of avoidable maternal death (Walker et al 1986; Matthews 1996, Lewis and Drife)

Assurance	2004). As for other areas of health care clear standards, protocols and guidelines are essential for MNH services. A range of 'gold standard' examples are available from WHO (2002, 2003a&b). There is also a selection of excellent quality assurance tools that can facilitate continuous improvement in the quality of care. Community involvement in quality assurance initiatives enables socially and culturally appropriate quality improvement (JHPIEGO 2003). Some tools, e.g. the partograph, are for use with every woman and enable the skilled attendant to provide quality care. Others tools assist exploration of why women are dying or receiving inadequate care by answering the questions: • Are women and their families/communities unaware of the care available and/or the need to seek care? • Are the services in accessible to them due to social, economic or physical access constraints? • Are women reaching the services but receiving inadequate and low quality care? Improvements and changes can then be focused where it is most needed. There are tools available for use in facilities and also for exploring issues at community level. These include criterion based audit, maternal and perinatal death audits and verbal autopsy (WHO 2004b).
Health Management Information System (HMIS)	Many health information systems collect information on antenatal care attendance and some on the type of attendant who was present at childbirth. However, on their own, these indicators are insufficient as they do not provide information on what is happening to women who are suffering obstetric emergencies (i.e. the women at most risk of maternal death and injury). WHO, UNFPA and UNICEF (1997) have developed a set of 'process indicators' that are based on the established premise that over 70% of maternal deaths are as a result of five obstetric emergencies. The indicators assess that the services to avert maternal deaths: a) exist; b) are distributed in a rational way; c) are used by women; d) are used by women in need (suffering an obstetric emergency); and e) provide quality care for these emergencies. It is a challenging process to successfully integrate these into the HMIS. However this has been archived in a number of settings and there are many lessons learnt to draw on (e.g. Goodburn et al 2001b, Hussein et al 2001). It is important that emphasis is placed not just on gathering and collating data but on interpreting and using it at a facility and district level to identify problems and improve services. It is also important that data collected is disaggregated to identify which women are accessing care and to provide an equity focus to the monitoring of health service delivery,
Financing	Making skilled attendance available is insufficient. The service must be accessible to all, including poor women. However, the high, and frequently unpredictable, costs of skilled attendance at delivery create an enormous barrier to service utilisation. Different approaches have been, or are being, tried to protect poor people from the costs of and to provide financial incentives (or at least reduce financial barriers) for accessing skilled attendance. These include voucher systems (Bangladesh), incentive payments (Nepal), national health insurance (Bolivia), social insurance schemes (Vietnam), free maternity care by law (Ecuador), loan schemes (Sierra Leone), and fund holding separate from service provision (Cambodia). To ensure skilled attendance for all most Governments need to radically reassess not only the overall flow of funds to the health sector but the way in which these are channelled. All sources of funding (external, domestic, public and private) need to be considered and ways of capturing these to scale up access and financial protection in a sustained and predictable way explored. In most settings this will require developing new human and institutional capacity. It is also important that there is civil society representation in the decision-making processes around new financial protection measures (WHO 2005).

3.3 Approaches to enable change

'….The response must not be simply a technical one, for the challenge posed by the [maternal health] MDGs is deeply and fundamentally political. It is about access to and distribution of power and resources: within and between countries; in the structures of global governance; and in the intimate spaces of families, households, and communities. Until we face up to the fundamental anchoring of health status, health systems, and health policy in these dynamics, our seriousness about achieving the Goals can be legitimately questioned'. (Freedman et al 2005)

Working towards skilled attendance requires a number of technical changes and adaptations to provider education and health service delivery systems. However for 'skilled attendance for all' to be achieved in a sustained and equitable manner substantial shifts in the underlying culture of most human resource management, health provider education and health systems will be necessary. This section outlines two of the approaches or 'ways of working' necessary to enable these deep changes.

3.3.1 Commitment to Equity and Human Rights

Even where skilled attendance is available, it is the poorest women that are least able to benefit from it (Kunst and Houweling 2001). Consequently great disparities in maternal death ratios exist not only between resource rich and resource poor countries but also within poor countries between rich and poorer quintiles (Graham et al 2003). The Millennium Project (Freedman et al 2005) Child and Maternal Health Taskforce have called for '*a fundamental shift*' in the way we conceive programming and health systems development/reform. This means challenging socially defined and endorsed hierarchies and deeply held values. It is these entrenched and often unquestioned norms that keep the poor, poor, women vulnerable, and ethnic minorities marginalised. It is only through fundamental and deep change that equity can be ensured and basic human rights for all achieved – without this change it is unlikely that skilled attendance for all can be achieved.

DFID has also argued for a rights based perspective to maternal health programming and has produced a 'how to' note that aims to 'bring a rights and equity perspective' and add value to health system development for skilled attendance (DFID 2005). Three principles can be used to guide programming:

- **Participation,** that is action to empower stakeholders (e.g. poor women, front line health workers) to recognise and voice their claims, concerns and perspectives and to access information and influence decision making**;**
- **Inclusion,** means taking action to reduce inequality and discrimination that exclude specific groups e.g. women infected with HIV or women of low caste from skilled attendance or girls from a marginalised ethnic group from midwifery training;
- **Obligation**, actions to strengthen the state and authorities (e.g. the MoH, the midwifery supervisor) to fulfil their duty to reducing maternal deaths and strengthen their accountability to others (e.g. pregnant women, midwifery trainees).

When national policy makers and the EDPs that support their programmes take an equity and rights based perspective to all aspects of their work they are more likely to be successful in their efforts to produce and manage skilled attendants and to develop the enabling environment necessary to achieve skilled attendance for all, particularly the poor and marginalised.

3.3.2 Integrated and harmonised working partnerships

A challenge facing the Ministries of Health and Governments in many resource poor countries is to co-ordinate the assistance they receive from different external development partners (EDPs). This is in addition to assessing the often varied advice received from consultants, providing leadership to and regulating the different actors that are providing health services, and providing health provider education in the public and private (both for-profit and not-for-profit) sectors. In the last decade there has been a shift in emphasis to look not only at the technical content of aid but to the way in which aid is delivered. It is now widely agreed that donors should adopt approaches to funding that:

- Engender and support country ownership;
- Work within National policy, strategies and programmes;
- Are sensitive to the country context; and
- Support the development of effective and accountable systems including national financing mechanisms.

This requires that donors design and deliver a mix of aid instruments that are appropriate to the country context and needs. In addition it means that each donor needs to work in a way that is complementary to the inputs of other EDPs, so as to maximise their combined effectiveness. It is also important that investment is sustained and can be depended upon for the long-term nature of the programming required to affect changes. Mutually agreed interim milestones and benchmarks can be used to assure all partners that progress is being made.

There are also challenges for the provision of technical assistance. Technical assistance needs to advise on the direction of, and support the implementation of, nationally owned policies, strategies, plans and monitoring systems. Unfortunately, politics and personal or organisational agendas play a vital role in influencing and shaping key national documents. EDPs need to invest to build the skills of their personnel and of implementing agencies so that they not only provide reliable and consistent technical information on the best policy and programmatic interventions for scaling up skilled attendance, but that they can provide this in a way that:

- influences change in entrenched systems;
- builds the capacity of and empowers national partners;
- takes account of the absorptive capacity of national partners and institutions;
- takes accounts of the different but valid perspectives that arise in multi-disciplinary team working.

It is sometimes commented that MNH consultants are technically focused. Equally there is sometimes concern that ‘systems’ consultants such as economists, institutional specialists and finance experts have limited understanding of the unique needs of MNH programming, such as ‘round the clock’ availability of clinical services. There needs to be improved dissemination of key issues to non MNH specialists and increased efforts to build the skills of and empower MNH specialists with the broader scope to work within programmes that aim at transforming systems.

4. INFORMATION GAPS

There are many steps that can be taken to adapt and reform human resource management, health education systems and health systems in order to move towards skilled attendance for all. There is also guidance to enable policy makers and development practitioners to take an equitable and rights based approach to these changes. There is a continuing shift towards more harmonised working by EDPs. Research into improved interventions (e.g. Gates work to look at technologies for PPH), and ways to deliver and monitor health service delivery improvements (e.g. IMMPACT) continue. This is important. However, it is also important to realise that there is enough information and knowledge to move confidently towards skilled attendance for all now. Most of this work can continue in the absence of further information or research. Progress is slower than it should be, not because there is a lack of knowledge but because there is a resistance to the fundamental nature of change that is required, a tendency to try and take short cuts and a lack of skilled technical assistance in the field of MNH.

For this reason, there is a strong need for a political and policy analysis of the 'determinants of' and 'blocks' to action and change. Such an analysis should take account of the contextual and enabling factors for change, and be rooted in international and national experience. Additionally, the system wide effects of other global health initiatives on the priority accorded to, and progress made, in MNH at international and national levels merit monitoring and evaluation.

At a more specific level, some further information needs are:

The role of professional associations:

- What lessons have been learnt about the roles that professional associations can take to support and empower skilled attendants?
- What factors enable and constrain professional associations in this regard?
- What factors contribute to or limit the risk of medical associations blocking legal, policy and practice changes that empower professionals with advanced skills?

Enabling entry to the midwifery profession:

- What lessons have been learnt about recruiting young women to a career in midwifery?
- What strategies have been found to be useful in different settings?
- What strategies have been used to attract midwives who have left the midwifery profession
- How successful have these been?

Health financing options:

- What are the different schemes and strategies that have been used to improve financial access to skilled attendance?
- What are the strengths and weaknesses of each of these strategies?
- In what circumstances might these strategies be successful if transferred elsewhere?

Lesson learning products should comprise concise and clear information that is accessible to policy makers and MNH practitioners (for example it would be useful to have a guide to financing mechanisms that was accessible to non-finance specialists).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 The evidence for skilled attendants and skilled attendance

The evidence for a skilled attendant at every birth comes largely from historical reviews. Professionalisation of delivery care, usually by midwives, was a common factor in reviews of maternal health policy and practice in Europe during the late 1800's and early 1900's, in Sri Lanka and Malaysia since the 1950s and in the more recent examples that span from Honduras to Egypt and Indonesia. However, despite the persuasive nature of these reviews it is important to bear in mind that historical data, reviewed retrospectively, fail to control for confounding factors and remain an inherently weak form of evidence.

The historical reviews are complemented by epidemiological studies, evaluations of intervention programmes and data modelling. Although none provide 'gold standard' evidence, valuable lessons to guide programme design and implementation can be drawn. These include:

- The development of skilled attendants and referral/emergency obstetric care delivery systems, which are not competing alternatives but complementary strategies.
- Training of skilled attendants needs to be competency based, prioritise both clinical and interpersonal skills development, and be provided by skilled trainers.
- Production of skilled attendants must go hand in hand with improvements to the human resource management systems that impact on deployment, motivation and retention.
- Plans for training and deploying skilled attendants must take account of the need to ensure availability of and access to both midwifery and obstetric skills.
- Achieving skilled attendance for all requires attention to the political, social and legal actions that address women's human rights.
- Equity concerns must be central to policy development and implementation strategies if provision of skilled attendance is to impact on the health outcomes of poor people.

Summary and Recommendation 1:

There is sufficient evidence from historical reviews, epidemiological studies and intervention evaluations to support the call for 'skilled attendance for all'. However, achieving skilled attendance goes far beyond funding and implementing programmes to train midwives. National governments, EDPs and MNH practitioners must not over-simplify their messages and must commit to improving the complex web of issues that are required to ensure skilled attendance for all. This includes attention to health provider training, health service organisation, human resource management systems, women's human rights and equity.

5.2 Developing Skilled Atten*dants*

The pursuit to ensure a skilled attendant at every birth highlights the need for changes in human resource management systems. Fundamental reform of health provider education and human resource management systems are required in most high MMR settings. The steps are clear; it is the commitment to achieving these that is often lacking:

- Gain policy consensus on which cadre(s) of health staff will be designated as or developed as skilled attendants.
- Empower nursing and midwifery staff with the skills and rights to provide BEOC services.
- Develop plans for human resource production and develop human resource capacity in human resource planning and management.

- Assess and address context specific barriers to recruiting trainees.
- Commit to and develop strategies to increase equitable distribution of skilled attendants.
- Increase the pace and quality of production of skilled attendants. This is likely to require reform of the health worker education system.
- Initiate cross Government working to address the push and pull factors affecting retention.
- Review the supervision of skilled attendants and address issues affecting morale and motivation.

Summary and Recommendation 2:

Recruiting, producing, equitably deploying, supervising and retaining sufficient numbers of skilled attendants requires a thorough review and reform of health provider education and human resource management systems. This necessitates not only a high level of commitment but also development of the skills and capacities necessary to provide leadership and vision in these areas.

5.3 Creating and enabling environment for skilled attendance

The complications that result in most maternal deaths and contribute greatly to newborn mortality and morbidity cannot be managed solely by training skilled attendants. It is only when the skilled attendant is working within a health system that can provide an effective and responsive continuum of care from community to a referral facility that provides EmOC, that skilled attendance is achieved. There are clear steps that can be taken to ensure that health service organisation and functioning enables skilled attendance:

- Provision of clear policy guidance on the place and type of attendant providing delivery care, the transition strategy from unskilled to skilled care and the provision of emergency obstetric services. These decisions need to be guided by the available evidence, the resource implications, the socio/cultural norms and beliefs surrounding childbirth and the physical access challenges of the particular context.
- Developing a responsive emergency referral system that links levels of care.
- Inclusion of equipment and medicines necessary for skilled attendance on national procurement and essential drug lists.
- Adoption of available tools and guidelines that enable and guide quality assurance in MNH service delivery.
- Inclusion of key indicators in the health management information system and emphasis on the analysis and use of data at a facility and district level to ensure an equity focus in the availability and provision of care.
- Interventions to improve the financial access to care through adoption of approaches to health care financing that protect the poor and ensure equitable access to skilled attendance.

Summary and Recommendation 3:

Skilled attendance cannot be achieved without a fully functioning health system. There is no short cut to health system development. However, there are clear elements, specific to the achievement of skilled attendance, which can be incorporated into health system planning, organisation and management. An MNH focus needs to be applied to every aspect of the health system to ensure that the needs of pregnant women and their newborn are not ignored.

5.4 Facilitating Change

The fundamental nature of the changes necessary to achieved skilled attendance for all requires attention to new ways of working. It is suggested that the governments of low resource countries and the EDPs that support them need to:

- Take a rights based approach to all policy, planning and programming through adoption of and commitment to the principals of participation, inclusion and obligation.
- Ensuring harmonised and integrated working partnerships that engender and support country ownership, works with national policies, strategies and programmes, is sensitive to the country context and supports the development of effective and accountable systems.

Summary and Recommendation 4:

The fundamental nature of the change required to achieve skilled attendance for all necessitates sustained commitment to new ways of working. It is critical that all stakeholders take a rights based approach to their work and that all actors embrace harmonised funding and working arrangements. There is a need to build the capacity of multidisciplinary technical assistance at an international and national level to provide the vision and advice necessary.

5.5 Information Gaps

Summary and Recommendation 5:

Progress towards skilled attendance for all is slower than it should be, not because there is a lack of knowledge but because there is a resistance to the fundamental nature of change that is required, a tendency to try and take short cuts and a lack of skilled technical assistance in the field of MNH rather than funding a sustainable team approach over 5-10 years. It is notable that `developed' countries took many years and much long term investment to reach the current levels of skilled attendance. There is a strong need for a better political and policy analysis of this 'resistance' and the determinants of change. There are also some further information needs that would be useful to fulfil, and it is suggested that lesson learning guides to the role of professional associations; strategies that enable entry to the midwifery profession and different approaches to health service financing are developed.

REFERENCES

Amowitz LL, Reis C, Iacopino V (2002). Maternal mortality in Heart Province, Afghanistan, in 2002. An indicator of Women's Human Rights. Journal of the American Medical Association; 288(10): 1284 – 1291.

Ashwood-Smith H. & Simpson H. [2003] An observational study of obstetric care in Southern Malawi, Malawi Safe Motherhood Project Report.

Bergstrom S, Goodburn E (2001). The role of traditional birth attendants in the reduction of maternal mortality. Safe Motherhood Strategies: a review of the evidence, eds De Brouwere V & Van Lerberghe W. Studies in Health Services Organisation and Policy, 17, 77 - 96.

Campbell C, Filippi V, Koblinsky M, Marshall T, Mortimer J, Pittrof R, Ronsmans C, Williams L (1997). Lessons learnt a decade of measuring the impact of safe motherhood programmes. DFID Research Work Programme on Population and Reproductive Health. Maternal and Child Epidemiology Unit. London School of Hygiene and Tropical Medicine.

Chen. L (2004a), High Level Forum Speech. www on 29th June 2005. http://www.globalhealthtrust.org/doc/ForumSpeechText112F1.pdf

Chen L, Evans T, Anand S, Boufford JI, Brown H, Chowdhury M, Cueto M, Dare L, Dussault G, Elzinga G, Fee E, Habte D, Hanvoranvangchai P, Jacobs M, Kurowski C, Michael S, Pablos-Mendez A, Sewankambo N, Solimano G, Stilwell B, de Waal A, Wibulpolprasert S. (2004b) Human Resources for Health: overcoming the crisis. The Lancet 364: 1984 – 90.

DFID, (2004) Reducing maternal deaths: evidence and action. www.dfid.gov.uk/pubs/files/reducmaternaldeath.pdf

DFID (2000) Realising Human Rights for Poor People, target strategy paper. www.dfid.gov.uk/pubs/files/tsphuman.pdf

DFID (2005) How to note. How to reduce maternal deaths: rights and responsibilities. http://www.dfid.gov.uk/pubs/files/maternal-how-to-final.pdf

Dieleman M, Viet Cuong P, Vu Anh L, Martineau T (2003). Identifying factors for job motivation of rural health workers in North Vietnam. Human Resources for Health 1:10 www.human-resources-health.com/content/1/1/10

Dovlo D (2004) Using mid level cadres as substitutes for internationally mobile health professionals in Africa. A desk review. Human Resources for Health 2:7. www.human-resources-health.com/content/2/1/7

Ferrinho P, Van Lerberghe W, Fronteira I, Hipolito F, Biscaia A (2004) Dual practice in the health sector: a review of the evidence. Human Resources for Health 2:14. www.human-resources-health.com/content/2/1/14

Fikree F. [2000] In: Saving lives: Skilled attendance at childbirth. Conference report. Inter Agency Safe Motherhood Group, Tunisia, November 2000.

Fort AL, Voltero L (2004). Factors affecting the performance of maternal health care providers in Armenia. Human Resources for Health 2; 8. www.human-resources-health.com/content/2/1/8

Freedman et al (2005) Who's got the power? Transforming health systems for women and children. Task Force on Child Health and Maternal Health. UN Millennium Project.

Freedman L. et al [2003] Background paper of the Task Force on Child Health and Maternal Health. Millennium Project commissioned by the UN Secretary General & supported by the UN Development Group.

Gilson L, Khumalo G, Erasmus E, Mbatsha S, McIntyre D (2004). Exploring the Influence of Workplace Trust over Health Worker Performance. Preliminary National Overview Report: South Africa. Prepared for the Health Economics and Financing Programme, London School of Hygiene and Tropical Medicine, UK. www.wits.ac.za/chp

Goodburn EA, Hussein J, Lema C, Damisoni H, Graham W (2001b) Monitoring obstetric services: putting the UN guidelines into practice in Malawi, I: developing the system. International Journal of Gynaecology & Obstetrics 74: 105_117

Graham, WJ., Fitzmaurice, AE., Bell, JS., Cairns, JA. The familial technique for linking maternal death with poverty. The Lancet 2003; 363: 23-27.

Graham W. et al [2001] Can skilled attendance at delivery reduce maternal mortality in developing countries? In: De Brouwere V. & Van Lerberghe W. [2001] Safe Motherhood Strategies: A review of the evidence. Studies in Health Services Organisation & Policy, 17. ITG Press, Antwerp.

Hawkins K, Newman K, Thomas D, Carlson C (2004). Developing a human rights-based approach to maternal mortality. Desk review. DFID Health System Resource Centre. www.dfid.gov.uk/pubs/maternal-desk.pdf

Hussein J, Goodburn EA, Damisoni H, Lema C, Graham W (2001) Monitoring obstetric services: putting the 'UN Guidelines' into practice in Malawi: 3 years on, International Journal of Gynaecology & Obstetrics 75: 63 – 73

International Confederation of Midwives (2005) http://www.internationalmidwives.org/. Website accessed August 2005

Jewkes R. et al [1998] Why do nurses abuse patients? Reflections from South African obstetric services. Social Science & Medicine 38: pp 1069-1073.

JHPIEGO [2003a] Using performance and quality improvement to strengthen skilled attendance. MNH Program, Baltimore.

Kamal I. [2000] Situation analysis of midwifery training in Sindh. NCMH/ UNICEF/ RAHNUMA

Koblinsky M. A. (ed) 2003 Reducing maternal mortality: Learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica, Zimbabwe. Human Development Network, Nutrition & Population Series, World Bank, Washington DC.

Koblinsky MA, Campbell O, Heichelheim J (1999). Organising delivery care: what works for safe motherhood? Bulletin of the World Health Organisation 77; 5: 399 – 406.

Kunst AE, Houweling T (2001). A global picture of poor-rich differences in the utilisation of delivery care. Safe Motherhood Strategies: a review of the evidence, eds De Brouwere V & Van Lerberghe W. Studies in Health Services Organisation and Policy, 17, 297 – 316.

Lewis G. & Drife J. [2004] Why mothers die 2000-2002. Confidential Enquiry into Maternal & Child Health. Midwifery Summary & Key Findings. 6th Report of the Confidential Enquiries into Maternal Deaths in the United Kingdom, CEMD, London.

Lule et al (2005), Achieving the Millennium Development Goal of Improving Maternal Health: Determinants, Interventions and Challenges. HNP Discussion Paper
http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1095698140167/LuleAchievingtheMDGFinal.pdf

MacDonagh S (2003) Maximising the synergies between maternal and newborn health. Options/DFID.

Maclean. GD (2005) Moving toward skilled attendance for all, Desk Review. DFID Health Systems Resource Centre.

Maclean G.D. & Sweet B.R. [1995a] Report of an assignment providing technical assistance to evaluate life saving skills for midwives in Indonesia, The British Council, Manchester. Unpublished document.

Mathews A. [1996] Maternal Mortality in Malaysia 1991-1993. Paper presented at the national Safe Motherhood meeting of the Ministry of Health, 27-29 September.

Mbaruku G & Bergstrom S (1995) Reducing maternal mortality in Kigoma, Tanzania. Health Policy and Planning; 10(1): 71 – 78.

Mcdonald and Starr (2002) Saving Women's Lives, Improving Newborn Health. Washington, Family Care International

MoH Malawi (2004) Human Resources in the Health Sector: Towards a Solution, Ministry of Health, April

Murakami I et al [2003] Training skilled birth attendants in Bangladesh. Human Resources Development in Reproductive Health, Japan & International Cooperation Agency, Dhaka, Bangladesh. Correspondence, The Lancet, 362 p1940.

Murray SF, Davies S, Phiri RK, Ahmed Y (2001) Tools for monitoring the effectiveness of district maternity referral systems. Health Policy and Planning 16; 4: 353 – 361.

ODC (2004) Study of Quality of Care Approach in Selected Health Facilities of Nepal, Executive Summary. Nepal Safe Motherhood Project

Parent F, Kahombo G, Bapitani J, Garant M, Coppieters Y, Leveque A, Piette D (2004). A model for analysis, systemic planning and strategic synthesis for health science teaching in the

Democratic Republic of the Congo: a vision for action. Human Resources for Health 2; 16. www.human-resources-health.com/content/2/1/16

Pathmanathan I, Liljestrand J. et al [2003] Investing in Maternal Health, learning from Malaysia and Sri Lanka. Human Development Network, Health, Nutrition & Population Series, World Bank, Washington DC.

Poovan P. et al [1990] A maternity waiting home reduces obstetric catastrophes. World Health Forum. (11) 440-445.

Rizzuto R & Rashid S (2002) Skilled care during childbirth: country profiles: Botswana, Malaysia, SriLanka, Tunisia. Family Care International, New York. www.safemotherhood.org/resources/pdf/ skilled_care/Skilled_Care_Country_Profiles_Eng.pdf

Ronsmans C, Endang A, Gunawan S, Zazri A, McDermott J, Koblinksy M, Marshall T (2001). Evaluation of a comprehensive home-based midwifery programme in South Kalimantan, Indonesia. Tropical Medicine and International Health. 6(10): 799 – 810.

Ronsmans C, Vanneste AM, Chakraborty J & van Ginneken J (1997). Decline in maternal mortality in Matlab, Bangladesh: a cautionary tale. The Lancet, 350(9094): 1810-4.

Tinker A & Huque Z. A. [1998] Assessing Safe Motherhood Programmes in India and Bangladesh. Quarterly newsletter & Literature Review on Maternal & Neonatal Health & Nutrition 7:1.

UNICEF, WHO, UNFPA (1997) Guidelines for monitoring the availability and use of obstetric services.

UNICEF (2005) Global database on skilled attendant at delivery, March 2005 update. Accessed on 30th June 2005: http://www.childinfo.org/areas/deliverycare/countrydata.php

Van Lerberghe W. & DeBrouwere V. [2001] of blind alleys and things that have worked: History's lessons on reducing maternal mortality. In: De Brouwere V. & Van Lerberghe W. [2001] Safe Motherhood Strategies: A review of the evidence. Studies in Health Services Organisation & Policy, 17. ITG Press, Antwerp.

Vujicic M, Zurn P, Diallo K, Adams O, Dal Poz MR (2004). The role of wages in the migration of health care professionals from developing countries. Human Resources for Health 2; 3. . www.human-resources-health.com/content/2/1/3

Walker G.J.A. et al [1986] Maternal mortality in Jamaica. The Lancet. (i) 486-488.

Wessel L. [1989] Maternity waiting homes. Casa maternal brings care to rural women in northern Nicaragua. Action for Children (4) 1. UNICEF.

WHO (2005) The World Health Report. Make every mother and child count. World Health Organisation, http://www.who.int/whr/2005/whr2005_en.pdf

WHO 2004a Making pregnancy safer: the critical role of the skilled attendant. A joint statement by WHO, ICM & FIGO. WHO, Geneva.

WHO (2004b) Beyond the numbers, reviewing maternal deaths and complications to make pregnancy safer. http://www.who.int/reproductive-health/publications/btn/

WHO [2003a] Managing newborn problems. A guide for doctors, nurses and midwives. WHO, Geneva.

WHO [2003b] Pregnancy, childbirth, postpartum and newborn care: A guide for essential practice. WHO, Geneva.

WHO [2002] Managing complications in pregnancy and childbirth. A guide for midwives and doctors. WHO, Geneva.

WHO, UNICEF and UNFPA (2000) Maternal mortality in 2000: Estimates developed by WHO, UNICEF and UNFPA.

WHO/SEARO [1998] Standards of midwifery practice for Safe Motherhood in SEAR countries. WHO/SEARO, New Delhi.

WHO [1996b] Maternity Waiting Homes: A review of experiences. World Health Organization, Geneva.

Wibulpolprasert S & Pengpaibon P (2003). Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience. Human Resources for Health 1;12. www.human-resources-health.com/content/1/1/12