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Women need skilled birth attendants. For a mother and her newborn, a skilled birth attendant can make the difference between life and death.

Every woman has the right to care from a skilled attendant during pregnancy, childbirth, and immediately after birth. For this to happen, the World Health Organization estimates that the number of skilled attendants in developing countries needs to be increased by at least 333,000.

Life-threatening complications occur in 15% of all births. A skilled attendant is not only trained to attend to normal pregnancies, but to recognize and manage complications, and make referrals to a health centre or hospital if more advanced care is needed. Women in rural areas are most at risk of giving birth without a skilled attendant. In some of the poorest areas of the world, tens of thousands of people might share one doctor or midwife.

In the developed world, almost all women have a skilled attendant at birth.
In the developing world, more than 50% of women face birth alone, with a family member, or with a traditional birth attendant who may or may not be trained.

It is time to take action in countries. Even in countries torn apart by conflict, we have proven that we can save mothers’ and newborns’ lives if governments are committed, communities are engaged and support is there from the donors, non-governmental organizations and volunteers. We have accomplished a great deal so far.

With this in mind, now is the time to focus on what has to be achieved. We have to keep up the work and the funding necessary to implement higher standards and measures in tackling maternal and newborn morbidity and mortality.

Together, we can work to save many more lives.
Approximately 5% of women experience a complication during pregnancy or birth – little of which can be predicted but almost all of which can be managed. This simple statement explains much of the drive behind our work to scale up skilled birth attendance in priority countries. It reminds us that most of the 530,000 maternal deaths that occur each year, as well as about half of the 7 million perinatal deaths, could be averted if all births were attended by a qualified professional backed up with a continuum of quality referral services.

Evidence for the decisive role of skilled birth attendants (SBA), and particularly midwives, in reducing maternal mortality is plentiful from both the industrialized and developing countries. In a study of how Malaysia and Sri Lanka successfully reduced their maternal mortality rates since the 1960s, it was noted that the outstanding feature of maternity-related health services in the two countries has been “the pivotal role of trained and government-employed midwives. They have been relatively inexpensive, yet they have been the cornerstones for the expansion of an extensive health system to rural communities. They have provided accessible maternity services in hospitals and communities, gained respect from the communities they serve, and are described with affection and admiration by the managers and policy makers in each country.”1 (See Figure 1 for a graphic illustration of results from Malaysia, Sri Lanka and Thailand.) The landmark World Health Report of 2005, Make every mother and child count, provides many more examples of how skilled birth attendants have contributed to reducing maternal mortality in different parts of the world.

An end to “poor-quality services for poor people”

In December 2006, at the First International Forum on Midwifery in the Community, my colleague Dr. Arletty Pinel of UNFPA’s Reproductive Health Department said “There must be no more poor solutions for countries in the process of tackling poverty alleviation.”

I could not agree more, and this is why we give such prominence to the issue of high-quality, evidence-based interventions. We cannot afford to throw money away on approaches that we know – i.e., can show with solid research – do not work or do not provide good value, even as a temporary measure. Take, for example, the question of whether to invest in training programmes for traditional birth attendants (TBAs).

In the 1970s and 1980s, WHO and others promoted the training of TBAs in countries where there were insufficient numbers of health professionals or hospital beds to give all women skilled care during their confinement. It seemed to make sense as an inexpensive way of using what was already there in many communities, and it was often promoted as a temporary solution while countries were “in transition” to higher stages of development. Eventually, however, research in different parts of the world showed that most TBA training programmes had little impact on maternal mortality, were not cost-effective, and were unable to overcome deeply ingrained cultural factors that put women and newborns at risk. As the 2005 World Health Report put it, “the money spent would perhaps, in the end, have been better used to train professional midwives.”

I do not mean to imply that TBAs should be ignored. In those countries and areas where they currently exist, TBAs are often a highly valued and respected resource in the community and it may certainly be better to consider them as important allies for health education and social support and a positive link between women, families and communities and the formal health care system. But they are not a replacement...
for skilled birth attendants – they just do not have the necessary skills and understanding. Nor should it be assumed that a short training programme will give an otherwise unqualified person the critical thinking and decision-making skills necessary to practice, especially in isolated areas where supervision and referral possibilities are minimal.

**High standards now – not later**
A viable workforce of skilled birth attendants cannot be achieved with half-measures, and low standards should not be accepted on the grounds that they are a temporary stopgap. When we speak of scaling up education and training for skilled birth attendants, we must be clear that we are talking about properly taught, competency-based curricula, delivered by programmes designed for the long term. Poor-quality training programmes, even in the lowest-income countries, should not be tolerated with the justification because they are all that can be afforded “for the moment.” The moment will simply be wasted.

There is no ambiguity about the standards that need to be instilled if we are going to meet the targets set under the Millennium Development Goals 4 and 5 for newborn and maternal health respectively.

In 2004, a Joint Statement by WHO, the International Confederation of Midwives (ICM) and the International Federation of Gynaecology

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**Figure 1: Maternal mortality since the 1960s in Malaysia, Sri Lanka and Thailand**

and Obstetrics (FIGO) set out clearly what is meant by a skilled birth attendant, including the core skills and abilities they must be fully capable of carrying out. While the designation of skilled birth attendant may be applied to several professional categories – midwives, nurses with midwifery skills, and doctors with midwifery skills – the essential point is that they need to be able to carry out these core skills and abilities to a recognized standard.

The recruitment challenge
What about quantity? The best estimates we have suggest that about 333,000 additional midwives will be required to achieve 73% coverage by 2015 (along with an additional 27,000 doctors and technicians, and 35,000 birthing or maternity units). Recent analysis based on national DHS surveys found that in priority countries, less than half of the women had a skilled birth attendant present at their most recent pregnancy. We do not have enough data yet to distinguish global trends, but in 26 of the 40 countries with two surveys to compare since the early 1990s, the proportion of births attended by an SBA rose. Some countries such as Burkina Faso, Egypt, Eritrea, Morocco, Nicaragua and Viet Nam achieved gains of 10 or more percentage points. However, in 14 of the 40 countries, mostly in sub-Saharan Africa but also in Asia and Latin America, the proportion decreased over time. There may be an element of over-estimation in these and other figures, since not all countries comply with international standards in their definition of a skilled birth attendant.

Clearly, immense efforts will be required in certain countries to reach the target coverage by 2015, without compromising quality standards. Part of the challenge will be to use available human resources in the most efficient ways; the 2006 Lancet series on maternal survival mentioned later on in this report provides some very useful thinking in this regard. But recruitment is a huge challenge in its own right. Even if we can ensure that funding and the basic infrastructure such as classrooms and teaching materials are in place (a big “if”, to be sure) some formidable barriers need to be overcome. For example, too few young women in some countries are graduating from secondary education with the qualifications needed to enter midwifery schools. Those who do may not find midwifery (or nursing, as a pathway to becoming a nurse-midwife) an attractive option compared to other opportunities.

Tackling this challenge is going to take some innovative thinking, much of it country-specific. An important issue to address is the low status of midwifery in many parts of the world. In countries where the prevalence of HIV is high, special efforts may be needed to overcome the perception that attending births is an especially risky profession.

A supportive environment
This issue of perception brings me to my final point: the overall environment in which skilled birth attendants do their work. While a well-designed recruitment drive can contribute, a supportive environment and human resource policies are needed if good people are to be attracted to and retained in the profession. What does that mean, in practical terms? One important aspect is overcoming gender-related disadvantages faced by midwives and nurses. Being a predominately female profession, midwifery is far too often dismissed as “women’s work,” and therefore badly paid. Far too frequently, no arrangements are made to accommodate the fact that many midwives – who are mostly women of reproductive age themselves – have their own responsibilities for home and child care outside work. Better pay and working conditions, then, are an essential starting point. (Improved pay and working conditions would also help to counter the so-called “brain-drain” of qualified SBAs...
particularly nurse-midwives – from low-income countries to more industrialized parts of the world.)

Another essential component of a supportive environment is status, which is not just a matter of perception but of autonomy. In most countries, as a result of professional power hierarchies, physicians dictate what activities midwives can or cannot perform, and how they perform them. There is little consultation or teamwork, just top-down instructions. Supervision of midwives is frequently punitive, rather than focused on working together to correct errors and improve practices.

Our Department invests a great deal of effort in training different healthcare professionals to work together – you can see this in the trainings in Bangladesh and the Republic of Moldova described later on in this report. We do so because of evidence that multidisciplinary teamwork gives better results in maternal and newborn care, but experience also shows that it provides a more satisfying working environment. I do see progress in this respect, as the traditional “professional protectionism” is receding. In many places, physicians are realizing that midwives and nurse-midwives should have the authority and training to perform some procedures that have traditionally been restricted to physicians only. The relevant professional associations have exercised strong leadership in this regard internationally. While it is being seen more and more at national level, more needs to be done, particularly in countries where health care workers of all sorts are scarce.

To a large extent, however, it is up to governments and donors to give greater priority to maternal, newborn and reproductive health care for the entire population, as has been the case in the countries I mentioned earlier as success stories. The necessary financial resources have to be invested, and recognition of midwifery as a lifesaving, valued profession – an essential component in the continuum of care – must be reflected in this investment.

MPS has worked hard in 2006, on many fronts and with many partners, to ensure that efforts to scale up skilled birth attendance take professional standards and supportive environments into account. This report contains many examples of our activities in various priority countries, and in a variety of relevant technical fields. We look forward to continuing that work in 2007 and beyond.
There can be few missions more straightforward than that defined by the Department’s title: making pregnancy safer. Yet the policy and operational environment in which MPS works is extremely complex. The 2005 creation of MPS as a separate department within WHO reflects the larger organization’s recognition of the need to give greater focus to this aspect of health.

A powerful leverage point
The Department was created as a means of strengthening WHO’s ability to assist countries in improving maternal and newborn health at country level. This is an agenda with roots in the 1987 Safe Motherhood Initiative, which has since been reinforced by the Millennium Development Goals (MDGs). By providing quantifiable, time-bound targets for countries, the MDGs provide an extra spur to the work carried out in 75 countries around the world. While some degree of progress can be seen in most of these countries, accelerated efforts are urgently needed if the global community is to achieve MDGs 4 and 5 respectively in reducing the maternal mortality rate by three-quarters and the mortality rate of “under-fives” by two-thirds by the year 2015. Nor will the MDG 6 targets of reversing the spread of HIV/AIDS and malaria occur without greater efforts to fight these diseases before, during and after pregnancy.

The Department’s mission and activities give it important points of “leverage” in meeting these objectives. The health of mother and infant are inextricably bound together: improving the health of the mother during pregnancy cannot help but improve the health of the child, and interventions to keep newborns healthy are more effective if a mother is well enough to help. Focussing significant resources on newborns is a key way to improve the health of under-fives, since the first 28 days of life is the period when a child is at greatest risk of death.

Key synergies
One of the Department’s key principles is to break down “vertical” thinking (in which programme streams work in isolation of each other) in favour of holistic approaches to planning and implementing interventions. Most people do not think of mosquito nets as ways of improving newborn health, yet preventing malaria among pregnant mothers has important benefits in reducing anaemia and low birth weight, both of which are major causes of newborn deaths and ill-health. Similarly, integrating the prevention of mother-to-child transmission of HIV in ante- and perinatal care offers a highly efficient channel to reach and treat large numbers of young HIV-positive adults.

In keeping with this holistic principle, Making Pregnancy Safer works closely with other WHO departments to create synergies through coordinated efforts. Its location within the Family and Community Health (FCH) cluster of programmes places it firmly within the “life cycle” approach to health – the life course that moves through pregnancy, childbirth, childhood, adolescence, and (repeating the cycle) parenthood. The Department’s various activities thus take into full account other programme focuses. Nutrition is an obvious area for synergies in improving mother and newborn health – it is a major cause of death in itself and contributes strongly to other health problems – as is immunization, which remains one of the most cost-effective interventions in public health. Less obvious, though rapidly emerging with increasingly strong evidence, are issues such as violence against pregnant women. It is also clear that family planning (notably through birth spacing) and closer attention to adolescent health and development (e.g., through information and preventive services) can have big payoffs in maternal and newborn health.

While keeping this “big picture” in mind, MPS strongly champions evidence-based clinical
and programmatic interventions within its mission area that give best value for human and financial resources invested. Conditions and diseases that pose relatively little risk to mothers and newborns in industrialized countries – sepsis, haemorrhage, obstetric fistula, stillbirth, anaemia, to name some of the most common – are widespread in developing countries. Raising standards and training health care staff to deal with such conditions, and adapting best practices to local conditions, is and will always be a central concern of the Department. At the same time, it must take into account the health systems needed to deliver such interventions, beginning with the basic concern of ensuring that enough trained personnel are available.

The Department also maintains important relationships with the wider world of practice and research, including professional associations, educators, non-governmental organizations engaged in services or advocacy, and experts engaged in advancing the science of health care. Concrete results of these relationships can be seen in forms such as research projects, publications, trainings, and advocacy events.

**Building a global team**

In the short time since the Department was created in 2005, it has built a strong team capable of pursuing a wide variety of activities while moving forward its overall agenda in service of women and their children worldwide. The cornerstone of our team-building effort is contact and communication. The communication is constant, thanks to information technology; the contact is assured by bringing staff together on both a global and regional basis. Each year, key staff are brought together to discuss the annual work plan, pool knowledge about what works and what does not, and set global priorities in line with overall WHO corporate objectives. This process is then echoed in each of the six regions, with meetings of country-based, regional and headquarters staff. The open exchange of experience and ideas at these meetings has given a cohesion and strong sense of purpose to MPS staff: in the words of Director Monir Islam, “I am constantly impressed by our members’ motivation and professionalism, and very proud of what we have accomplished together.”

**How we work**

The Department carries out its work with a staff of about 104 international and national professional officers at the regional and country level and 18 professional officers at headquarters. The actual core budget from WHO accounts for only 15% of this total: the rest has to be raised from donors and other sources (see the final chapter of this report). The configuration of the Department is as follows:

- **Country level:** this is where the greatest amount of activities are focused, with an emphasis on strengthening national health systems through technical and other assistance. Since 2005, the Department has increased its presence in the field considerably, adding 20 members to a total of 65 staff working in over 75 country offices.

- **Regional level:** regional offices play an essential coordinating and technical support function; country activities would be much less effective without their planning and operational support. The Department employs staff in each of the six WHO regional offices, and has recently expanded its African regional presence by decentralizing many functions to three sub-regional offices in West, Central, and East and Southern Africa. A key function...
of these offices is to build a roster of local experts who can be tapped for technical assistance, rather than bringing in consultants from outside the regions.

- **Headquarters**: the Geneva office maintains a relatively small office employing 18 professionals. This means staff need to be multi-skilled and flexible, able not only to work on their area of technical expertise but also to assume cross-cutting thematic and programmatic responsibilities.

Typically, engagement with individual countries is one of high involvement initially, with a focus on building local technical capacity and decision-maker commitment. As this is accomplished, functions such as disseminating best practice information and monitoring and evaluation are emphasized.

**Help in times of crisis: the conflict in Lebanon**

When wars, earthquakes and other crises occur, it does not mean that women put their pregnancies on hold, or that newborns suddenly do not need skilled care. In fact, the need for care increases during such events – just when health services’ ability to deliver is destroyed or severely curtailed. MPS has responded to a number of crises in recent years, from natural disasters such as earthquakes to conflict situations in several parts of the world.

During the conflict in Lebanon which erupted in the summer of 2006, MPS was asked to provide technical assistance in the areas of maternal, newborn and reproductive health, under the auspices of the WHO Health Action in Crisis (HAC) Department and the country office in Beirut. An MPS Geneva staff member flew to Lebanon in August, and spent ten days undertaking a variety of activities. Close collaboration was maintained with a range of partners offering assistance in these fields of activity, including UNFPA, UNICEF, bilateral agencies, and national authorities such as the Ministry of Health and Ministry of Social Affairs. After initial efforts to evaluate the magnitude and the types of problems to be dealt with, a health task force was created to cover reproductive health, including all the essential components of maternal and newborn health. Quickly assembling a roster of Lebanese professionals and academics with expertise in the field, the MPS representative was able to organize a rapid assessment which provided an accurate picture of the state of maternal and newborn services across the country. The assessment provided essential baseline information, which aided in the recovery of services even before the crisis had fully ended.
A great deal of the Department’s efforts are aimed at tasks such as assessing countries’ technical and managerial capacity, reviewing policy guidelines, promoting appropriate standards, and working to strengthen programmes through training and consultation. Some visible outputs of this work can be seen in events such as training workshops and conferences – the First International Forum on Midwifery in the Community mentioned earlier is a prime example – or in a range of publications from guidelines and manuals to authored articles in scientific journals.

In the sections below, some of the highlights of the year are described, with an emphasis on events and projects that culminated or achieved important benchmarks during 2006. However, it must be remembered a great deal of the work is incremental, as the Department provides its technical expertise to a multitude of ongoing projects, or helps countries – and indeed entire regions – apply MPS publications and tools. To take only one example, the publication Managing Newborn Problems has been enthusiastically adopted in the countries of the Western Pacific Region (WPRO), where it is being used to standardize the management of complications in pregnancy and childbirth at referral level hospitals. All of the priority countries in the region have been assisted in translating the publication, adapting it to national conditions, and initiate training efforts. The regional office is pleased to report that not only governments but also professional associations have been involved in the process.

Defining core competencies
Advancing the cause of ensuring skilled birth attendance (see the essay which begins this report) is a key concern of the Department. Different regions are at different stages in meeting access and quality goals, and it is crucial that the standards which define both are accepted and understood. To this end, the consultation held in Brazzaville, Congo, was an important step forward. Attended by 28 participants from both French- and English-speaking African countries, as well as important partner organizations (UNFPA, UNICEF, JHPIEGO, West African Health Organization, Population Council, and Save the Children), the objective of the meeting was to agree on essential minimum competencies for skilled care during the pregnancy, birth and postpartum period in the region. It brought together recommendations agreed in previous sub-regional meetings, and thus moved the agenda forward considerably in achieving a regional approach to raising the quality and availability of skill birth attendants – midwives, nurses and doctors – in sub-Saharan Africa. The existence of this agreed
The list of competencies has several concrete advantages. First, as it is being disseminated to Member States, organizations and professional associations in the region, it provides clear benchmarks for human resources planning, even to the level of personnel/population ratios. Second, it helps to clarify both the curriculum, responsibilities and the financial needs of the region’s educational institutions for health professionals, simplifying the task of development partners seeking to provide technical and financial assistance.

**Integrated Management of Pregnancy and Childbirth (IMPAC)**

IMPAC is both an approach and a set of tools, and is central to the Department’s technical assistance activities. Some of the tools are manuals aimed at different levels of health services, and have been widely distributed in different parts of the world. For example, two manuals are aimed at referral level hospitals (*Managing Complications in Pregnancy and Childbirth*, or MCPC, and *Managing Newborn Problems*, or MNP) while a third, *Pregnancy, childbirth, post-partum and newborn care: a guide for essential practice* (PCPNC) is aimed at the primary care level. A set of six midwifery training modules—increasingly available in translated versions (see text box)—concentrates on essential life-saving skills (e.g., *Obstructed Labour and Managing Incomplete Abortion*), while the *Strengthening Midwifery Toolkit*, developed in collaboration with the International Confederation of Midwives (ICM) and other partners, addresses more policy-level concerns such as legislation and regulation and midwifery education programmes. The toolkit was finalized in 2006 after considerable testing in the field and is now being distributed globally to partners and key stakeholders.

In 2006, the Department also published nine individual *Standards for Maternal and Neonatal Care*; an additional 20 will be available in 2007. The user-friendly leaflets are an integral part of the Department’s technical resources for countries. They have already been used in countries, notably in Malawi, as part of efforts to strengthen and improve midwifery.

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**Building commitment to maternal survival**

The Department collaborates closely with top experts in the fields of maternal and newborn health, contributing both its expertise and its ability to disseminate information to decision-makers in priority countries. For example, it is proud to be associated with the *Lancet’s* series of papers on *Maternal Survival*, launched in London in September 2006. Pointing out that rates of maternal mortality in developing countries compared to industrialized countries constitutes the “largest discrepancy of all public health statistics”, the papers assess various strategies for reducing maternal mortality, concluding that the provision of professional care in a health centre is more effective than alternative approaches. It also estimates the resources needed to scale up coverage of maternal health services and concludes with a call for action in areas such as strategy and planning, financial support, human resource development and retention, and monitoring necessary for tracking progress in improving maternal survival. The Department, which also contributed substantively to the *Lancet’s* 2005 series *Newborn health: a key to child survival*, recognizes the high value of such high-level publications in gaining the commitment of governments, health professionals and advocates to maternal and newborn health.
practice, and their introduction in Kenya is being planned for 2007. The standards, which clearly display the strength of the evidence base for each one, have the endorsement of other relevant UN agencies, the international associations of gynaecologists and midwives, respectively, and the International Paediatric Association.

Working with communities

The Department’s work in the area of Individuals, Families and Communities (IFC) promotes an active role for women, men, families and communities in contributing to improvements in maternal and newborn health (MNH). Guided by a conceptual framework entitled Working with Individuals, Families and Communities to Improve Maternal and Newborn Health (WHO 2003), the Department provides technical support to regions and countries to strengthen this component of MNH strategies. Key interventions are grouped under four priority areas, including developing capacities at the household and community level to improve MNH and to respond to obstetric and MNH emergencies, increasing awareness of rights and needs related to maternal and newborn health, strengthening social networks and the linkages between communities and the health services, and ensuring that efforts to improve services take the needs and perspectives of women and communities into account.

While most countries agree this is a priority area to address, many have requested WHO assistance to do so. Thus efforts in 2006 focused on the development of tools for implementing the IFC framework. One such tool is an orientation workshop package, developed with the Child and Adolescent Health Department and WHO Regional Office for Europe (EURO), which introduces health programme managers and district health committees to basic IFC concepts, strategies and interventions. The package was field tested in the Republic of Moldova with national health programme managers and representatives from several districts (rayons), and is currently being applied in one rayon by a committee which includes health managers, providers, representatives of schools/education sector, and other community groups. On the national level, there is now agreement to apply the IFC approach in other rayons.

Another important IFC tool is the Participatory Community Assessment (PCA), which was developed in partnership with WHO Regional Office for the Americas (AMRO) and the Swiss NGO Enfants du Monde, and features a methodological guide, a situation analysis manual, discussion guidelines, and training workshop materials. These were finalized in 2006 after expert review and intensive field testing in two municipalities in El Salvador. On the basis of the PCA results and further discussion by local, district and national stakeholders, El Salvador is currently planning to expand the IFC approach to other municipalities and to integrate the IFC framework into the national health care system. Four other countries in the Americas (Bolivia, Haiti, Honduras and Paraguay) will begin IFC implementation in 2007 with support from WHO Regional Office for the Americas (AMRO) and WHO.

MPS Geneva and WHO Regional Office for the Eastern Mediterranean (EMRO) are also working together to develop material on birth and emergency preparedness and birth spacing for community health workers of the Community-Based Initiative.

Postpartum haemorrhage

MPS strongly promotes evidence-based health care, and whenever possible supports
efforts to build the evidence base in order to create solid standards and policies. An important example can be seen in efforts this year to prevent postpartum haemorrhage (PPH). Bleeding after childbirth accounts for nearly one quarter of all maternal deaths worldwide. Common causes for postpartum haemorrhage include failure of the uterus to contract adequately after birth (atonic PPH, which is the most common), tears of the genital tract and bleeding due to retention of placental tissue.

Although there has been a large degree of agreement among leading health professionals on how to prevent or treat many aspects of PPH, some unresolved issues relating to the active management of the third stage of labour have led to confusion and controversy, particularly in developing countries. In order to resolve these issues and arrive at robust, evidence-based guidelines, the Department initiated a long and rigorous consultation process involving cooperation with two other WHO departments (Reproductive Health and Research, and Medicines, Policies and Standards), an external institution (Italy’s Centre for Evaluation of Effectiveness of Health Care) and dozens of experts around the world. The process culminated in October 2006, with a technical consultation on preventing PPH, held in Geneva. Among other results, the process has established agreement that active management of the third stage of labour should be offered by skilled birth attendants to all women, and provided guidance on the appropriate use of the drug oxytocin for prevention of PPH in preference to other medications. A publication entitled *WHO Recommendations for the Prevention of Postpartum Haemorrhage* has now been approved for publication during the course of 2007.

**Human rights in support of maternal and newborn health**

Human rights instruments such as treaties and codes are not just statements but “instruments” that are intended to be used to bring change. In an effort to make systematic use of human rights principles at country level in order to improve maternal and newborn health, the Department has been working for several years on a project with WHO’s Reproductive Health and Research Department and a number of international partners (notably the Harvard School of Public Health’s François Xavier Bagnoud Centre for Health and Human Rights). During 2006, field testing was completed on an assessment tool in three countries, Brazil, Indonesia and Mozambique, in a process that engages with a variety of stakeholders. The tool provides a means to review laws, policies, regulations and health system factors relevant to maternal and newborn mortality and morbidity issues in a given country, and relates these to a country’s efforts to fulfil its treaty obligations – for example, in terms of the right to access basic and emergency obstetric care services. The results of the field testing are expected to be published during the course of 2007.
Building midwifery in Mongolia

In 2006, MPS supported a review of midwifery in Mongolia, conducted by two international technical advisers with the support of an in-country working group. The review was based on WHO guidelines for reviewing midwifery programs according to the country’s needs and priorities. Using a rapid appraisal approach, the review analysed key national documents, undertook site visits to several rural and remote areas, assessed eight health facilities and four educational institutions, and conducted both key-informant interviews and focus group discussions.

Although there has been a significant reduction in the maternal mortality ratio (93 per 100,000 live births in 2005), the country is unlikely to reach its MDG infant mortality target without very significant reductions in neonatal and perinatal mortality rates. The current situation reflects the significant changes that have occurred to the country’s health services over the last 15 years. Because midwifery training was ceased between 1994 and 2002, there is a current shortage of midwives which is likely to worsen in the near future. Moreover, midwives are an ageing workforce (a common problem across the world.) Doctors currently provide many maternal and newborn health services, and Mongolia is seeing an increase in the medicalization of childbirth, with a Caesarean section rate of 18%. Significantly improved midwifery services are required to meet the MDG target.

The review resulted in a set of clear recommendations to rebuild midwifery in the country. They cover issues such as workforce planning, proper remuneration and career paths, rapid training of trainers, and institutionalization of international standards. The country has embraced many of the recommendations of the review, with a far-reaching training programme already in operation.

A significant step forward occurred on 7-8 December, when Mongolia held its Inaugural Midwifery Conference. Attended by national and international dignitaries, the conference celebrated the establishment of a national midwifery association – a key recommendation of the review, and a gratifying vote of confidence for midwives across the vast country.
The benefits of training: from regional to country level

A successful feature of the Department’s capacity building strategy is to multiply the benefits of regional trainings through immediate country trainings, using participants from the regional workshops as trainers at national level. A good example can be seen in the week-long regional training-of-trainers in Essential Newborn Care in September 2006, organized by the WHO Regional Office for South-East Asia (SEARO) office. The training was held at the Institute of Child and Mother’s Health in Matuail, Bangladesh, a tertiary hospital with around 4000 deliveries per year and one of the country’s reference training centres. The 17 participants – including experienced trainers, nurses, paediatricians, obstetricians, and programme managers – came from six countries: Bangladesh, Bhutan, India, Democratic People’s Republic of Korea, Timor-Leste and Nepal. The workshop was conducted using adult participatory learning techniques (i.e., demonstrations, presentations, clinical practice, role play and discussions) and covered the main areas of neonatal care including care at birth, initiating and supporting early breast feeding, thermal control, examination of the normal newborn, neonatal resuscitation, communication skills and special care for the low-birth-weight baby. Theory and simulation teachings were done in the morning, while in the afternoon the participants did the clinical practice sessions with mother and baby pairs. The hands-on opportunity to practice various teaching methods and leading clinical practices in a working hospital was greatly appreciated by the participants, who were mindful that they would soon be training health staff in their own countries. at the country level.

The efficacy of the training-of-trainers was put to the test in the following week at Bangladesh’s First National Training on Essential Newborn Care, which was held at the same hospital. The main objectives of the 5-day training were twofold: to graduate more trainers for Bangladesh and to build the Essential Newborn Care skills of teams of health care providers (obstetricians, paediatricians and midwives) from 5 districts and Dhaka. The international facilitators, who had stayed on from the previous week, were pleased to note that the trainers who had participated in the regional workshop were able to conduct the course without major difficulties, and were eager to organize future courses on their own. Since then, national trainings have also been successfully carried out in Bhutan, Democratic People’s Republic of Korea, Maldives, Nepal, Sri Lanka, and Timor-Leste, and the results so far strongly support the validity of this strategy for capacity building.
Partnerships and collaborative efforts

From its inception, one of the Department’s missions has been to develop and maintain partnerships with a wide range of organizations – from international agencies to research institutions and professional associations – that work on maternal and newborn health. A great deal of collaboration goes on with other departments of the WHO such as Health Action in Crisis (HAC), Reproductive Health and Research (RHR) and Child and Adolescent Health, as well as those focused on specific diseases or conditions such as HIV/AIDS, malaria, nutrition and many others. MPS also works closely with the Partnership for Maternal, Newborn and Child Health (PMNCH) which is an umbrella organization of key partners working in the areas of maternal, newborn and child health. In all such relationships, the Department contributes its expertise and technical input to the achievement of common goals and looks to other partners to contribute their skills and resources to its own activities.

Much of the partnership function is to foster collaboration and consultation. For example, it is increasingly recognized that improved collaboration and cooperation between programmes dealing with HIV/AIDS and maternal and newborn health has considerable potential for improving and extending health care services to those in need and enhancing the use of available resources. At the country level, however, still very little is known about feasibility, effectiveness or impact of various models of integration, or why, how and what to integrate. MPS staff have been holding regular discussions on the subject with relevant departments at headquarters and the WHO Regional Office for Africa. As well as providing a forum for ongoing sharing of information about related issues and opportunities, the discussions have led to an inter-country workshop planned for 2008 on linking sexual and reproductive health and HIV services.

Partnerships with professional associations

Associations of health professionals in industrialized countries often have considerable influence on health care practices, and are valued partners in areas such as maintaining standards, training and planning human resources. Similar associations in developing countries have considerable potential to contribute to maternal and newborn health care practices in these settings, but for a variety of reasons this potential is largely untapped.

In November, the Department organized a meeting of health care professionals in Kuala Lumpur to explore ways for professional associations at the global, regional and local levels to become more involved in national maternal and newborn programming. The meeting included representatives of the International Federation of Gynaecology and Obstetrics (FIGO), the International Confederation of Nurses (ICN) and International Confederation of Midwives (ICM), as well as staff of UNFPA and other WHO departments. Participants discussed a variety of practical issues, including how their associations and memberships can help strengthen human resources in their countries and ways to improve the availability of medical commodities essential to maternal and newborn care.

Malaria in Pregnancy

The Roll Back Malaria partnership is one of the major international collaborative efforts currently working on a single disease, with a great deal of its activities carried out...
through thematic working groups and sub-regional networks. MPS currently chairs the working group on Malaria in Pregnancy (MIP), and during 2006 focused on some key issues which affect the scaling-up of malaria in pregnancy programming, and thus the achievement of the sixth Millennium Development Goal (MDG6). Foremost among these was improving the access of pregnant women to insecticide treated nets (ITNs), an inexpensive but effective means of preventing exposure to malaria-bearing mosquitoes. Although progress is being made in making such nets available in countries worst affected by the disease, most nets are delivered through immunization and social marketing channels which do not reach pregnant women directly. This situation needs to and can be corrected by making ITNs available to pregnant women through antenatal care clinics and by including reproductive health programmes in the planning and implementation of malaria control interventions. As shown by the successful experiences in Kenya, Malawi, the United Republic of Tanzania and other countries, antenatal clinics are effective venues for distributing insecticide treated nets that will directly benefit pregnant women, their children and communities at large.

**Preventing mother-to-child transmission of HIV**

The HIV/AIDS epidemic has become a leading cause of maternal and child deaths, particularly in sub-Saharan Africa. While there has been a significant increase in funding for HIV/AIDS-related programming in recent years, much of the effort in preventing mother-to-child transmission (PMTCT) of HIV has been relatively narrow, with an emphasis on training health care workers to administer single-dose nevirapine for the prevention of HIV transmission from the infected mother to her baby. In contrast, very few staff have been trained in the use of combination antiretroviral therapies to deal with both PMTCT and treat AIDS in the mother. Only a small number of HIV-positive pregnant women in Africa benefit from antiretroviral treatment for their own health. Another problem, on a different scale, is that the plethora of partners working on HIV/AIDS in countries has made it difficult for governments to coordinate and harmonize activities in this area.

The Department has been active in supporting an initiative by the Inter-Agency Task Team (IATT) for PMTCT aimed at scaling up PMTCT interventions, on the one hand, and integrating these interventions within maternal and newborn health services on the other in several countries. The IATT consists of UN partner agencies and other partners with interest in PMTCT. Several high prevalence countries in the Africa and Asia regions such as Burkina Faso, Cameroon, Côte d’Ivoire, Malawi, Rwanda, the United Republic of Tanzania, Zambia, India and Myanmar, have benefited from joint technical missions by the IATT to assist countries in developing scale-up plans for PMTCT and paediatric HIV treatment programmes. A workshop was held in Nairobi in July 2006, at which 38 participants from six countries received orientation on the integration of PMTCT and malaria-in-pregnancy programmes.

**Prevention and control of sexually transmitted infections**

Sexually transmitted infections are highly relevant to maternal and newborn health. For example, chlamydia and gonorrhoea may result in pelvic inflammatory disease and fatal ectopic pregnancy, and greatly increase the risk of HIV infection. During pregnancy, sexually transmitted infections contribute to low birth weight or pre-term delivery, which greatly increase the risk of infant morbidity and mortality. Many of the relevant
interventions are relatively inexpensive and uncomplicated, while highly effective. It is estimated that universal screening and treatment for syphilis in pregnancy could prevent 492,000 syphilis-related stillbirths and perinatal deaths annually in sub-Saharan Africa (Schmid, 2004).\(^4\) A combination of prophylaxis against eye infection and detection and treatment of gonorrhoea and chlamydia in pregnancy would reduce infection-related blindness in newborns and serious postpartum pelvic infections in their mothers.

MPS is working closely with several other WHO Departments and external partners to implement WHO’s global strategy for the prevention and control of sexually transmitted infections, with an emphasis on eliminating congenital syphilis. In July 2006, the partners convened a meeting in Geneva to appraise the evidence, determine under which conditions and in which populations interventions to prevent and control sexually transmitted infections can reduce HIV transmission, and outline implications for country programmes.

**Strengthening the health system in Congo**

In January 2006, MPS participated in the first in-country mission of the newly constituted Partnership for Maternal, Newborn and Child Health (PMNCH). The mission, centred on a series of meetings in Kinshasa, Democratic Republic of Congo, sought to bolster the country’s sparse maternal, newborn and child survival services by helping the Ministry of Health to position such services within the World Bank’s project to strengthen the overall health system (*Programme d’Appui pour la Rehabilitation du Secteur de la Santé*, or PARSS). Altogether 23 experts from global, regional and country levels of UNICEF, UNFPA, WHO, USAID’s BASICS programme and the World Bank participated in the mission. The mission produced four sets of recommendations related to various aspects of health sector reform and services for mothers and their newborns.
Monitoring and evaluation (M&E) is often forgotten when programmes are being designed, or added on at the last minute during implementation. In fact, M&E is essential to improving decision-making by policymakers and planners, raising the efficiency and effectiveness of services, and increasing accountability of both personnel and systems. It is also important for advocacy efforts with donors and partners, particularly as a means of collecting solid information about the economic use and management of resources. MPS supports the promotion of a “culture of M&E” in health services, and works hard to both support and keep abreast of advanced M&E approaches, tools and technologies that can be applied to maternal and newborn care.

The ultimate goal of M&E systems for maternal and newborn health is not to “gain information” but to “improve health.” Therefore, the performance of such systems must be assessed not only in terms of data quality but also on whether these data are actually used to improve the care and health of the mother and newborn. This is true for all sources of health information, from population-based sources (census, vital registration systems and household/population-based surveys and surveillance) to health services-based sources, including health-facility records, administrative records and health-facility surveys. Unfortunately, M&E systems in most developing countries face a variety of problems such as poor-quality or non-existent data, poor analysis skills, centralization of data without feedback to lower levels, and inadequate integration of essential information systems resulting in duplication and missed opportunities.

Many of the Department’s M&E activities in 2006 were in response to requests from individual countries for specific technical assistance. For example, MPS staff travelled to Afghanistan and Tunisia to study current systems for maternal national mortality surveillance and advise on monitoring MDG 5 achievements. Technical assistance was also provided to Chile and Mongolia, assisting with analysis of maternal and perinatal mortality data. Such assistance is often provided in cooperation with partners such as the Liverpool School of Tropical Medicine and the WHO Collaborating Centre in Reproductive Health/CDC.

A wide range of collaborative work
The Department works closely with international partnerships of researchers and practitioners such as the Initiative for Maternal Mortality Assessment (IMMPACT) and the Health Metrics Network (HMN) on technical and policy issues related to maternal and newborn health information systems. The Department participates in a reference group on maternal mortality data with these and other partners. Among other projects, the Department is working with the HMN and other WHO Departments on a standardized verbal autopsy tool (questionnaire and supporting material) for estimating cause-specific mortality in areas without medical death certification, ensuring that maternal and newborn data will be accurately collected. An advanced draft of the tool was developed at a November 2006 technical consultation of experts held in Geneva, and will be finalized and disseminated in early 2007.

The Department’s M&E staff also works closely with other WHO departments, notably Reproductive Health and Research (RHR), and in activities aimed at advancing
the profession. For example, staff act as lecturers and facilitators in the workshop entitled “From Research to Practice: Training in Reproductive Health Research”, which is held each year at WHO under the auspices of the Geneva Foundation for Medical Education and Research. The course provides training to professionals from developing countries in a variety of methods for evidence-based maternal and reproductive health research.

**Improving M&E at district level**

Districts are widely regarded as the “implementation unit” for integrated action on health problems. They are the most peripheral fully organized units of government, varying greatly from country to country in size and degree of autonomy, and have many different names (commune, prefecture, ward etc.) In this era of decentralization in health and other services, it is critical that district health managers use monitoring and evaluation to advance health system performance as well as to be self-sufficient actors in managing decisions and advocating for change.

In December 2006, the Department hosted WHO’s first technical consultation dedicated to district-level M&E of maternal and newborn health and services. The four-day meeting brought together over

**Making a difference in one district**

When Dr Godfrey Egwau, WHO focal point and consultant obstetrician at Soroti Regional Referral Hospital’s maternity unit, stood for parliament in February 2006, voters knew that if he won he would move to the capital, Kampala. Women in Soroti district weighed this and overwhelmingly voted for his opponent. Egwau, who dreamed of going into politics, lost the election.

Many associate Egwau with the high standard of maternal care provided here. Soroti district became the test ground for a WHO Making Pregnancy Safer pilot programme from 2001 to 2004. Since then, the district has continued to provide a high level of maternal care: in fact, 43% of women living in Soroti now give birth with help from a trained health worker, as opposed to 26% before the MPS project started (the national average is 38%). Impressively, maternal mortality in the district fell from 750 deaths in 2000 to 190 deaths for every 100,000 live births in 2006.

Dr Egwau is philosophical about his political loss, and lauds the efforts of the many people who have helped achieve these improvements. “It is an exciting thing to work in this district,” he says, “because you see results.”

(Adapted from article in WHO Bulletin, Vol. 84 – 2006)
40 participants from 25 countries, and featured in-depth presentations from nine of them: Afghanistan, Bangladesh, China, India, Slovenia, Solomon Islands, South Africa, Thailand, and Zambia. In addition to reflecting on lessons learned from these and other examples, a wide variety of issues were discussed, including the need for both facility-based and population-based data collection, the most effective ways to collect and use data at local level, coordination with other programme streams, human resources and training, and the need for integration in national health information systems whenever possible.

The participants adopted a set of recommendations which covered a variety of important issues in monitoring and evaluating maternal and newborn health services. One participant, a director from a national Ministry of Health, spoke for many when she declared, “I can take this document back to my minister, and argue strongly for action on the basis of these recommendations.”

**Quality control for maternal and child health in China**

In April, staff from MPS and WHO’s Department of Child and Adolescent Health (CAH) were invited to assist in a quality control review of China’s maternal and child health surveillance systems. In China, quality control cascades down from record reviews at district-level and township hospitals to in-depth discussions with medical and family planning personnel at village level, as well as visits to households where a birth or maternal or under-five death has occurred over the past year, and interviews with people in the streets about possible deaths of women and children in the village. Thus, in addition to discussions in the capital, the WHO staff accompanied a team from the Chinese Ministry of Health on visits to health facilities at district, county and village level.

During the trip, the WHO staff and their Ministry of Health hosts reviewed various aspects of the surveillance system, such as the sampling framework, how the level of under-reporting revealed in the quality control sites is used to adjust national estimates, rules for establishing causes of death at home and in the hospital, dissemination of the methods and results, and the implementation of electronic medical records. In addition to completing a report with recommendations to the Ministry of Health, the WHO staff provided technical advice on training and on improving current methods of establishing causes of death, both at hospital through standardized death certificates and at home through standardized verbal autopsies.

**A new partner in Africa**

The Department places great importance on developing regional and country capacity for monitoring maternal and newborn health. In 2006 MPS began to work with a research centre in Nairobi, Kenya called the Urban Research and Development Centre for Africa. The Centre has accepted responsibility for analyzing the African regional data of the WHO Global Survey on Maternal and Perinatal Health. Data analysis and interpretation are done by the centre in collaboration with the survey coordinating units from all participating countries, and with support from MPS headquarters in Geneva. In future, it is planned for the Centre to assist the coordinating units with further data analysis, and to provide training and related support.
VI Advocacy

Technical expertise can only translate into effective action if it is supported by a favourable social, political and economic environment, and if adequate funding is in place. For this reason, the Department invests a great deal of effort in communications activities that promote its key messages, disseminate its publications, and mobilize the necessary financial resources.

For example, the Department organized and supported several high-profile meetings, notably the Meeting of Development Partners which brought together over 50 participants from developed and developing countries including Angola, Australia, Canada, Finland, France, Germany, India, Japan, Malawi, Mali, the Netherlands, Norway, the Philippines, United Kingdom, United States, Sweden and Sudan. The meeting noted with concern the slow overall progress made to date in improving maternal and newborn health, and the great need for accelerated action to advance Millennium Development Goals 4, 5 and 6. Partners involved included the African and Asian Development Bank, World Bank, UNICEF, UNFPA, and the Partnership for Maternal, Newborn and Child Health.

The Department also helped countries organize their special events in support of safer pregnancy. One of these was Gabon’s first National Day for Maternal and Newborn Mortality and Morbidity, in September. The highlight of this event was two days of widely-reported activities carried out in Libreville in collaboration with UNFPA.

In June 2006, the Department developed its relationship with various mass media outlets, and was able to generate significant press coverage for relevant stories, notably the ongoing campaign to deal with obstetric fistula. The Department also kept up the momentum established in 2005 by publishing a wide range of documents, some of them specifically designed to be used in advocacy activities. These included the Making Pregnancy Safer newsletter and publications described elsewhere in this report. The MPS website (www.who.int/making_pregnancy_safier) now records tens of thousands of “hits” on its various publications each year. In 2006, Spanish-language publications entered the “Top Ten” of downloads for the first time, indicating increased awareness of our publications across the globe.

Sensitizing journalists

In March, MPS brought together high-profile African journalists to attend a Maternal and Newborn Health Media Workshop in Dar-es-Salaam, the United Republic of Tanzania, sponsored by the Commonwealth Secretariat. The journalists, all from countries with high maternal mortality ratios, came from a range of media organizations including Ghana Radio Gold, Ghanaian Broadcasting Corporation (GBC), Nigeria’s Ray Power FM, the Malawi Broadcasting Corporation (MBC), the Malawi Nation newspaper, local United Republic of Tanzania print and television media and information officers from the Ministry of Health. Several prominent articles appeared in national newspapers highlighting the issue of maternal and newborn health and the Making Pregnancy Safer programme. These included The Nation (Malawi), AllAfrica news service, CNN International in Africa, BBC, Ghana radio and Nigerian national television. The workshop focused on the increasing knowledge of maternal and newborn health issues, and included a visit to a local hospital and interviews with health officials, service providers, and patients. Further workshops are planned for 2007, and networking has been facilitated between the sponsored journalists and their media outlets.
Uganda’s travelogue

Community-based approach
The Making Pregnancy Safer initiative underscores a community-based approach to safe motherhood that promotes community-based initiatives aimed at empowering women and their families with the knowledge to recognize danger signs and seek early care to reduce complications before, during and after pregnancy. At the Kyere district hospital, the demand is high and many women have to wait outside the facility until a bed becomes available.

Reducing maternal mortality
Since the programme was launched in the Soroti district, 5 hours northeast of Kampala, maternal mortality has dropped from 750 deaths in 2000 to 190 deaths for every 100,000 live births in 2006. The global MPS target aims at reducing maternal mortality by 75% from the 1990 level and newborn mortality to below 35 per 1000 live births by 2015. The main objectives are to improve equitable access, identify best practices for families and the community and promote an effective referral health system.

Community health centres
Beyond Soroti, maternal and newborn mortality is a major concern in Uganda’s 75 other districts. Bicycle ambulances, through support from the WHO Making Pregnancy Safer initiative, have been an effective way to get pregnant women to the local district hospital to ensure timely care during obstetric complications. The Akobo community health centre, two hours drive from Soroti, has established one of the most effective community transport systems. The Ministry of Health has worked diligently with district planners to maintain roads and community members are trained to transport patients from the community to the first referral point—the community health centre. Over 60% of births take place in home settings.

Recognizing the need to build on the experiences of more than a decade of the Safe Motherhood movement, WHO launched the Making Pregnancy Safer programme in 2000 to further accelerate the reduction of maternal, perinatal and newborn mortality. Uganda has been leading the efforts towards this goal through the Soroti district pilot programme, which began in 2001 to make skilled care available for every birth. Thousands of women have benefited.
Opportunities for Africa’s newborns

MPS contributes substantively to many publications by WHO and its partners in the course of a year, but some have particular value as advocacy instruments in support of maternal and newborn health. A major publication, launched in November 2006, was *Opportunities for Africa’s newborns: Practical data, policy and programmatic support for newborn care in Africa*. Produced under the aegis of the Partnership for Maternal, Newborn and Child Health (PMNCH), *Opportunities for Africa’s Newborns* drew together the expertise of 9 organizations and 60 authors. In particular, it showcased the success of six African countries in reducing newborn mortality rates for babies during the first month of life in Africa, with reductions ranging from 20% in the United Republic of Tanzania and Malawi to 47% in Eritrea. The launch achieved considerable coverage and garnered support from policy-makers, politicians, activists, NGOs, professional organizations, academics and partners all over the world. Media coverage included the *Financial Times, New York Times, The Guardian* (London) and other international and national newspapers.

New media

The Department is always interested in using different advocacy tools to promote its messages and inform ever wider audiences. For example, it has been experimenting with interactive media as a cost-effective means of reaching decision-makers. In 2006, a group of 16 facilitators from Burkina Faso, Mali, Mauritania, Senegal and Togo were trained to support an interactive, computer-based advocacy tool called REDUCE/ALIVE, which has been designed for the promotion of maternal and newborn health. Financial support was provided to use the tool in Niger and Togo to promote maternal and newborn health among ministers, members of parliament, civil society and others. In both countries, the tool contributed to the adoption of national policies on the provision of free services for pregnant women, support for trainings, and the boosting of human resources for health.
Babita’s story: the power of a good public health campaign

It could have been one woman’s nightmare – but it had a happy ending for tens of thousands. Babita was in the late stages of her sixth pregnancy (three girls, two abortions), but during the entire nine months had only had one contact with her local health authority in Karnal District, in India’s northern state of Haryana. When a painful earache drove the poor villager to a Community Health Centre, the Medical Officer (LMO) examined her and noted with alarm that Babita was severely anaemic with a haemoglobin count of 1 gram. The LMO referred Babita to the District Hospital. After she made the 40 kilometre trip, the hospital refused to admit her unless she brought three pints of blood from the blood bank. The blood bank told her to come back the following day with three blood donors. Discouraged, Babita went home by tempo (motorized rickshaw) to her village – a trip she would not have survived if labour had started that evening.

Fortunately, the LMO raised Babita’s case with the District Magistrate Rakesh Gupta, who was visiting the Community Health Centre while reviewing Karnal’s “Safe Motherhood” campaign in his capacity as chair of the District Health and Family Welfare Society. Appalled at Babita’s treatment, he issued a public warning that there would be severe repercussions among senior health officials if Babita and her child did not receive proper service. Within hours, Babita was admitted to the Government Hospital at Karnal; three days later, with her haemoglobin raised to 7 grams, she delivered a healthy baby boy, whom she named Sagar. The District Magistrate was able to get wide coverage in the media for her case – not least about the way the system had ignored Babita during the early stages of her pregnancy – and for the “Safe Motherhood” campaign. The local press took the story further by publicizing unacceptably high levels of pregnancy-related deaths and complications among mothers and infants.

While it is not possible to judge exactly what part this case played in improved results in the district (among other indicators, institutional deliveries rose from 25% in December 2005 to 65% in September 2006), the District Magistrate feels Babita’s courage in allowing her case to be reported was crucial. In his words, “she gave the campaign crucial momentum. A good beginning has been made, but there is a long way to go before we meet the international standards we aspire to in Safe Motherhood.”
Our Goodwill Ambassador’s Travelogue: 
Ethiopia, August 2006

Supermodel Liya Kebede, WHO’s Goodwill Ambassador for Maternal, Newborn and Child Health, was busy during 2006. For example, while in Ethiopia to speak at a meeting of the African Regional Committee in August, Liya visited local hospitals and health facilities throughout the country to advocate on behalf of WHO’s health and nutrition programmes. As the country had recently experienced severe flooding, Liya also visited the camps of the displaced and met with flood victims. She concluded her visit to the country with a ceremony at the Addis Ababa Hospital, where she participated in launching the WHO obstetric fistula manual – an important resource for high maternal mortality countries like Ethiopia.

A visual travelogue of Liya’s visit to the country can be seen online at www.who.int/goodwill_ambassadors/liya_kebede/en/.
Each year, around 250,000 women die in sub-Saharan Africa of pregnancy-related causes. One million babies die as stillbirths, of which at least 300,000 die during labour. A further 1.1 million babies die in the first month of life; 50% of these die on the first day and another 25% during the first week. Another 3.3 million children will die before their fifth birthday, while a further 4 million who begin life with low birth weight and others with neonatal complications will face serious physical and mental barriers to reaching their full potential.

Although newborn deaths account for a large proportion of under-five mortality, they are relatively neglected in policy agendas – a situation which urgently needs changing, since as many as 800,000 newborn deaths could be avoided through low-cost, low-technology evidence-based care. For example, a significant reduction in neonatal deaths could be achieved by increasing the birth spacing of children through family planning. On the clinical side, strengthening care of the sick baby in hospital and routine postnatal care could achieve a great deal. Yet the reality is that while some countries have seen dramatic improvements, in many countries progress has stagnated or regressed. Recent estimates indicate that Africa’s maternal mortality rate – approximately 830 deaths per 100,000 live births – is about 2.5 times higher than in Asia and more than four times that of Latin America. Almost half of these deaths resulted from haemorrhage, hypertensive diseases and infections, although it is estimated that unsafe abortions account for a high proportion of maternal deaths in some countries. There appears to be a widening gap in care between maternal and child health services, and another growing gap in services available to rich and poor. Half of the babies in sub-Saharan Africa are born at home, and do not have access to quality care.

Across the region, the numbers of personnel with professional skills in maternal and newborn health care are far from adequate to meet the level of need. Reasons range from AIDS-related mortality among health workers in some countries to a serious “brain-drain” as professionals leave for other regions of the world or move from low-paid health care jobs to better-paid areas of work. Shortages are particularly acute in countries such as Lesotho, Namibia, Mozambique, Malawi, Swaziland, Zambia and Zimbabwe.

The scale and diversity of the needs in the region pose particular challenges to efficient programme management. In 2006, the Department took an important step forward by decentralizing its regional operations to sub-regional, a move which permits more efficient and focused programming. There are now three inter-country teams with offices in Libreville (covering 11 countries in Central Africa), Harare (covering 18 countries in East and Southern Africa) and Ouagadougou (covering 17 countries in West Africa).

Road Maps for achieving MDGs 4 and 5
The Millennium Development Goals 4 and 5 cannot be achieved in sub-Saharan Africa without improving the continuum of care along two dimensions: in time (through the life cycle) and in place (from home to hospital). Currently, coverage along the continuum of care in the region is relatively high for antenatal care but drops during childbirth and postnatal care, when the risk of death is greatest for both mother and baby.

First adopted in 2004, the Road Map for Accelerating the Reduction of Maternal and Newborn Mortality and Morbidity is a key tool designed to help countries in sub-Saharan Africa strengthen both dimensions of the continuum by providing strategic direction, strategic partnerships, and
enabling country-level monitoring. The year 2006 saw considerable progress in moving from planning to implementing national Road Maps. Focused technical and financial support was provided to seven countries (Burkina Faso, Botswana, Equatorial Guinea, Guinea Bissau, Mali, Niger, Uganda) to develop national Road Maps in close collaboration with governments, partners and all relevant stakeholders (civil societies, NGOs, professional bodies etc.). To date, 31 countries have developed and adopted national Road Maps with financial and technical support from WHO and other partners including the European Union and USAID. In order to increase the availability of technical assistance at country level, the regional office created and provided training for a core group of 40 anglophone, francophone and lusophone consultants. However, a significant constraint to progress remains in the lack of staff for ongoing technical support (as opposed to one-time assistance such as individual trainings) to the Road Map initiative at regional, inter-country team and country levels.

Integration of health services
Integration of different service streams has great potential for reducing duplication and creating synergies that will improve maternal and newborn health. MPS pursues this goal in several ways. One is to build a core group of regional consultants with expertise in integrating different streams, who assist governments as needed. In June, for example, the regional office organized a workshop for 34 experts from 13 countries in Nairobi, Kenya. The focus of the training was to integrate maternal, newborn and child health services with programmes for Malaria in Pregnancy, Prevention of Mother-to-Child Transmission of HIV, Family Planning and Nutrition. At the end of this training, a draft of the implementation framework of these programmes into Maternal, Newborn and Child Health services was developed. Since UNFPA has also done a considerable amount of work in this field, the AFRO office is currently working closely with UNFPA to produce a single implementation guide document for countries to use in such integration efforts.

MPS also builds capacity for service integration directly through inter-country workshops which gather key policy makers and programme managers from maternal and child health programmes, along with partners such as UNICEF, UNFPA and Save the Children. Two such workshops were held in 2006, one in Harare for seven anglophone countries (Ghana, Mozambique, Nigeria, the United Republic of Tanzania, Uganda, Zambia and Zimbabwe) and one in Ouagadougou for seven francophone countries (Burkina Faso, the Democratic Republic of Congo, Madagascar, Mali, Niger, Rwanda and Senegal). These trainings also contained a strong action component: each country team produced a three- to six-months work plan outlining the steps they planned to take using WHO’s Framework for newborn health as a guide, and specifying the steps for which they will need technical support.

HIV/AIDS
Each year, over half a million newborns are infected with HIV in sub-Saharan Africa through mother-to-child transmission (MTCT). In spite of efforts to scale up programmes to prevent MTCT, less than 10% of pregnant women infected with HIV receive interventions to reduce MTCT. The Department has worked closely with WHO’s HIV/AIDS Department, other UN System partners (particularly those agencies which, like WHO, are cosponsors of UNAIDS) and a variety of donors and NGOs to integrate maternal and newborn health systems with programming focused on preventing
mother-to-child transmission of HIV (PMTCT). A particular concern is building the capacity of health workers to scale up PMTCT activities as more funding becomes available. For example, in collaboration with UNICEF, the Department and other partners provided trainings for 12 African experts in the adaptation of WHO’s generic curriculum for PMTCT. Assistance was also provided for rolling out training in specific countries, which have so far included Burkina Faso, Lesotho, Swaziland, Mali and Gabon.

**Malaria in pregnancy**
Along with HIV/AIDS, malaria is one of the paramount public health problems in the region affecting pregnant women, their foetus and newborn babies. Each year, 30 million women living in malaria-endemic areas become pregnant. For these women, malaria is a threat both to themselves and to their babies, with up to 200 000 newborn deaths each year as a result of malaria in pregnancy. A great deal of technical assistance was provided at country level to address this problem, and different approaches were followed by different countries. For example, Cameroon and Gambia were assisted to produce national strategic plans on malaria in pregnancy, while in Eritrea the national reproductive health programme and the national malaria control programme were brought together to carry out joint planning. Both Cameroon and the Central African Republic received technical and financial support to train physicians in the prevention and control of malaria in pregnancy. At inter-country level, a July training in Accra, Ghana brought together health professionals from six countries (Gambia, Ghana, Liberia, Sierra Leone, Nigeria and Uganda). The participants focused on the integration of antenatal care with prevention or control of malaria in pregnancy and prevention of mother-to-child transmission of HIV. In addition, the Department is working closely with UNFPA to produce a single guide document for countries to use in the implementation or improvement of services for malaria in pregnancy.

**Cape Verde: the fruits of political engagement**
Cape Verde’s Minister of Health does not take “no” for an answer – at least not where maternal mortality is concerned. In 2001, the minister was determined to reduce the high rates of maternal mortality in the country through cooperation with WHO’s then-new Making Pregnancy Safer initiative. Aware that the government would have to provide a significant amount of financing itself for the initiative to work, he took his concerns straight to the Prime Minister while vigorously lobbying his cabinet colleagues. His advocacy was successful and the money was approved by the Cabinet. But the minister continued to stay on top of the initiative, staying in close touch with operational decision-making about infrastructure, human resources and quality control. When the initiative ended in 2004, with clear evidence both of success in reducing MMR and of efficient use of funds, he returned to the Cabinet for more money – and got it. MMR has continued to fall, most recently to an estimated 4.5 per 100 000 in 2005. The experience of Cape Verde is a useful one for other low-income countries. It shows that much can be accomplished if a well-designed initiative finds an effective champion who is willing to invest time not only in securing political commitment, but in “staying on top of” its implementation.
Mozambique: Books for midwifery tutors arrive

Teaching materials in the local language are an essential aid to any capacity building project. In September, midwifery tutors at the Institute of Health Sciences in Maputo, Mozambique received *Educação para uma maternidade segura*, the Portuguese translation of WHO’s *Education Modules for Midwifery Teachers*. The books were distributed by WHO and UNFPA in the capital and at health education institutions in three other provinces in Mozambique. These activities were made possible through generous support from the Government of Portugal.

In late 2006, MPS headquarters received a letter from midwife Barbro Fritzon, working for UNFPA, saying that the modules are highly appreciated by the midwifery tutors, as the only books they had before was *Normas de Conduta Obstetrica* 125 pages printed 1985 by the Ministry of Health in Mozambique and some old English books for gynaecologists. For the midwifery tutors this really changed the opportunity to teach and instruct student midwives with good books! The only thing is, they do not have enough books…[but] the copy machine is working hard!

A new shipment has been sent for further distribution beyond the original recipient institutions as the country increases its training of urgently needed midwives.
While some countries in the region have made progress in reducing maternal and child mortality, the situation has worsened in others and persistent disparities remain among and within countries. The lifetime risk of maternal mortality in the region as a whole is 1 in 160, but ranges from 1 in 16 in Haiti to 1 in 1,100 in Chile (2002 figures), and in 12 countries there are still over 100 deaths per 100,000 live births.7 The vast majority of maternal mortality is due to preventable causes including haemorrhage (almost 25%), pregnancy-induced hypertension, sepsis, and complications related to abortion. Anaemia and domestic violence are also worrying factors in maternal health. Adolescent mothers are twice as likely to die from pregnancy-related causes as older mothers. As child mortality rates have been declining in past decades in the region, about 450,000 children still die in the region each year, with the majority caused by diseases originating in the last weeks of gestation, delivery and first four weeks of life. Levels of skilled attendance during pregnancy, birth and post partum, as well as referrals to hospitals in the event of complications vary widely, with access lowest in rural areas. In many countries in the region, there are still many women who do not receive the four complete antenatal check ups recommended by WHO Regional Office for the Americas (AMRO) as the minimum.

In 2006, the regional and in-country teams provided technical cooperation to many countries in the region, with intensive efforts in Bolivia, Dominican Republic, Ecuador, El Salvador, Guyana, Haiti, Honduras, Panama, Paraguay and Nicaragua. Among other noteworthy advances, Guyana and Panama were able to complete national plans for reducing maternal and neonatal mortality. The regional team also helped to mobilize financial resources for MNH activities in Haiti and Guyana, supporting their successful proposals to the European Commission. In Honduras, Nicaragua, Paraguay, Ecuador and Guyana, regional funds were allocated to support the hiring of a national consultant in each AMRO country office, as a means of reinforcing national capacity.

**Improved health through empowering women, families and communities**

The Regional Plan for Maternal Mortality Reduction strongly supports the empowerment of women, families and communities as a means of improving maternal and neonatal health. Many countries have requested and received assistance for capacity building and planning in this area. El Salvador, and Paraguay are well advanced in field testing the Participatory Community Assessment (Diagnóstico Comunitario Participativo, or DCP) methodology, with Paraguay having also completed a situation analysis. The DCP is a key strategy to help women, families and communities improve care at the household level while at the same time expanding their access to and use of health services. This strategy brings rural, indigenous and community-based groups into partnership with public health authorities. Recognizing that the latter need training in order to keep up their

**Raising neonatal health in the public health agenda**

An intensive consultation and evidence-gathering process that began in 2005 continues to raise the profile of neonatal health in the region’s public health agenda, successfully gaining the September 2006 approval of AMRO’s Directive Council. The process to develop a Neonatal Regional Plan of Action included a regional workshop in Antigua, Guatemala in which 15 countries and a range of agencies endorsed the Continuum of Care approach, linking neonatal health with maternal and child health. In practical terms, this means the region’s health systems at national level are harmonizing their planning and policies around cost-effective approaches, with an emphasis on bringing this continuum of services to the most vulnerable and marginalized populations. The Plan of Action is scheduled to be finalized by October 2007.
part in the partnership, WHO Regional Office for the Americas (AMRO) has developed a two-day workshop “package” (with curriculum, information handouts and an interactive CD) to help MNH managers and providers understand the concept of empowerment and operationalize it within health programmes. Field testing of the module will be carried out in Guyana in May 2007.

Data for decision-making through better epidemiological surveillance

In line with the emphasis on evidence-based approaches, the regional office provided technical support to maternal health and mortality surveillance and perinatal information systems in the region, and supported the sharing of lessons learned from different countries as their systems are implemented. For example, August 2006 saw a regional meeting of experts and policy makers from 13 countries in Sao Paulo, Brazil which shared experiences and methodologies on maternal mortality surveillance systems, with a focus on reducing the gaps between knowledge and action. As well as programme and policy issues, the meeting discussed technical questions, such as appropriate use of definitions in reporting causes of deaths.

The implementation of Reproductive Age Mortality Surveys (RAMOS) were supported in El Salvador and Dominican Republic (see text box from El Salvador). First-year activities were successfully completed in El Salvador, and in November the country’s 2005-06 maternal mortality baseline was launched – a major accomplishment in itself as well as a model for other countries. RAMOS experiences from eight countries were systematically collected and presented at the above-mentioned meeting in Sao Paulo.

Expanding and improving midwifery skills

While midwifery has a long professional tradition in the English-speaking Caribbean, this is not the case in some Latin American countries, where most births in health facilities are carried out by physicians, nurses or auxiliary nurses, depending on the level of care. At the same time, countries with low maternal and neonatal mortality (e.g., Chile, Argentina, Cuba, Uruguay, Costa Rica) tend to have midwifery or nurse-midwifery as key elements of their care models. Accordingly, AMRO has invested considerable effort in assessing the capacity of countries to strengthen midwifery and nursing. With a view to expanding and improving skilled birth attendance, assessments have been completed or are being carried out in Dominican Republic, Guyana, Haiti (see box on page 33), and Honduras, with other countries under consideration. New educational resources were made available in the region during the year, including a Spanish translation of a standard midwifery textbook, and a Midwifery Toolkit in English and Spanish.

Among other activities in this area, 2006 was a productive year for the region’s 20-member Collaborative Partnership for Achieving Improved Maternal and Newborn Health in the Americas through Nursing and Midwifery, which is hosted by AMRO. With the support of a variety of partners, two recently initiated “communities of practice” (in English and Spanish) in the areas of making pregnancy safer are now using a new electronic networking system. Avoiding costly travel and teleconferencing, communities of practice take advantage of increasing access to email to provide a global forum where members can network with colleagues, access up-to-date information and resource materials, and keep track of best practices. Two new institutional partners focusing on midwifery, at the Universities of Chile and Puerto Rico respectively, have begun the process of becoming WHO Collaborating Centres within the partnership.
**El Salvador: establishing a baseline**

The Millennium Development Goal 5, improving maternal health, aims for a 75% reduction in maternal mortality ratio (MMR) by 2015, but measuring this requires an accurate baseline in each country. To accurately determine its MMR and to improve maternal health surveillance, El Salvador’s Ministry of Health worked with the Pan American Health Organization (PAHO), the US Centers for Disease Control (CDC) and other partners to develop a comprehensive maternal mortality surveillance system based on a Reproductive Age Mortality Study (RAMOS) methodology.

First, all deaths of women of reproductive age that occurred between June 1, 2005 through May 31, 2006 were identified using sources such as municipal registries, health facilities, medical examiners and the media. Next, pregnancies in the year preceding death were determined through medical records and, where needed, a brief family interview. If a woman had died within a year of pregnancy, a family interview was conducted including a verbal autopsy for medical causes of death and a social questionnaire for non-medical factors. Medical records from all health care facilities used during the pregnancy and postpartum period were abstracted. Each case’s data were reviewed to learn the following: medical cause of death, relationship to pregnancy, preventability, problems that contributed to the death, and potential recommendations.

A total of 2,468 deaths among women of reproductive age were identified, 96.9% through the municipal registries. Of the 100 deaths that occurred with a year of pregnancy, 82 were found to be maternal, resulting in a MMR of 71.2 per 100,000 live births. Haemorrhage was the leading cause of maternal death, followed by pregnancy-related hypertensive disorders, and suicide. Between one-quarter to one-third of deaths were related to lack of patient or community knowledge about pregnancy complications and lack of transportation to health care facilities.

**Mapping Haiti’s midwifery services**

Haiti is the poorest country in the Western Hemisphere, with high mortality rates for mothers (523 per 100,000 live births) and infants (80 per 1000 live births). Health care services are a mix of public, non-profit and private facilities. There are proposals to provide a minimum package of services in the public sector, but the plan is not yet implemented. About four-fifths of births are attended by *matrones* (traditional birth attendants).

Since 2000, WHO has been supporting Haiti’s efforts to improve skilled attendance at birth, notably through the country’s Nurse-Midwifery School in Port-au-Prince. In 2006, the WHO Collaborating Centre at Canada’s McMaster University completed an evaluation of midwifery and skilled attendance in the country, working closely with their Haitian counterparts at the Ministry of Health. Information for the case study was obtained from midwives, nurses, nurse auxiliaries, and matrones working at 16 hospitals, 16 health centres, and three other sites in eight different départements (districts). The results were revealing about both the strengths and weaknesses of the services, and the conditions within which the health staff are working. Notable findings included the need for increased in-service training opportunities, the use of certain ineffective practices (e.g., too frequent use of episiotomy and perineal shaving), the lack of routine audit of deaths, and the potential collaboration between traditional and professional care providers to bridge some social-cultural barriers to skilled care at birth. Most important is simply the need to increase the number of professional birth attendants in the country.
While approximately 53,000 women of childbearing age die every year in the region as a result of pregnancy-related complications, most countries in the region have made significant progress over recent decades. The proportion of pregnancies attended by skilled health personnel more than doubled in the period 1990–2004, from 28% to 60%, while the proportion of deliveries attended by such personnel rose from 36% to 53%. Yet such progress falls short of the strides needed to achieve regional goals. The average maternal mortality only declined from 465 to 370 per 100,000 live births in the same period. If this rate is not drastically improved, maternal mortality in 2015 will be around 300 per 100,000 live births – almost three times the Millennium Development Goal target of 116 per 100,000 live births.

Moreover, there are huge variations in progress between countries in the region. Wealthy countries such as Kuwait, Libyan Arab Jamahiriya, Oman, Qatar, Saudi Arabia and United Arab Emirates have so far achieved over 75% reductions in maternal mortality compared to levels in 1990, with rates ranging from virtual none to 40 per 100,000 live births. At the other end of the scale, maternal mortality has been reduced by under 30% in Afghanistan, Djibouti, Iraq, Pakistan, Somalia and Sudan, with maternal mortality ratio ranging from 294 per 100,000 live births in Iraq to 1600 in Afghanistan and Somalia.

About 95% of the maternal deaths occur in seven countries (Afghanistan, Iraq, Morocco, Pakistan, Somalia, Sudan and Yemen), with approximately 60% of it in only two countries – Afghanistan and Pakistan. Less than 50% of deliveries were attended by skilled health personnel in Afghanistan, Pakistan, Somalia and the Republic of Yemen, and the figure was between 50% and 80% in Djibouti, Egypt, Morocco and Sudan.

Serious barriers to progress, particularly in the priority countries, include lack of national policies with long-term direction and sustained commitment, poor health care delivery systems, inadequate training, and high turnover among health care service providers. Other challenges go beyond the health system per se: these include obstacles which prevent disadvantaged populations from utilizing the available health services (notably poverty, illiteracy, unawareness about the existing services), gender-based discrimination which undermine women’s decision-making power in reproduction and health matters, and deep-rooted poverty. It must also be remembered that, apart from some of the world’s richest countries, the region also includes five which appear on the UN’s list of Least Developed Countries.

Expanding activities, focusing priorities
In response to these challenges, the Department’s regional and country offices have expanded their activities significantly in recent years. In 200, Sudan was the only “spotlight” (heightened focus) country in the region. As of 2006, however, 12 more countries have been added to the list: Afghanistan, Djibouti, Egypt, Iraq, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Saudi Arabia, Somalia, and the Republic of Yemen. In partnership with UNFPA, the regional office has helped nine countries formulate national plans of action for enhancing the technical competence of service providers in maternal and neonatal health and family planning. As of 2006, implementation of these plans had begun in the region’s five MDG-priority countries: Afghanistan, Iraq, Morocco, Pakistan and Sudan. In support of this work, the Regional Office selected a number of WHO’s Integrated Management of Pregnancy and Childbirth (IMPAC) guidelines which are most relevant...
to these countries and translated them into Arabic in order to expand their application in Member States.

**Support for planning and collaboration**
The regional framework adopted in 2005 for accelerating the reduction of maternal mortality in the region was moved ahead in 2006 with an inter-country meeting of national MPS managers in Sana’a, Yemen, in November. The meeting focused on countries identified as requiring urgent improvement in key health indicators (Egypt, Iraq, Morocco, Pakistan, Somalia, Sudan, Syrian Arab Republic, United Arab Emirates and Yemen). In addition to staff from WHO and other UN agencies, the 40 participants included representatives from a variety of interested organizations, including the Basic Health Services Project of Pathfinders, International Planned Parenthood Federation, Pan-Arab Project for Family Health of the League of Arab States, Royal Netherlands Embassy, Yemen-German Reproductive Health Programme and Yemeni Midwives’ Association. The meeting agreed on a number of recommendations to be used as basis for follow-up workplans which will be formulated at the regional and country levels.

**Improving maternal mortality surveillance in Tunisia**
Tunisian health authorities’ demonstrated commitment to achieving its Millennium Development Goals was bolstered in mid-2006 by a presidential decree supporting the work of the national committee on maternal mortality. Upon the invitation of the Ministry of Health, MPS began a technical assistance process aimed at improving the national maternal mortality surveillance system. An initial concern was to reach a more accurate estimate of maternal deaths and therefore of progress towards MDG 5. With the help of experts from WHO headquarters, a review of the current system was undertaken, identifying a range of areas for improvement from the actual registration of deaths to the writing of reports by the national committee. Ongoing collaboration between WHO and the Ministry of Health over a 12-18 month timeframe will work towards a variety of goals, including building a quality assurance component into the system, improving dissemination of data beyond the local level, and creating procedures for confidential investigations of maternal deaths.
**Condition urgent: training Afghanistan’s community midwives**

Afghanistan has some of the world’s highest maternal mortality ratios: 1,600 per 100,000 live births at the national level and up to four times higher in areas such as Badakhshan province. Over 90% of deliveries take place at home and only 9% of deliveries are attended by skilled health personnel. Efforts are underway to deal with this situation. Since 2002, over 2,000 formal midwives have been trained through the five Institutes of Health Sciences in five provinces and the 17 Community Midwifery training programs in 17 provinces (formal midwives practice at district, provincial and regional hospitals, while community midwives practice in health centres and provide services to the community, including attending homebirths). Each year, there are between 250 and 300 new graduates. With the technical and financial support of partners including USAID/REACH, JICA, UN agencies such as WHO, UNICEF and UNFPA, and other donors, the Ministry of Public Health has been coordinating efforts to train community midwives to international standards.

But this is only “a drop in the bucket.” Afghanistan requires another 8,000 to 10,000 midwives to reach its target of one midwife per 2,500-3,000 population. A variety of daunting challenges must be faced. In most areas of activity, for example, recruitment of women is very difficult in Afghanistan for cultural and security reasons. But even without these general obstacles, more financial and technical support is needed to maintain and run the existing midwifery training schools as well as to establish new training schools in other provinces.

**Community midwives: reducing maternal mortality in Sudan**

Sudan is the largest country in Africa and has a total population of about 35.4 million. About 80% of babies are delivered at home, and maternal mortality is one of highest in the region (509 per 100,000). Coverage by midwives, both community and facility-based, far outstrips need in Sudan. Moreover, the quality of midwifery services is below international standards for skilled birth attendants.

There are three levels of midwifery training in the country. The direct-entry midwifery training program lasts 12 months and provides basic midwifery skills in antenatal care, home delivery, postnatal care and community-based primary health services. Currently, 38 schools graduate about 1,700 midwives annually. A one year specialized training programme for certified nurses graduates about 120 nurse-midwives per year. Finally, a 2-year course on management and supervisory skills for nurse-midwives graduates 80 health visitors a year. Health visitors are the main trainers at the Midwifery schools and principal providers of antenatal care and family planning services.

In 2006, the Ministry of Health entered the second year of its Midwifery Services Rehabilitation Project in partnership with WHO and other UN agencies. The main components of the project are increasing the number of midwifery schools, raising standards for midwifery school teachers, improving training curricula, upgrading the skills of the currently available workforce. Among other achievements, 2006 saw the finalization of the basic curriculum, training of 77% of the necessary tutors, and assessment of over 1,100 midwives who were judged ready for upgrading. However, lack of funds meant that, at the end of the year, about 800 women selected for training were unable to start their courses.
Just over a third of the countries in the region have limited resources and special needs in the field of maternal and child health. Some have maternal and perinatal mortality rates similar to poorer countries in other regions, particularly among dis-advantaged groups such as migrant populations and ethnic minorities, and those affected by conflict. As estimated by WHO, average maternal mortality in the whole of the WHO European Region, including both eastern and western countries, is 39 maternal deaths per 100,000 live births. However, individual country rates are as high as 110 in Kyrgyzstan and 210 in Kazakhstan. Similarly, while the average neonatal mortality rate in the region is 11 per 1000 live births in the Region, it is 35 in Turkmenistan, 36 in Azerbaijan and 38 in Tajikistan. The Department currently works primarily with twelve countries that have chosen making pregnancy safer as one of their national priorities: Albania, Armenia, Georgia, the Republic of Moldova, Kazakhstan, Kyrgyzstan, Romania, the Russian Federation, Tajikistan, Turkey, Turkmenistan and Uzbekistan.

A variety of challenges need to be overcome, many of them the legacy of Soviet practices in medicine and social policy. Some problems, such as legislative constraints, lack of networking between different providers and levels of care, and rigid centralization and are at national level. Others need to be dealt with at operational level, such as the over-medicalization of pregnancy and childbirth, inexperience with multi-disciplinary approaches, and widespread use of abortion instead of family planning. A major obstacle to effective review of maternal mortality is the open (i.e., non-confidential) and punitive orientation of current reviews. These create a climate of fear and secrecy among health workers, and are actually counter-productive to helping health systems to improve.

One issue with direct implications for the achievement of Millennium Development Goals (MDGs) 4 and 5 is under-reporting of maternal and under-fives mortality in the region. More accurate reporting – a focus of the Department’s “Beyond the Numbers” initiative (described below) – may require some countries to re-set national MDG objectives. A serious barrier to progress is the dearth of technical information and learning tools translated into Russian, which is the lingua franca in the region.

At the same time, the Department’s technical assistance and advocacy for evidence-based medicine has resulted in some notable successes. Best practices that have made progress in the region include increased use of partograms for decision-making in labour, decreases in blood transfusions, wider use of oxytocin in the third stage of labour, and reductions in both post-partum haemorrhage in mothers and hypothermia among newborns. On a wider scale, the Department is working with other partners in WHO’s Family and Community Health Section to bring better reproductive and sexual health to adolescents and young people, who account for a significant proportion of pregnancies in the region.

Implementing “Beyond the numbers” in countries
“Beyond The Numbers” is a proven methodology for generating better data about outcomes (maternal deaths and life-threatening complications or “near misses”) and quality of clinical practices – fundamental information for improving services. Of particular importance in the region is the increasing acceptance by clinicians that a confidential, non-threatening approach actually provides superior data about outcomes. The methodology continued to make headway in the region during 2006, significantly increasing the numbers of professionals across the region receiving training. Two regional workshops were held, and national workshops were held in Kyrgyzstan, Republic of Moldova and Tajikistan. The results of pilot projects at three maternity clinics in the Republic of Moldova were reviewed by national and international experts, with a view to disseminating lessons learned in other countries.

Enhancing obstetric, newborn and perinatal care
The regional office devotes a great deal of effort to helping countries upgrade the quality of care received by women and their newborn children, in large part through the
development or updating of clinical guidelines and their inclusion into programmes for the training of trainers (TOT). The efficacy of such trainings must be carefully evaluated, and for this reason, assessments and follow-up training workshops must be carried out. Such workshops were held in Armenia, the Republic of Moldova (see box), Kyrgyzstan, Tajikistan, Uzbekistan in 2006 to assess and enhance the effectiveness of Essential Obstetric and Newborn Care TOT in the previous year. In addition to reinforcing skills, the workshops assisted health providers in finding solutions to persisting problems and strengthening ongoing clinical supervision at district level. The events also afforded opportunities for local health providers to visit care sites and address specific institutional issues: for instance, the Uzbek workshop assessed care management and practice routines at the Republican Perinatal Centre.

**Adding value through partnerships**

The regional and country offices work closely with a variety of partners, including other UN agencies, bilateral institutions, and both local and international NGOs. Italy’s Fundazione Cariverona is a main donor for MPS activities in five Central Asian countries. The Department works closely with USAID’s ZdravPlus project, providing training materials and WHO facilitators for improving maternal and newborn care in Kazakhstan, Tajikistan and Uzbekistan. Within the United Nations family, UNFPA country offices are key in Beyond The Numbers activities, while UNICEF Kyrgyzstan is a main partner of our regional office in implementing Essential Obstetric and Newborn programming.

In 2006, a new four-year project was launched involving nine South-Eastern European countries (Albania, the Former Yugoslav Republic of Macedonia, Croatia, Romania, Bulgaria, Serbia, Montenegro, Bosnia and Herzegovina and the Republic of Moldova). With lead financing by Norway under the 1999 European Union pact aimed at promoting stability in the region, and carried out in collaboration with the WHO’s programme for Country Policies, Systems and Services, the project’s initial focus will be on raising the quality of maternal and perinatal health care throughout these countries.

**Two weeks in Chisinau, the Republic of Moldova**

MPS workshops are carefully designed to get maximum benefit in a short space of time. For example, in October 2006, an Essential Obstetric and Newborn Care training was held in Chisinau Municipal Perinatal Centre for 40 key health professionals from the Centre and from the Chisinau Mother and Child Health Research Institute (a newly appointed WHO Collaborating Centre for the region). The WHO-funded training, taught by regional and national experts, was divided into two parts: a theory week of pure training and planning, and a practical week of clinical work in the two participating institutions. During the latter, participants were divided into two groups, each group including obstetricians and midwives in order to encourage multi-disciplinary teamwork. Team activities were arranged in 24-hour shifts, such that every participant completed two 24-hour shifts. By prior agreement with hospital management, the groups handled all clinical cases, including pathology. The trainers – 4 specialist physicians and 2 midwives – also participated in the 24-hour shifts during which they served as consultants, facilitated theoretical discussions, and assisted participants in implementing the practices acquired during theory week.

The head of one of the trained health professionals said about the course: “It was extremely helpful. We internalized during this training many things that previously we accepted only theoretically. I regret that there was no opportunity for every single staff member of my maternity unit to attend the course”. The training also met regional objectives, as it was used to field-test updated Essential Perinatal Care clinical guidelines before finalization.

During the course of the workshops, the participants developed action plans to improve practices in their facilities. Follow-up visits by the workshop trainers will not only provide further training opportunities but include rigorous reviews of action plans’ implementation. The visits will also assist participants to re-assess their own maternity units use WHO Regional office in Europe questionnaires, identify problems and propose practical solutions to overcome them.
The home of one quarter of the world’s population, this region accounts for approximately one third of maternal and newborn mortality. An estimated 171,000 maternal deaths occur here annually, and some 1.4 million infants (out of a total of 37 million live births) die in the first four weeks of life. Poor maternal nutrition, short birth-intervals and inadequate care during pregnancy are key factors explaining why 30% of the babies born in the region weigh less than 2500 grams. About half of the world’s unsafe abortions occur in the region.

Inter-country disparities are striking. Skilled birth attendance varies from 11% of births in Nepal to 99% in Thailand. Rates of maternal mortality range from 44 per 100,000 births in Thailand to 740 in Nepal, while neonatal mortality rates range from 11 in Sri Lanka to 43 in India. 8 Countries with high rates of maternal and newborn mortality also have high fertility rates, low age at marriage and a heavy burden of teenage pregnancy and motherhood. During recent decades, many countries have reduced fertility rates significantly, although there is a tendency of stagnating contraceptive prevalence rate in some countries.

With these conditions in mind, the regional office has focused on strengthening human resources for maternal and newborn care. Five countries with rates of skilled birth attendance coverage less than 50% have been prioritized: Bangladesh, Bhutan, Nepal, and Timor-Leste all have rates of under 25%, while India’s rate is 43%.

The regional office places a high priority on advocacy at government level, and on ensuring that each country has a well-placed national focal point to move the Making Pregnancy Safer agenda forward. MPS focal points are now in place in seven of the region’s eleven member states, providing support within the framework of national programmes.

**Strengthening human resources for maternal and newborn care**

To address the human resource gap in general and for maternal and newborn care in particular, the regional office and headquarters have provided technical support to a number of countries in order to improve health care providers’ skills and health systems. In 2006, Bangladesh, Bhutan, India, Nepal and Timor-Leste received technical support for training aimed at upgrading midwifery skills among primary care providers and improving monitoring and supervision, especially for providers working at community and primary care level. Two technical assistance missions were undertaken to Bhutan’s Ministry of Health in support of the country’s recent policy decision to aim for 100% institutional deliveries.

An important feature of the assistance was a review aimed at creating a robust human resource strategy – an essential component often missing from such policy initiatives.

In Indonesia, the Ministry of Health has been promoting the Alert/Prepared Village (Desa Siaga) Initiative. This aims at improving access to and quality of maternal and newborn care services through re-deployment of community midwives mainly to underserved areas, and through community empowerment. In line with the “Skilled Care at Every Birth” agenda, Bangladesh, India, Maldives and Nepal now have their own National Strategy or Policy on skilled birth attendants. Bhutan is focusing on strengthening institutional care while Timor-Leste is focusing on strengthening midwifery training and the deployment of midwives throughout the country.

**Improving standards based on good practices**

Assistance was provided to all countries to adapt, revise and implement evidence-based guidelines for maternal and newborn care. There was great acceptance of WHO tools such as the IMPAC series, and the Guidelines on Family Planning and Reproductive Tract Infection/Sexually Transmitted Infection (RTI/STI). Support was provided for implementing facility-based maternal death reviews in Bangladesh, India, Myanmar and Nepal.
Participants of the 2006 WHO training on Essential Newborn Care Course (ENCC) in Yangon, Myanmar.

**Strengthening Essential Newborn Care (ENC)**

The region accounts for a third of the global newborn deaths. While there have been impressive gains in the past decades in reducing infant mortality, neonatal mortality is as yet an unfinished agenda for the region.

In order to strengthen and equip primary care providers with the skills for essential care of normal newborns and management of sick babies (particularly through stabilization and management of referral care), the regional office facilitated two regional trainings of trainers in the WHO Essential Newborn Care Course (ENCC) in 2006. The first was conducted in June at Yangon for India, Indonesia, Maldives, Myanmar, Sri Lanka and Thailand, and was funded through the Tsunami funds for the region. The training for the remaining five countries (Bangladesh, Bhutan, Democratic People’s Republic of Korea, Nepal and Timor-Leste) was conducted at Dhaka in September 2006 in partnership with ACCESS/JHPIEGO. Results have been rapid in many cases, indicating the enthusiasm of participating governments: for example, in Bhutan and Sri Lanka, participants from the regional training in Dhaka are currently rolling out the training across the country. In some cases, more assistance was provided as a follow-up to the regional trainings, and the Department provided technical support for in-country ENCC trainings in Myanmar, Bangladesh, Maldives and Democratic People’s Republic of Korea, with the help of funding from Italy, UNICEF, and the Republic of Korea.

**Strengthening programme management**

Good technical standards are severely undermined if management systems are not in place to support them, and the Department has worked hard to improve management in the region. In Indonesia, the Department provided support aimed at strengthening district-based management through the District Team Problem-Solving approach. Management and leadership support was also provided to MCH District Public Health Officers in Timor-Leste in collaboration with other partners like HAI, while in Sri Lanka this support aimed at strengthening both information systems and the quality of maternal and newborn health care.

It has proven useful for programme managers to exchange experiences on initiatives. For example, the regional office supported an inter-country consultation for four countries (Bangladesh, India, Myanmar and Nepal) which implemented facility-based maternal death reviews in 2005-2006. Although there remains an urgent need to strengthen maternal and perinatal death reviews in many parts of the region, efforts to integrate them into the normal health system practice has been vigorous in some countries. Progress is evident in Nepal, where maternal and perinatal death reviews have been institutionalized in district-level hospitals in rural areas.
**Myanmar: training urgently needed midwives**

In Myanmar, the maternal death rate in rural areas has been estimated to be between 280 and 360 per 100,000 live births, and may actually be higher. Many women deliver at home, and only 56% of women are assisted by skilled birth attendants. Existing midwifery schools have increased the number of trained midwives (800 in 2005) but are many years away from meeting national needs. About 28,000 “auxiliary midwives” provide services at village level on a voluntary, unpaid basis, and with only three months of training that do not meet basic standards for skilled birth attendants.

Starting in January 2006, MPS has been helping to train midwives and nurses according to international standards through its Essential Newborn Care Training Program. An international consultant is in place and reference manuals are being translated into the national language.

The first Essential Newborn Care course for national trainers took place in June. The majority of participants are from five townships in the north of Ayeyarwaddy Division which were selected for initial Essential Newborn Care programming. Far from major cities and facing serious communications difficulties during the rainy season, the townships’ total population of 1.1 million are served by only 232 midwives. The training teams that completed the training workshops are ready to begin with the training of midwives. On the request of the Ministry of Health, Essential Newborn Care training activities are being expanded to 10 townships in three divisions of the country. Essential drugs and basic medical equipment have been procured through the WHO supply system for distribution to midwives after their training course.

**Training and beyond in Bangladesh**

Training by itself is not enough to ensure that consistent, high-quality maternal and newborn health services are provided to women and their children. A wide variety of administrative and support activities must also be in place. Examples can be seen in MPS activities in Bangladesh, where the 2001 National Maternal Health Strategy prioritized the training of skilled birth attendants in rural areas.

Starting in mid-2003, WHO has assisted the government in designing and implementing a competency-based training program for Family Welfare Assistants (FWA) and Female Health Assistants (FHA). During piloting, 90 FWAs and FHAs in 6 districts (45 in 3 districts supported by WHO and 45 in 3 districts supported by UNFPA) received 6-month training. An independent evaluation found high levels of skill retention in participants 6 months after training. To date, 2,400 FWA and FHAs from 130 upazillas (sub-districts) across 28 districts in the country have received 6-month training certificates and are now working at the community level to provide antenatal care, conduct deliveries, postnatal care, newborn care, and referral of complications.

A number of additional activities to support the work of these skilled birth attendants are in progress or under development. To ensure that high standards are maintained, quality assurance specialists from WHO and UNFPA are working with the district teams to upgrade monitoring tools that were prepared during the piloting phase of the programme. Eventually, the Bangladesh Nursing Council will be responsible for quality assurance as well as accreditation tools on a national level. Refresher trainings for community-based skilled birth attendants will be provided under a Continuing Midwifery Education programme in all districts. Community support systems are also being implemented which address questions such as preparation for safe delivery, recognition of danger signs and provision of community transport and funds for referral of women with obstetric emergencies. To ensure high-quality training and service delivery, clinical supervision of these community based skilled workers has been put in place, including reporting systems and accountability frameworks. Attention is also being paid to ensure avenues of professional growth.

Future plans are exciting – and ambitious. Each year between 2007-2010, an additional 60 upazilla will begin to provide training for some 1,800 new skilled birth attendants. Existing SBAs would be trained. From 2011 onwards, 464 upazilla are going to be covered per year by 60 district training centres, moving the country towards its Millennium Development Goal targets for deliveries by skilled attendants. By 2015 all rural upazilla would be covered by this programme.
In this region, rates of maternal mortality vary widely, from approximately 50 per 100,000 live births in China to between 370 and 530 per 100,000 in Cambodia, Lao People’s Democratic Republic, and Papua New Guinea. The proportion of births attended by skilled personnel are similarly varied, from a low of 21% in Laos to a high of 99% in Mongolia. The major causes of maternal death are postpartum haemorrhage, eclampsia, and infections in the priority countries. However, rates can be very different among the countries. For example, postpartum haemorrhage accounts for 41% of maternal deaths in Viet Nam and 30% in Papua New Guinea. The fourth leading cause of maternal death in Viet Nam is abortion, while in Papua New Guinea it is malaria.

Although the governments of the seven priority countries (Cambodia, China, Laos, Mongolia, Papua New Guinea, Philippines and Viet Nam) have each made strong commitments to reducing maternal mortality, some face severe challenges such as shortage of financial and technical support and serious weaknesses in their health systems. Accordingly, many of the regional office’s activities are in direct response to individual country requests or needs. For example, technical assistance was provided in Laos to help pilot-test an innovative maternity waiting home, which will help remote and poor areas to increase access to maternal health care services and mobilize community participation. At the level of national policy, assistance was provided to Viet Nam as it developed a strategy on neonatal health care, and expanded training on neonatal care, emergency obstetric care and comprehensive post-abortion care to an increasing number of provinces. And in Mongolia, the Department is working to help improve the capacity of health workers to provide maternal and neonatal health care, especially in remote areas, after years of low priority for midwifery skills. An ambitious programme has been mapped out to ensure that aimags (provinces) and soums (districts) have sufficient health care workers trained in pregnancy, childbirth, postpartum and newborn care (PCPNC) and other important components of the Making Pregnancy Safer agenda.

The regional office has emphasized a number of strategic focuses that apply to all or most of these countries. One is vulnerable populations, most notably poor women and adolescents. Efforts are made to link maternal and newborn health-related programmes with those on universal health care coverage, poverty reduction and gender equality. Many of these efforts take the form of advocacy activities aimed at achieving political commitment for these areas. For example, young people compose a major part of national populations and age-specific fertility rates are high among adolescents in many countries – as high as 97 births per 1000 women 15–19 years of age in Marshall Islands, and 81 per 1000 in Laos. This has brought MPS to collaborate closely with UNICEF and UNFPA in finding ways to improve sexual and reproductive health among the region’s young people. An important first step was achieved in 2006 with the agreement on a framework – developed in partnership by the agencies and several governments – to accelerate national action in this area.

**Managing structural change within health systems**

The regional office is also working to help countries manage changing patterns of service delivery, as they move from a traditional emphasis on government-based health services to one that includes the private sector and non-governmental providers. Professional associations are important partners in this process. In October 2006, the regional office organized a historic regional consultation in Shanghai, which brought together the heads of obstetricians’ and gynaecologists’ associations, midwives’ societies and directors of ten WHO collaborating centres on maternal and newborn health. More than 30 temporary advisers from seven priority countries and ten WHO collaborating centres participated in the workshop. As well as exchanging experiences and lessons learned on a technical level, the participants also discussed the ways...
professional associations and institutions can cooperate with the governments in making pregnancy safer and reducing maternal, perinatal and newborn mortality. Since then, the professional associations for obstetricians and gynaecologists in China, Mongolia and Philippines have adopted key MPS guideline documents including *Pregnancy, Childbirth, Postpartum and Newborn Care: A Guide for Essential Practice* and *Managing Complications in Pregnancy and Childbirth* for the use of their members.

**Sexually transmitted infections and HIV/AIDS**

Along with better family planning and higher standards of care at community and referral hospital levels, there is great potential to improve maternal and newborn health by linking programmes with those aimed at sexually transmitted infections (STIs) and other major diseases such as HIV/AIDS. In order to drive forward this agenda, the SEAR O and WPRO offices organized a consultation with UNICEF, UNFPA and UNAIDS in Kuala Lumpur in November 2006. More than 130 participants from 19 countries attended the consultation to finalize a framework for integrating prevention and management of STIs and HIV/AIDS into reproductive, maternal and newborn health services. Participants noted that it was the first time for many of them that they had experienced staff from two vertical programme streams (i.e., maternal and newborn health on one hand, and STIs and HIV/AIDS on the other) discussing how to work together in order to provide integrated service.

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**Re-thinking maternal and child health in China**

Over the past two decades China has significantly reduced maternal and child mortality rates. However, the pace of improvement has slowed down in recent years. In order to ensure that it will achieve its Millennium Development Goals on maternal and child mortality on time, the Ministry of Health conducted a joint study with UNICEF, WHO and UNFPA to identify problems and make recommendations for China’s maternal and child health systems. The review was completed in 2006.

As well as statistical analysis, the review gathered a great deal of qualitative data from field visits by local and international experts, illuminating some serious disparities regarding access to health services that exist between urban and rural populations, and between the different regions in China. Maternal and child mortality is three to five times higher in remote rural areas than in urban areas, and marginalized population groups as migrants and ethnic minorities are not covered effectively by the MCH network. Moreover, as the market economy becomes increasingly pervasive and government support weakens, MCH institutions are tending to place greater emphasis on treatment over prevention, and on paid over non-paid services. Poverty, increasing economic inequities, disparities in access to basic social services, and certain gender and cultural factors are all affecting the health of women and children.

Some key strategies and policy recommendations emerged from the review, many providing useful lessons for other countries in the region. It is recommended that the Chinese reaffirm the essential role that maternal and newborn health plays in society, recognizing it is a public good that should receive systematic and stable financial support provided by the government. Priority should be given to rural areas and poor urban populations, providing them with high-quality standardized services and effective referral systems, and ensuring that the most cost-effective interventions are accessible to all population groups.

At the review’s official launch, the Vice-Minister of Health said that the government will make full use of the conclusions, and added that maternal and child health was an “important factor in building a harmonious society”.

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9
Better information for the Solomon Islands

The Solomon Islands face high levels of maternal and infant mortality, teenage pregnancy and growing numbers of sexually transmitted infections. Although maternal and child health, family planning and reproductive health services have been improved in recent years, policy-makers have lacked data to determine which areas need attention and to assess programme effectiveness. At government request, WHO worked with the Ministry of Health to develop an information system integrating available data on antenatal and postnatal care, pregnancy and childbirth complications, pregnancy outcomes, and morbidity and mortality of mother and infant. The simple, user-friendly software consolidates and tabulates data for reporting, instantly converting data into information which can be used by health providers, programme managers, and policy makers.

After intensive pilot-testing, the system has been rolled to all provinces. One full year of data collection has permitted the Ministry of Health to create a detailed picture of maternal and child health in the country. It has been very useful in pointing out issues for further investigation, such as the possible relation of high stillbirth rates with malaria and frequent teenage pregnancy.
2006-2007 Budget allocation for Making Pregnancy Safer (in millions)

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IX Notes


### List of countries with very high (1000+), high (500-999) and medium level (200-<500) MMR

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### List of countries with very high (1000+), high (500-999) and medium level (200-<500) MMR

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<th>Country</th>
<th>Antenatal care (%)**</th>
<th>Deliveries in health facilities (%)***</th>
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<th>Maternal deaths</th>
<th>Stillbirth rate</th>
<th>Stillbirths (000)</th>
<th>NMR</th>
<th>Neonatal deaths (000)</th>
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<th>RO</th>
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<th>Number of stillbirths</th>
<th>% total</th>
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**Other countries**
## List of countries with very high (1000+), high (500-999) and medium level (200-<500) MMR

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<th>Deliveries in health facilities (%)***</th>
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<th>Maternal deaths</th>
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<tr>
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<td>12%</td>
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<td>12%</td>
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<td>92%</td>
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<tr>
<td>Maternal deaths</td>
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<td>Stillbirths</td>
<td>3,328,000</td>
<td>Neo-natal deaths</td>
<td>4,002,000</td>
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