CONTENTS

■ Foreword 7
■ In pursuit of coverage and quality 8
■ The Department
  ■ Norms and technical support 14
  ■ Partnerships and collaborative efforts 20
  ■ Monitoring and evaluation 22
  ■ Advocacy 24
■ In the regions
  ■ Building capacity to improve health systems - Regional Office for Africa (AFRO) 28
  ■ Assessing health and health services - Regional Office for the Americas (AMRO) 36
  ■ Strengthening maternal health care - Regional Office for South-East Asia (SEARO) 41
  ■ Promoting monitoring and evaluation - Regional Office for Europe (EURO) 46
  ■ Closing regional gaps in service coverage - Regional Office for the Eastern Mediterranean (EMRO) 50
  ■ Reaching out to women in rural areas - Regional Office for the Western Pacific (WPRO) 56

■ Budget 60
■ Annex 62
Vision

Our vision is a world in which skilled care at every birth is ensured for all women and in which mothers and their newborn babies notwithstanding their social, cultural, ethnic or religious background are assured access to comprehensive quality health services throughout all phases of their lives.
MPS Mission

Every day, 1500 women and over 10 000 newborn babies die owing to complications in pregnancy and childbirth. 98% of these deaths occur in the developing world. Most of them could be prevented through skilled care during childbirth and the management of life-threatening complications. The Department of Making Pregnancy Safer (MPS), with over 120 staff worldwide aims to reduce maternal, perinatal and newborn morbidity and mortality. MPS is working towards attaining the Millennium Development Goals 4 and 5 by accelerating the countries’ implementation of essential interventions to make pregnancy safer. In partnership with key stakeholders, MPS also supports country efforts to strengthen their health systems.

To this end, MPS focuses on four strategic areas, in cooperation with regions and countries:

- Building a conducive social, political and economic environment to support timely country actions;
- Responding to country needs and providing technical support to achieve universal coverage of essential interventions that will ensure skilled care at every birth within the context of a continuum of care;
- Building effective partnerships across relevant programmes and partners for coordinated actions in countries;
- Strengthening assessment, monitoring and evaluation for better decision-making by policy-makers and planners in countries.

Pregnancy is special. MPS is helping to make it safer.
Photo credits, clockwise from top left: WHO / Pallava Bagla, WHO / Marie-Agnes Heine, WHO / Christopher Black, WHO / Marie-Agnes Heine, WHO / Pallava Bagla, WHO / Marie-Agnes Heine.
The past year has been a busy one, with a great deal of solid work accomplished in the field of maternal and newborn health.

And yet, I must be frank, the year has featured a number of “downs” alongside the “ups”. The biggest down relates to the Millennium Development Goals 4 and 5, which aim to reduce child mortality and maternal mortality respectively. Some countries are on track to meet the targets related to these Goals but many, particularly in Africa but also in other regions, are not. A few countries, mainly in conflict areas, are actually going backwards in terms of key indicators such as coverage by skilled birth attendants and access to essential obstetric care.

One of the ups was the Women Deliver Conference in October. There was a great deal of energy and optimism expressed at the conference and I got a sense of real commitment to making pregnancy safer for millions of women in priority countries. More ups are evident to me every time I visit one of our country offices and see the dedication of staff doing the work on the ground. I think that their professionalism in technical assistance, capacity building, data collection, and other key tasks are all crucial in order to make progress.

Certainly, achieving the Millennium Development Goals depends not just on the work we do in our “own” field but on progress in broader areas such as improving health systems and securing health-care financing. However, we should take heart as all the evidence shows that maternal and newborn services are powerful justifications for public health approaches. The demonstrable fact is that more and better-trained skilled birth attendants, strong referral systems, improved antenatal and postnatal services are among the most cost-effective uses of public funding that exist.

In 2008, we must continue to get that message out. I am sure that, in doing so, the ups will eventually outweigh the downs in all regions and for all women.
IN PURSUIT OF COVERAGE AND QUALITY

By Monir Islam
Director
Making Pregnancy Safer

A few months ago, in the run-up to the Women Deliver Conference in London, I was struck by a comment in the leading medical journal The Lancet. The conference was one of the most high-profile events that MPS was involved with in the past year, and a great deal was written about it, both before and after it was held. Yet in a very few words, the comment seemed to zero in on an important issue that bears thinking about: “Generally, we know what to do to save the lives of women and mothers – and, in 2007, we do not need another technical conference to debate the issue of basic strategy.”

As it happened, Women Deliver was far from being just another technical conference (see page 24). But The Lancet provided a timely reminder of an important fact: the Making Pregnancy Safer agenda is a pretty simple and clear one, backed by a high degree of consensus among practitioners and researchers. In essence, organizations that care about maternal and newborn care need to concentrate on the three “pillars” of the agenda:

- family planning so that women only get pregnant when they want and are ready to do so;
- skilled care during pregnancy, and particularly during delivery;
- emergency obstetric care to deal with complications.

These pillars get even better results if they are accompanied by good antenatal and postnatal care.

From the services point of view, that’s basically it. As the teenagers say, “It isn’t rocket science”. The equipment and medicines required are not “high-tech”, the training is rigorous but not complicated, and the costs are predictable and manageable.

Gaps in coverage and quality

So why, 20 years after the landmark Safe Motherhood Conference in Nairobi, are so many countries in danger of missing the targets set by the Millennium Development Goals for reducing maternal and infant mortality? Why are there 75 million unwanted pregnancies each year, and 536 000 deaths from complications during childbirth? And why is it that a rising proportion – currently 40% – of child deaths are newborns?

A large part of the answer is contained in one word: “coverage”. In some priority countries, there are simply not enough skilled personnel and not enough facilities (clinics, hospitals, etc.) to provide care for all mothers and newborns. In others, the coverage is unequally distributed between cities and the countryside. For instance, while approximately half of the world’s
women have a skilled birth attendant present during delivery, this proportion is highly skewed: while three quarters of urban women have an attended birth, only about one third of rural women do so. Coverage is also skewed by income – in fact, recent research in 50 countries shows that skilled care at delivery is the health service where the gap between rich and poor is the widest (compared to immunization or treatment of fever, for instance)\(^3\). Finally, coverage of specific services – even basic ones that are known to work well and do not cost much – is far too low.

Why do we have such inequities in coverage? On the “supply” side, perhaps the biggest problem is lack of trained staff, although other important factors include insufficient equipment and medicines, and poor distribution of facilities. But even if the staff and equipment are available, the fact is that many women are prevented from accessing services by cost barriers, and by obstacles related to women’s low status in many societies.

And of course the coverage gap is not the only problem. There is also a quality gap that needs to be confronted. Although we know of many examples of people doing great work in difficult conditions, the fact is that many health-care staff are under-paid, under-trained and under-motivated. Similarly, a great deal of equipment is badly maintained, improperly applied, and simply not appropriate for the job. As a result many women and newborns are not getting an adequate standard of care, which has a negative impact on the care-seeking behaviour of women.

Moving ahead

Both coverage and quality have to be addressed at the same time if we are ever to achieve the Millennium Development Goals 4 and 5. That will take a lot of work on the individual components that fall within the three pillars of maternal and newborn health. But it is unrealistic to imagine that the problem is purely technical in nature. The three pillars mentioned above need to be built on a solid foundation that includes advancing the rights of women, political commitment, a functioning health system and adequate financing.

In 2007 MPS continued its work with both the technical pillars and the foundations. On a purely technical level, we helped to improve some of the tools that can really make a life-or-death difference in a difficult delivery. See, for example, the field-testing of a lighter, simpler vacuum extractor (a cup attached to the head of the baby using suction to help guide the newborn out) which can be used by a single operator – a very helpful advance in places where skilled personnel are scarce (see page 19). To help increase the availability and expertise of skilled birth attendants, the Department continued its strategy “training of trainers” with partners such as the Faculty of Nursing at Thailand’s Chiang Mai University (see page 45) and the University of Chile’s School of Midwifery (see page 37). We worked on improved approaches to using existing resources more effectively, such as in the FANC initiative in Africa (see page 30) which increases the benefits that women get from each visit to their antenatal clinic.

Footnotes:
A particularly gratifying aspect of the year was the success achieved in raising the international profile of maternal and newborn health through conferences such as Women Deliver and the London Meeting of Women Parliamentarians (see page 24). We were very pleased to see the attention drawn to maternal health care at the World Economic Forum in Davos, when some very influential women from the worlds of politics, business and the arts spoke their minds on the tragedy of maternal mortality (see page 25). Such events are an effective means of prioritizing the Making Pregnancy Safer issue not just among regional and national agendas but on the global stage. Less glamorous, but equally important, we continued to emphasize building the evidence base through epidemiological surveillance and other data-gathering approaches.

As we move forward in 2008 and beyond, MPS is also helping to raise awareness and response to maternal and newborn mortality and morbidity in countries experiencing crisis through natural or man-made disasters. Recent experiences following the Tsunami and the Pakistan earthquake have shown how maternal complications become far riskier for women in times of weakened or non-existent infrastructure and resources. Therefore our hope is to help build national and regional capacity to prepare for, respond to and recover from such emergencies.

Let me finish by noting that our work is done in cooperation with a wide range of partners, and support comes from a variety of sources, many of whom are mentioned in this report. I thank them all for their help, and in the current year and those to come, I look forward to continuing these partnerships, making them stronger and developing new ones towards the global effort of promoting maternal and newborn health.
FIGURE 1.
Childbirths assisted by skilled birth assistant - DHS data from 2001 - 2006 (31 countries)
Characteristic of delivery: Percent distribution of live births assisted by a skilled birth attendant in the last five years preceding the survey.

Childbirths delivered by caesarean section - DHS data from 2001 - 2006 (23 countries)
Characteristic of delivery: Percent distribution of live births delivered by caesarean section in the last five years preceding the survey.

Footnotes:
4) The Morocco Survey was a collaboration between MEASURE DHS+ and PAPFAM of the League of the Arab States.
5) Data collected for women aged 10-49, indicators calculated for women aged 15-49.
In 2007, the Department of Making Pregnancy Safer went through a process of expansion and consolidation. The Department now has over 120 dedicated staff divided between 75 focus countries, at the regional offices in each of WHO’s six regions (including three sub-regional offices in sub-Saharan Africa), and at headquarters in Geneva. The country offices focus their efforts on strengthening national health systems through technical and other assistance, while regional offices exercise a coordinating and planning support function to ensure that country offices operate at maximum efficiency and effectiveness. MPS headquarter staff offer a formidable array of technical expertise in support of country and regional initiatives, but also take on programmatic responsibilities in a number of cross-regional projects.

2007 was also a year for actively reaching out to enhance the Department’s working relationships with other programmes within WHO. This reflected the WHO’s emphasis on “joined up” health-systems approaches rather than vertical programmes (i.e., isolated by mission or professional discipline). Especially fruitful were relations with the departments of HIV/AIDS, Malaria, Nutrition, and Reproductive and Child Health, as is discussed in greater detail later in this report. The Department also deepened its work with a broad range of partners outside WHO that offer strong expertise or resources in the field of maternal and newborn health including UNICEF, UNFPA, The World Bank, international non-governmental organizations, academic institutions, the private sector, and professional bodies such as the International Confederation of Midwives (ICM) and the Fédération Internationale de Gynécologie et d’Obstétrique (FIGO).
An important part of this outreach effort is a programme of orientation workshops, which permits MPS to engage with key staff at all levels of partner organizations, discuss practical means of pursuing common objectives, and exchange information on recent developments in maternal and newborn health. The workshops serve to make such partners fully aware of the scope of MPS strategies, approaches and tools, and are complemented by a training programme directed to programme managers and health-care providers who are interested in or may need guidance on specific areas of work. During 2007, the Department held two orientation workshops in Geneva and Harare, Zimbabwe for staff from governments, donor agencies, international organizations, research institutions, the private sector and non-governmental organizations involved in maternal and newborn health. The participants were sponsored by their employers.

In short, the Department continued with the support of policy formulation and strategy development as well as the setting of evidence-based norms and guidelines, the support of their implementation and the monitoring of progress.

**The global reach of the Making Pregnancy Safer agenda**

The Department of Making Pregnancy Safer is the principal means by which WHO pursues its mandate to help Member States improve maternal and newborn health at country level. The Making Pregnancy Safer agenda is one which has developed over many years. A particular highlight was the Safe Motherhood Initiative which was launched in 1987 by WHO, UNICEF, UNFPA, The World Bank and other organizations directly concerned with maternal health. The Safe Motherhood Initiative was complemented in following years by a number of child-survival programmes aimed at reducing infant mortality, especially in the postnatal period.

More recently, these initiatives have been reinforced by the Millennium Development Goals (MDGs), which provide quantifiable, time-bound targets for countries. However, while some degree of progress can be seen in most of the 75 priority countries in which the Department works, accelerated efforts are urgently needed if the global community is to achieve MDG 4 (reducing the mortality rate of “under-fives” by two thirds by the year 2015) and MDG 5 (reducing the maternal mortality ratio by three quarters by the year 2015). Nor will the MDG 6 targets of reversing the spread of HIV/AIDS and malaria occur without greater efforts against these diseases before, during and after pregnancy.

The Department’s mission and activities give it an important role in helping countries meet these objectives. The health of mother and infant are inextricably bound together: improving the health of the mother during pregnancy is a key measure for improving the health of the child. Equally, interventions to keep newborns healthy are more effective if a mother is well enough to do her best for her child. Moreover, as the first 28 days of life are the period when a child is at greatest risk of death, investing strongly in the health of newborns is a key strategy to improve the survival and development of children under the age of five.
MPS places great emphasis on identifying and promoting evidence-based clinical and programmatic interventions that give the greatest return for the human and financial resources invested. In particular the Department focuses on the main causes of maternal death and disabilities, being sepsis, haemorrhage, eclampsia, obstructed labour and obstetric fistula. It also deals with the main causes of newborn death like asphyxia and infections. These causes are widespread in developing countries, whereas they carry relatively little risk to mothers and newborns in industrialized countries. Care and preventive measures for mother and baby such as antenatal care, care in normal childbirth, and essential newborn care are also a focus of the Department’s work. MPS therefore works hard to raise standards and train health-care staff to deal with such conditions, and to adapt proven clinical practices to local conditions in individual countries. While these constitute the central concern of the Department, it takes care to situate them in the context of the essential health systems (organizational structures and policy environments) needed to deliver such interventions. Always at the forefront of MPS’s efforts is the basic concern of ensuring that enough trained personnel are available to carry out the necessary programmes.

Cooperation in the area of maternal and newborn health

In order to stay abreast of clinical and organizational advances, the Department maintains ongoing relationships with leaders in practice and research. The practical fruit of these relationships can be seen in the long list of research projects, publications, trainings, and advocacy events. The Department’s array of partners is wide-ranging, and includes professional associations, educators, training institutions, nongovernmental organizations engaged in services or advocacy, and experts engaged in advancing the science of health care.

A key achievement for the Department’s work in 2007 was to establish consensus on the need to focus on the interdependence of the mother and her baby in health programming, and strengthening the attention paid to newborns within maternal-newborn health (MNH) programmes. This was achieved by providing training on essential newborn care, and through collaboration with partners, notably with WHO’s Child and Adolescent Health Department. MPS also published estimates of perinatal and neonatal mortality as of 2004, providing vital information for countries working to strengthen their MNH programmes.6
Strengthening competencies in newborn health

Building on the experience of successful workshops held in 2006, MPS helped facilitate two multi-country workshops in 2007 on strengthening newborn care within maternal and child programmes. The first was organized in February by WHO/SEARO in Yangon, Myanmar and was attended by national maternal and child health-programme managers from Bangladesh, India, Indonesia, Myanmar and Nepal. In addition to capacity development, the workshop also resulted in the first draft of a strategy to strengthen newborn health in the participating countries. The second was organized in July by WHO/AFRO in Libreville, Gabon. Both workshops were carried out in collaboration with WHO’s Child and Adolescent Health Department, UNICEF, UNFPA, and other partners such as regional academic institutions. In the Yangon workshop, for instance, valued contributions were made by the International Centre for Diarrhoeal Diseases (Dhaka, Bangladesh), the All India Institute of Medical Sciences (New Delhi, India), and the Mother and Infant Research Activities (Kathmandu, Nepal).

The year also saw an important expansion of the Department’s essential newborn care (ENC) activities. In January, a national training of trainers in ENC was organized for Iraqis, with the objective of creating a pool of trainers from the regions of Baghdad, Basra, and Kurdistan. Although for security reasons, this training workshop was held in Jordan, replication of ENC training was rolled out through these regions during the year.

Support from the European Commission

To accelerate the attainment of the health-related Millennium Development Goals (MDGs) in African, Caribbean and Pacific (ACP) countries, the European Commission and WHO jointly engaged in an EC/ACP/WHO partnership programme. Its purpose is to enhance national capacity for the formulation and implementation of health policies including a strengthened engagement of the health authorities. The focus lies on poverty reduction strategies, sector wide approaches and clear budget-support processes, in order to scale up programmes to accelerate the achievement of the MDGs. Four areas of work were elected as the key components to strengthen country capacities at the strategic planning and health-services delivery levels – they include progress in the achievement of the health-related MDGs, Making Pregnancy Safer, disease surveillance and control programmes, and health information systems.

Eight countries were targeted for this programme with the support of the WHO regional and country offices. The eight being, Angola, Burkina Faso, Guyana, Haiti, Kenya, Malawi, Niger, and the United Republic of Tanzania. The goal of the MPS area of work is to provide technical support for the development of policies, strategies, norms and standards for improving access, quality and use of maternal and newborn health-care services. The budget for safer pregnancy-related activities in 2006-2007 was US$ 14 million. During 2007 MPS continued the support activities begun in 2006 to lay the ground work for action in the eight ACP countries. Many activities are conceived not only to respond to individual country needs but as inter-country activities in order to facilitate sharing of experiences and to strengthen regional alliances. To this end, several inter-country and national workshops have been held including training on newborn care, costing and resource planning. Building partnerships has been one of the main tasks this year and has required new ways of planning and implementing WHO programmes - this has been an integral part of MPS’ work within the WHO HQ, with regional and country offices, and with partner agencies. This has also been key to MPS support to country programmes - emphasizing the importance of partnerships between partners at the national level but also between the health services, regional and local councils and non-health service actors to address maternal-newborn health (MNH) needs.

Footnotes
Training in Africa

In the African Region, three regional trainings of trainers were organized during 2007. The first was in Nairobi, Kenya, with extensive participation from five Anglophone countries (Kenya, Malawi, Uganda, the United Republic of Tanzania and Zambia). The second, held in Maputo, Mozambique, was attended by health workers and officials from Lusophone countries (Angola, Cape Verde, Mozambique, and Sao Tome and Principe), while the third, in Lusaka, Zambia, drew its attendance from another set of Anglophone countries (Nigeria, Swaziland, Zambia, Zimbabwe). During the course of the year, national replication of the ENC trainings was conducted with the support of MPS in Kenya, Malawi, and the United Republic of Tanzania, with more planned for 2008. An important aspect of the workshop in Maputo was that it offered an opportunity for testing the Portuguese translation of the ENC course materials. With this done, replication of the ENC course is now on track to begin in the Portuguese-speaking countries of Africa. The ENC trainings are also scheduled to take place in Francophone countries in 2008, and material is being translated into French.

An important documentary support to these efforts was completed in 2007 with the publication of the Consensus on essential competencies in the African Region. This follows over a year of work, which has led to extensive revision of midwifery curricula in Ethiopia, Malawi, Nigeria and the United Republic of Tanzania, and ongoing efforts to harmonize midwifery training in West Africa. The list of competencies has also been used to develop a matrix of the generic skills-mix needed in the African Region to ensure skilled care at the various levels of the health system.

Photo credit: WHO/Marie-Agnes Heine.
A desperate shortage of maternal, newborn and child health professionals

One of the most serious problems facing maternal and newborn health programmes is a shortage of qualified staff. This problem has many causes, which vary from country to country, but are often rooted in the same factors. On the “supply” side, these include a shortage of places in training institutions, lack of training and recruitment policies on the part of national governments, and low levels of resources invested in maternal and newborn health. At the same time, some health systems face a great challenge in retaining existing skilled staff who are tempted either to leave the country for better opportunities abroad, or who leave the profession to pursue other types of work.

MPS has consistently targeted this problem over the years. In November, the Department held a three-day technical consultation on “Scaling up the maternal and newborn services workforce”, which was attended by 54 experts from all regions of the world. The participants represented a wide range of the different disciplines that can contribute to maternal and newborn health, from frontline services to epidemiologists and health planners. Twenty-three participants came from country governments, donors, academic and professional bodies, while seven represented UN agencies and other international partners. The remainder were WHO staff from country and regional offices and from different units of the Secretariat in Geneva. In addition to discussion of broad issues such as ways to make the most of the existing workforce, the consultation did preliminary work to develop a tool to assess the maternity workforce which will be tested in countries in 2008.

Developing leadership capacity in maternal and newborn health

In June, MPS carried out an innovative training course in Salzburg, Austria. The WHO workshop on “Reducing maternal and prenatal deaths” gathered together a group of experts from MPS priority countries with the purpose of developing their leadership capacity in the field of maternal and newborn health. The invited experts were recognized as being well placed for this strategic role owing to their work at teaching institutions, active membership in professional organizations, and participation in designing and implementing equitable services in their countries.

The workshop was organized by MPS in collaboration with the American Austrian Foundation, with funding support from the Government of Austria. The 28 participants came from 11 priority countries (Bangladesh, Iraq, Kenya, Myanmar, Nepal, Pakistan, Sri Lanka, Sudan, Uganda, the United Republic of Tanzania, and Viet Nam) and included paediatricians, obstetricians, midwives, nurses and programme managers. Presentations and discussions covered clinical problems and care related to three major problems (preterm birth, asphyxia and infection) as well as methods of improving perinatal care at primary, secondary and tertiary levels of care. At the end of the workshop, participants discussed plans for translating the workshop experience into practice in their home countries.

Empowering individuals, families and communities (IFC)

WHO’s support to countries has generally focused on clinical aspects of maternal and newborn care. MPS has worked hard in recent years to ensure a more comprehensive approach to making pregnancy safer. This includes efforts to ensure that MNH strategies include important elements of health promotion strategies, particularly inter-sectoral action, community participation and finding ways to develop the capacity of women, their families and communities to better care for themselves. While this has clearly been taken up in the regional strategies,
efforts continued in 2007 to support programmes in putting the IFC approach into operation. Tools and training modules are being finalized and discussions continue with WHO country offices on how to move forward in this area. There is still a need for orientation of the Department’s country counterparts, including staff of ministries of health and WHO, regarding the use of these tools.

In 2007 the Department continued testing important tools such as the IFC start-up kit and its Participatory community assessment guide, the handbook for counselling and communication for MNH, and the training package for operationalizing empowerment in MNH programmes. Regional meetings were held with AMRO, SEARO and EMRO. Initial work is under way by MPS and partners in Afghanistan, Bangladesh, Burkina Faso and Colombia, and ongoing work has continued in El Salvador and the Republic of Moldova. As a follow-up to a recommendation from the PAHO regional meeting, a certificate programme in “Health promotion, empowerment and the MDGs” for MNH programme managers is under development with the University of Antioquia in Medellin, Colombia, supported by MPS, PAHO and Enfants du Monde (a Swiss nongovernmental organization).

Technical support for clinical interventions

The Department exercises an important role as a source of technical advice to countries on interventions for maternal and newborn care. These efforts are centred on the “Integrated management of pregnancy and childbirth” (IMPAC), which is both an approach and a set of tools (manuals, guidelines, etc.). As the Department is fundamentally dedicated to evidence-based health care, it takes every opportunity to support efforts to build the evidence base and, in turn, promote standards.
and policies based on that evidence. Recently, an MPS-issued guideline document, *WHO recommendations for prevention of postpartum haemorrhage*, was singled out by The Lancet, as a strong example of the evidence-based standards required to meet the needs of low-income and middle-income countries and disadvantaged populations.\(^7\)

**Monitoring labour**

Notable progress was made in 2007 on tools to improve the safety of childbirth. One was an interactive training aid to help quickly and effectively train birth attendants in the use of partographs. The partograph is a simple method to describe the progress of labour in a graphic form, and thus is invaluable in prolonged and obstructed cases of labour (such cases are the source of many maternal deaths and disabilities such as infection, obstetric fistula and nerve injuries, as well as stillbirths, neonatal deaths due to asphyxia, and long-term disabilities). When used correctly, the partograph gives an early indication of abnormal progress of labour, permitting timely interventions to investigate and deal with the complication. WHO strongly promotes the use of the partograph, and is therefore highly interested in training health providers in its use. MPS has collaborated with the health consultancy John Snow, Inc. to develop a training aid which is interactive and may be used in classroom teaching or as a self-learning module. After feedback from demonstrations at regional offices during 2007, the training will move into field-testing in 2008.

Progress was also made in 2007 on an improved method of vacuum extraction (or "ventouse") delivery. Vacuum extraction is a means of assisting childbirth by attaching a cup to the head of the baby using suction, and then guiding the baby out. Its use is recommended in the IMPAC guidelines *Managing complications in pregnancy and childbirth*, and is included in the Midwifery educational modules and the widely distributed *Inter-agency reproductive health kit*. However, the conventional vacuum extractor is bulky as it includes a metal cup, long tubing, a large glass bottle, and a pump to create vacuum. Thanks to the pioneering work of Dr Aldo Vacca, a new, much smaller and lighter cup, which can be used by a single operator, is now available commercially in some developed countries. MPS has been working with UNFPA and the nongovernmental organization Médecins Sans Frontières to field-test the new cup in emergency and refugee situations in order to assess the challenges faced with the use of the new cup in resource-limited settings.

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Footnotes:
Integrating HIV prevention

In collaboration with WHO’s Department of HIV/AIDS, MPS has developed draft clinical training materials within WHO’s “Integrated management of pregnancy and childbirth” (IMPAC) and “Integrated management of adolescent and adult illness” (IMAI) guidelines. These aim to strengthen the capacity of health service providers to integrate HIV prevention and treatment within health services for mothers and newborns. In a related development, 2007 saw field-testing of an important training tool called the Antenatal care midwifery educational module. The need for the module arose from recognition that (a) antenatal care in Africa needed strengthening and (b) basic competencies to care for pregnant woman are best acquired by health providers before they receive training on preventing mother-to-child transmission of HIV.

MPS supported and participated in field-testing in Uganda in March 2007, in collaboration with WHO’s HIV/AIDS Department. The module is expected to be finalized soon.

The Department’s work within The Partnership for Maternal, Newborn and Child Health (PMNCH) also continued in 2007. PMNCH is an umbrella organization of key partners working in the areas of maternal, newborn and child health. Among other functions, it performs an important advocacy role in health and development fields. The Department works hard to develop and maintain partnerships with a wide range of organizations that work on maternal and newborn health. These range from international agencies to research institutions and professional associations, as well as multi-stakeholder structures such as the Partnership for Maternal, Newborn and Child Health (PMNCH).

Some of this collaborative work aims to keep MPS up-to-date with major structural issues that effect health on a global scale. For instance, the world is undergoing a process of demographic transition in which the majority of the population in developing countries is increasingly composed of young people. This means that adolescent reproductive health has become more important than it ever was. With this in mind, MPS is working with several WHO departments and The World Bank on finding ways to expand relevant health services to this age group.

Addressing malaria in pregnancy (MIP) is crucial to the attainment of maternal and newborn health goals. The greatest burden posed by malaria on the health of pregnant women is currently in sub-Saharan Africa, where 25 million pregnant women are at risk of malaria (P. falciparum) infection annually. There is also a substantial burden in Latin America, South-East Asia, the Eastern Mediterranean and the Western Pacific Region. MPS is working very closely with the global Roll Back Malaria Programme and is presently the Chair of the working group for malaria in pregnancy. In 2007, the Department hosted the first joint meeting of two important networks which cover English and French speaking Africa respectively: the Malaria in Pregnancy Eastern and Southern Africa Coalition (MIPESA) and the Réseau d’Afrique de l’Ouest contre le Paludisme pendant la Grossesse (RAOPAG). The meeting was an important step in harmonizing the work of these networks with the sub-regional networks of Roll Back Malaria, and also with the WHO/AFRO malaria and reproductive health inter-country support teams. This harmonization should help greatly in scaling up MIP interventions in the African Region.
role in certain countries. In 2007, for example, national PMNCHs were established in Nigeria and the United Republic of Tanzania, providing a new avenue of high-level advocacy with key decision-makers. The Director of MPS currently sits on the PMNCH working group on effective interventions.
The Department’s support for monitoring and evaluation (M&E) in countries reflects its importance – but too often forgotten is its role in improving the efficiency and effectiveness of services, the quality of decision-making, increasing and providing mechanisms to make both personnel and systems accountable. M&E is also essential to advocacy efforts with donors and partners, providing necessary information about the management of both financial and human resources. Unfortunately, few developing countries have effective M&E systems, and face a variety of challenges including lack of (or poor quality) data, inadequate analysis skills, lack of feedback mechanisms to channel useful information to different levels of the health services, and lack of coordination of information systems.

The Department cooperates with a variety of partners on improving methodologies for the monitoring and evaluation of maternal and newborn care. For example, one of the most important data-gathering exercises in the field of health is the Demographic and Health Surveys (DHS), which are nationally representative household surveys implemented every five years in over 75 countries. The surveys make available key information on population and health in countries by collecting a wide range of relevant data, including significant data on maternal and newborn health. In 2007, MPS conducted a major comparative analysis and a trend analysis through secondary analysis of DHS datasets which focused on 17 indicators related to maternal and newborn health in 72 countries. The secondary analysis served to highlight country situations and to indicate health trends in countries over time. It also shed new light on issues such as geographical and socio-economic disparity in access to maternal and newborn health services. By May 2008, the analyses will be delivered to countries in printed copies and on an interactive CD. It is hoped that they may serve as a practical tool at country level to help governments and their partners identify priorities for programme planning, resource allocation and resource management.

A major task over the past few years has been to help establish a “culture of M&E” within country programmes, particularly in the African Region. One focus of the Department is to facilitate in-country use of data as a starting point in decision-making. An example of such an effort was to contract with the Nairobi-based Urban Research and Development Centre for Africa (URAD-CA) to assist in the analysis of African data from the WHO “Global survey on maternal and perinatal health”.

Photo credit left: WHO / Marie-Agnes Heine.
Gaining in-depth knowledge about maternal, newborn and child health services

MPS and WHO’s Department of Child and Adolescent Health (CAH) are jointly developing a household survey tool to measure the coverage of maternal, newborn and child health interventions, and to evaluate their delivery. The tool is designed to be relatively simple and low-cost, limited to a reasonable number of questions, and appropriate for use at district or sub-regional levels. Moreover, it can be implemented in approximately one month, so results can be available quickly. Focused on collecting information useful for programme management at local level, it has the added benefit of complementing the large-scale Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), which are not conducted frequently enough for routine programme management. The survey tool covers knowledge, practices, coverage, and delivery channels related to priority interventions in the areas of prenatal care, care during delivery, newborn care, infant and young child feeding, immunization, Vitamin A dispensation, case management of the sick child (fever/malaria, cough, and diarrhoea), health expenditure for children and adolescents.

Peru was selected for pilot-testing this survey tool, which was formally known as the “Maternal, newborn and child health delivery channel survey”. Data collection was conducted during the month of June 2007 in three provinces (Calca, Canas and Paucartambo). Staff from CAH and MPS travelled to Cusco to support the organization and training of the survey team. Preliminary feedback was ready for presentation in July, and was followed by more in-depth reporting to local authorities in September.

Results from pilot test in Peru

The surveys show that the unmet need for contraception in the three provinces is high. Just under half (48%) of interviewed women who did not want to become pregnant reported that they were not using any contraception; of these, 59% reported that the reason for not doing so was that the partner did not want to use it. Antenatal care was almost universal but only 42% of the women received their first antenatal care visit during the first trimester of pregnancy (“unawareness of pregnancy” was the most cited reason for not seeking care). Two thirds of women interviewed reported having received at least once the following four specific services: blood and urine sample taken, and blood pressure and weight measured. Some 78% of the women gave birth with the support of a skilled birth attendant.

Data collected on women’s knowledge showed low recognition of danger signs for themselves and their babies during pregnancy and after birth. For example, only 40% of the mothers were able to identify two or more danger signs which should result in the newborn being taken to a health-care provider immediately; 48% of the mothers were able to identify two or more of the pregnancy danger signs. The “delivery channel” for such danger signs (i.e., the means by which the information reaches women) was found to be predominantly the skilled birth attendants, which included nurses, midwives and doctors.

A variety of lessons were learnt from the experience in Peru. The scope of the survey (covering the continuum of care from prenatal to adolescent services) generated major interest among the country’s health-care providers, which may have been a factor in its success. The experience indicated that it was feasible to carry out all survey modules, but it may take up to seven or eight weeks; moreover, time needs to be budgeted for the interpretation of results with staff from the area surveyed. The next field test should investigate feasibility of using personal digital assistants (PDA, handheld computers) for more efficient data collection.

Further pilot-testing will be carried out in the United Republic of Tanzania in 2008 using an English-language version of the survey. This should permit the tool to be finalized and made available to countries around the world.
One of the Department’s most important missions is to broaden support for systematic improvement of maternal and newborn health. To this end, MPS uses a variety of means to increase public awareness and draw support from the highest level of decision-makers. In 2007, the Department organized a number of high-level events which successfully accomplished both of these objectives.

Meeting of Women Parliamentarians

In March 2007, MPS was proud to organize the Meeting of Women Parliamentarians in cooperation with Sally Keeble, member of the parliament of the United Kingdom of Great Britain and Northern Ireland (United Kingdom) in London. During the two-day conference, parliamentarians from developed and developing countries discussed key policies and interventions to improve maternal and newborn health and to achieve the health-related Millennium Development Goals. Key participants included: Mrs Cherie Blair, international lawyer and wife of the then Prime Minister of the United Kingdom; Mrs Sarah Brown, a well-known advocate for maternal health and wife of the present Prime Minister of the United Kingdom; Mrs Liya Kebede from Ethiopia, the supermodel who is WHO’s Goodwill Ambassador for Maternal, Newborn and Child Health; Hon. Olive Masanza from Malawi; the First Lady of Lesotho, Mrs Mathato S. Mosisili; and Hon. Faida Mohamed Bakar from the United Republic of Tanzania. The parliamentarians shared their experiences and reaffirmed their commitment to advancing investment in women’s health-care needs, and to advocate for better health systems.

Women Deliver Conference

A second high-profile international event in 2007 was the Women Deliver Conference that took place in London in October. Working together with UNFPA, UNICEF, the World Bank and major nongovernmental organizations, WHO organized this global conference to mark the two decades since the Safe Motherhood Initiative was declared in Nairobi. The importance of the event, in which the WHO Director-General Dr Margaret Chan was a featured speaker, was signalled by The Lancet (13 October, 2007):

The title for the safe motherhood 20th anniversary conference carries, quite deliberately, multiple meanings – women deliver babies, certainly, and that is a central theme of the conference. But women also deliver in many other ways: food, goods, and income for their families; education, affection, and care for their children; and energy, creativity, and inspiration.
MPS helped prepare the overall event as a member of the conference core planning group, and chaired a number of panel discussions and plenary debates focusing on maternal and newborn health and survival. During the conference, MPS launched the “Global strategy on the elimination of congenital syphilis” together with WHO’s Department of Reproductive Health and Research. At an exhibit stand shared with other WHO departments, MPS informed delegates on its activities and provided them with new relevant documents and publications on maternal and newborn health issues.

for their communities. The Women Deliver conference is a celebration and acknowledgment of the many ways in which women are the backbone of society – and a vigorous call for that role to be recognised and supported, not only because women deserve it, but also because societies need it.

A “power evening” for maternal health

In January, hundreds of the world’s most influential people gathered in Davos, Switzerland for the World Economic Forum. Among the many formal and informal gatherings at the forum was a dinner at which several outstanding women from the worlds of fashion, politics, music and business made urgent appeals for action to reduce maternal mortality. The speakers were Queen Rania of Jordan; Sarah Brown, the well-known advocate for maternal health and wife of the British Prime Minister; Indra K. Nooyi, CEO of PepsiCo; Wendi Murdoch, television executive and wife of media mogul Rupert Murdoch; the rock star Annie Lennox; and the former Nigerian Finance Minister Ngozi Okonjo-Iweala. They spoke about different aspects of women’s health around the world, and the desperate need to raise the issue in development priorities. And they have continued speaking out, in different ways. In December, for example, Sarah Brown published an article on maternal health in the British journal New Statesman. Her article explicitly tied maternal health to the overall pursuit of development: “To meet any of the Millennium Development Goals, we need the will, the means and the momentum. We have seen this in relation to vaccinations, free education and the fight against Aids. Now we must see it on the issue of maternal death...”

Footnotes

In their final statement, the 70 cabinet ministers and parliamentarians present pledged to make the achievement of MDG 5 “a high priority on the national, regional and international health agenda”. The three-day event also sparked announcements of new funding, including more than US$ 200 million by the United Kingdom to UNFPA to advance women’s reproductive health worldwide, and US$ 11 million from the John D. and Catherine T. MacArthur Foundation to distribute new technology against blood loss after childbirth in India and Nigeria.

Communicating with the world

The Department continued to back up its advocacy work through both paper-and web-based publications. 2007 saw the distribution of issue 5 of the MPS Newsletter, which was dedicated to the 20th anniversary of the Safe Motherhood Initiative. The Department also strengthened the content of its website in a number of ways, including the introduction of audio files and display photos covering particularly important meetings and conferences. Increasing numbers of “visitors” to the website are doing so to access documents and publications, and MPS is therefore making efforts to ensure that as many of these as possible are made available online without undue delay. In 2007, a number of documents received over 10 000 “hits” from readers. The most downloaded was *Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice*, closely followed by *Making a difference in countries: strategic approach to improving maternal and newborn survival and health*, and *Neonatal and perinatal mortality*.

Photo, from left: WHO Director-General Dr Margaret Chan, Dr Mushtaque Chowdury (Deputy Executive Director of Bangladesh Rural Action Committee and co-coordinator of the Millennium Task Force on child health and maternal health) and Mr Assane Diop (Executive Director, Social Protection Sector, International Labour Organization) at Women Deliver Conference 2007, London. Credit: WHO / Christina Zück.
Contributing to the global store of knowledge

MPS takes great pride in the number of articles written or co-authored by MPS staff which appeared in some of the world's most prestigious medical journals in 2007. A partial list of these includes:


Bacci A et al. The introduction of confidential enquiries into maternal deaths and near-miss case reviews in the WHO European Region. Reproductive Health Matters, 2007, 15:145-152.


IN THE REGIONS

Building capacity to improve health systems

Regional Office for Africa (AFRO)

Where are the road maps taking us?

It is now almost four years since WHO/AFRO and partners undertook a decisive turn in their approach to maternal mortality reduction in the African Region: *The Road Map for accelerating the attainment of the Millennium Development Goals related to maternal and newborn health*. In essence, a road map is a strategic plan to accelerate efforts to reduce maternal and neonatal mortality by providing strategic direction and partnerships, and by enabling country-level monitoring.

Conceived as a remedy to the long-standing problem of fragmented, uncoordinated efforts by many different actors, the road map approach was adopted as the regional strategy for increasing investment in maternal mortality reduction at institutional and programme levels. MPS took on responsibility for helping countries and their partners to elaborate national road maps and to implement them, in particular by developing a number of tools for planning, capacity building, monitoring and evaluation.

The 2006 MPS annual report announced that 31 countries had developed and adopted road maps; at the end of 2007, the number had risen to 37. This is good news, as was the fact that an overview document, *The Road Map for accelerating the attain-
ment of MDGs related to maternal and newborn health in Africa, was published in 2007. Nonetheless, honest reflection on progress so far cannot help but highlight some problems that need to be addressed. MPS regional staff note that while the road map process has led to the development of national policies, strategies and generic guidelines or training material, only a few countries can be said to have developed and implemented concrete operational plans (see Burkina Faso and Ethiopia below). Remaining challenges include:

- Insufficient human resources: Increasing availability of skilled personnel, is key to the road map success, yet most African countries do not have consistent policies or plans to increase the number of skilled birth attendants.
- Insufficient resources and or inadequate allocation of the available resources
- Insufficient translation of national policies and commitments into operational plans
- Poor coordination and harmonization among the different actors and partners lead to confusion, duplication and fragmentation.
- Important gaps remain even in some well-designed road maps. For example, most road maps developed so far lack details on priority interventions for newborn care.

- Effective and properly resourced monitoring mechanisms to measure the progress of the road map implementation have still not been included.

Increasing the impact of IMPAC

The Department’s regional and sub-regional offices have been receiving many requests from countries for financial and technical assistance with individual tools from its “Integrated management of pregnancy and childbirth” (IMPAC) initiative, which provides technical manuals aimed at different levels of the health services. For example, *Managing complications in pregnancy and childbirth*, is aimed at referral level hospitals while *Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice*, was designed for use at the primary care level. In the area of midwifery, essential life-saving skills are provided in six midwifery training modules, while policy-level concerns such as legislation and regulation are addressed by the *Strengthening midwifery toolkit*, developed in collaboration with the International Confederation of Midwives (ICM) and other partners. Among the countries that have recently requested assistance are Botswana, Ethiopia, Kenya, Lesotho, Malawi, Swaziland, the United Republic of Tanzania, Zambia, and Zimbabwe.

The Department and its partners are organizing a coordinated response to these requests. This builds on experience with the introduction of IMPAC in countries around the world, particularly where WHO is working with UNFPA in the “Strategic partnership programme” (SPP) to improve quality of sexual and reproductive health care. In particular, experience has shown that successful adoption of the tools requires substantial orientation work by personnel in the target countries’ health systems and government. This includes good understanding of IMPAC’s underlying assumptions, intended audience and use. It also includes the need for consideration of each tool’s implications for regulation, human resources, commodities, costing, monitoring and evaluation, health promotion etc., as well as how they are linked both with each other and with other WHO tools.

Experience in Francophone Africa

In collaboration with the West African Society of Gynaecologists and Obstetricians (SAGO) and UNFPA, MPS held a six-day meeting on one of the IMPAC tools for Francophone African countries in November. More than 20 experts from 11 countries reviewed and adapted the WHO guidelines.
Improving quality of antenatal care

Quality antenatal care (ANC) is one of the effective interventions identified as critical to the improvement of quality of services for pregnant women and their newborns. Even when coverage of antenatal care services is relatively high (which is the case in many African countries), quality of services is often a problem. The result is that maternal and newborn mortality remain persistently high, particularly during the intrapartum and postpartum periods. A variety of problems are connected to this situation, notably a critical lack of skills at ANC level in several substantive areas. For example, there are not enough staff trained in techniques to prevent mother-to-child transmission of HIV, to prescribe antiretroviral therapies, and to advise on infant-feeding options for HIV-positive women. Another problem is that many women in resource-poor settings only attend antenatal care centres once in the course of a pregnancy; this raises questions not only about how to increase the number of visits a woman makes but how to maximize the health gains made from each visit.

One initiative to remedy this situation is the new focused antenatal care (FANC) model. This is an integrated package of interventions designed to be delivered in four visits. It includes a wide range of services such as immunization, intermittent preventive treatment (IPT) for malaria, identification and management of infections such as tuberculosis and syphilis, counselling, prevention of mother-to-child HIV transmission, identification and management of obstetric complications such as pre-eclampsia, and birth preparedness.

Four antenatal visits recommended

Three systematic assessments in Ghana, Kenya and South Africa, demonstrate that FANC contributes to improving some aspects of quality of care. In Kenya, refocusing antenatal care resulted in significantly better quality of care in several areas: birth planning, identification of potential complications, detection of existing diseases (e.g. malaria in pregnancy and sexually transmitted infections), postpartum care, and family planning in the postpartum period. As a result of FANC, many countries now recommend that pregnant women schedule four antenatal visits, instead of the routine (and rarely followed) ANC advice to pregnant women to visit every month.

However, effective implementation of FANC in countries faces a number of obstacles including acceptability to service providers and clients, preparedness of health systems to introduce new
ways of working, and sustainability of services over time. It is against this background that the Department is working hard to orient decision-makers and programme managers to the advantages of FANC, and its integration in country road maps. For example, in collaboration with partners Africa 2010/AED (Academy for Educational Development) and the Population Council, WHO/AFRO organized an orientation workshop in Nairobi, Kenya in September, which was attended by 58 participants from Gabon, Ghana, Kenya, Mali, Niger, Rwanda, the United Republic of Tanzania and Zambia.

Putting advocacy tools to work

In 2007, MPS continued to use an interactive, computer-assisted advocacy tool called REDUCE/ALIVE as a cost-effective means of reaching decision-makers. Among other features, the tool uses computer models to estimate the consequences of poor maternal health care, such as: maternal, newborn and child deaths, short- and long-term illnesses and disabilities, and economic productivity losses. Since its introduction, REDUCE/ALIVE has been used to reach out to parliamentarians in 12 African countries (as well as Viet Nam). Our experience has been that it has contributed to policy change in favour of maternal health in several

Celebration of the annual Safe Motherhood Day in Uganda

Uganda has signalled its prioritization of the Making Pregnancy Safer agenda in many ways, including celebrating annual national days for safe motherhood. The First Lady Janet Museveni presided over the day in 2006 while the Minister of State for Health (primary health care) officiated in 2007. The national days are supported by nongovernmental organizations as well as the government health system, and generate a lot of media coverage.

Photo, from top: Hon Emmanuel Otaala, Minister of State for Primary Health Care at the 2007 Safe Motherhood Day celebrations held in Kayunga District, central Uganda. Bottom: The First Lady, Mrs. Janet Museveni at the launch of the first Safe Motherhood Day in 2006 held in Soroti District, eastern Uganda. Photo credits: WHO/AFRO.
of these countries. For example, laws have been adopted in Burkina Faso, Mali and Niger in favour of free provision of certain maternal health services such as caesarean section, while in Togo REDUCE/ALIVE helped build support for the recent reproductive health law.

Increasing capacity through training

One of the priorities in sub-Saharan Africa is to increase the number of skilled personnel available. This can be done in several ways, including recruiting more people into this area of country health systems and broadening the skills of those already employed. The Department does a great deal of work on “training of trainers” as a cost-effective way of spreading needed skills to places that need them. In October, for example, MPS held an inter-country training of trainers for Lusophone countries in Maputo, Mozambique which focused on essential newborn care. Participants included health-system personnel from Angola, Cape Verde, Mozambique, and Sao Tome and Principe, and key partners were present. Over the two-year period 2006-2007, a total of four trainings of trainers for the essential newborn care (ENC) course were organized and 80 experts from 13 countries were trained as trainers. As a result six countries have organized national ENC trainings for 20-25 health workers each.

Mozambique also provides a fine example of evidence-based public health programming in its efforts to train sufficient numbers of surgery technicians (técnicos de cirurgia), a response to the ongoing shortage of physicians. The training of a medical doctor takes between six and 11 years and is extremely expensive in developing countries. Moreover, the majority of trained doctors prefer to work in the capital or other major cities, leaving rural areas without skilled staff. Mozambique’s surgical technicians are trained to deal with most emergency situations requiring general surgery, including obstetric emergencies, and they are based in rural district hospitals. Recent studies have established that, while not a replacement for doctors, the training of surgery technicians is a highly cost-effective solution for rural areas. Efficiency in patient management and rates of complications are comparable to those of doctors; moreover, it has been demonstrated that the surgery technicians tend to stay longer in the rural areas than medical doctors.
Making a difference in Burkina Faso

Burkina Faso faces stubbornly high rates of maternal mortality at 700 per 100,000 live births. Among the key factors affecting women’s health in the country are high total fertility rates (estimated at 6.2 in 2003), low socio-economic status, and low levels of education. The main causes of maternal death are haemorrhage (41%), infection (23%), uterine rupture (10%), complications due to abortion (10%), and eclampsia (4%).

The national Government adopted a policy of subsidizing deliveries and emergency obstetric care in 2006, which was extended to caesarean sections in 2007. A number of initiatives are under way with technical support from MPS, which has been very active in advocating for improved maternal and neonatal health services, and for follow-up of women’s health. Support from the European Union has been particularly helpful in financing new activities.

Care at village level

In 2007 a number of initiatives were undertaken, such as training of trainers in emergency obstetric and neonatal care (known by its French acronym SONU) and in auditing of maternal deaths, and orientation sessions to familiarize district-level health officials regarding SONU at village level. The latter is particularly important, since some of the greatest gaps in care are experienced by women in rural areas. It is known that the greatest risk of maternal and newborn death is related to the first and second delays – referring to the “three delays” model: (1) delays in seeking care, (2) delays in arriving at an emergency care facility, (3) delays in receiving care from care workers after arrival at the facility. This is why Burkina Faso is putting in place units (in French: cellules urgences obstétricales et néonatales au niveau village) composed of two or three people to manage emergencies at community level. Each unit will concentrate on the following areas: (a) training in the recognition of danger signs, (b) organizing timely decision-making for referrals, (c) communication and transport systems to facilitate referrals, (d) resource mobilization for maternal and neonatal activities at community level. It is expected that when these units are fully functional, maternal and newborn death and ill-health will be greatly reduced at community level.

Ethiopia takes a hard look at its support for safe childbirth

Although Ethiopia has succeeded in improving some key indicators such as family planning and expanding its overall health-service coverage, maternal mortality is very high at 720 per 100,000 live births, and the level of institutional delivery – estimated to be between 6% and 16% of births – remains one of the lowest in the world. The health system suffers from a critical shortage of skilled health workers (especially midwives and physicians) and health-service managers. Unless institutional delivery by skilled providers is made available for the majority of pregnant women it will not be possible to achieve set national targets and the Millennium Development Goals.

Recently, the WHO Country Office sponsored an information-gathering project by independent consultants from Addis Ababa University. The national assessment on the status of the “enabling environment for birth attendants in the public health sector” in Ethiopia covered 75 hospitals and 530 health centres across all 11 regions in the country, and included over four fifths of public sector hospitals and health centres. The study found serious gaps in basics such as access to electricity, telephone and water supply, particularly in health centres. Reasons for these deficiencies ranged from lack of resources to organizational bad practice. For example, some water shortage was due to lack of minor maintenance to pipelines, while monopolization of telephones by admin-
Administrators in some health centres meant that staff lacked access to a telephone for referral of women in labour to the next level. Lack of transport was an issue everywhere. The majority of the facilities are found to be understaffed, with a critical shortage of midwives and obstetricians. Close to 70% of hospitals and 90% of the health centres were under-supplied with midwives in accordance to the minimum Ministry of Health standards. Half of the hospitals did not have obstetricians and 73% of the district hospitals did not conduct caesarean sections. Overall the levels of deliveries and postnatal care conducted by hospitals and health centres were very low compared to antenatal clinics.

Progress in task-shifting

On the positive side, as part of an ongoing task-shifting initiative, the assessment found progress in efforts to train health officers and general practitioners to conduct emergency life-saving obstetrics surgeries. Some of the regions have also started implementing various incentive mechanisms to motivate and retain staff, which includes creating training opportunities and increasing duty-hour allowances. There has also been success in moving forward the agenda of task-shifting in order to make the most efficient use of existing human resources (see page 35). Among its many recommendations, the assessment concluded that it was urgent for infrastructure and staffing patterns to be improved at district level, with the goal of ensuring 24-hour access for emergency obstetrics and newborn care at hospitals and health centres. Managerial skills and leadership capacity (i.e., ability to motivate staff, raise funds and other resources, work with partners, advocacy skills, etc.) among administrators and programme managers need to be improved in order for existing systems to work better, and for improved practices to be introduced. In addition, intensive in-service training for nurses needs to be started in order to reduce the severe gap in access to midwifery services, along with better long-term planning for midwife recruitment and education.
A “phenomenal” example

The team who carried out the national assessment on the status of the “enabling environment for birth attendants” found many examples of impressive people working in the Ethiopian health system. But they selected Zebider Tesfaye, a dedicated lady health officer in Tigray Province, to illustrate their case for task-shifting. Team members commented that Zebider’s work is “a phenomenal example which can help to close the national debate on the success of shifting responsibilities for life-saving emergency obstetric surgery to mid-level health workers once and for all “.

Zebider is a qualified clinical officer, with four years of training at college level. To undertake her new responsibilities, she took an additional three-month course in emergency surgery, and has had refresher courses since then. In addition to obstetric emergency surgery, Zebider is carrying out surgeries that include the removal of lipoma and hydroceles, circumcision, and drainage of abscesses. Between 2006 and 2007, she performed 34 caesarean sections and referred hundreds of in-labour or pregnant women for better care to Mekelle referral hospital after having made proper arrangements and life-saving measures.

“I refer women who are at very high risk of dying due to the nature of the complication they have,” she explains. “Most of my referrals are anaemic women who have lost massive amounts of blood due to a variety of reasons. We just give them fluids and refer them to Mekelle hospital since we do not have blood replacement in our hospital.”

Agreeing with many of the points made by the assessment, Zebider notes that a number of barriers still need to be overcome to get the maximum benefit out of staff like her. The lack of a clear career path is one problem; another is the lack of housing in the hospital compound, and the low level of financial incentive. She is also concerned about the lack of regular supervisory support from the referral hospital.

Nonetheless, Zebider is very happy that she is helping suffering women and families who otherwise would have to travel hundreds of kilometres to access services.

Photo: Zebider Tesfaye from Ethiopia has been trained to do a variety of emergency surgery tasks. Credit: WHO / AFRO.
During 2007, the Pan American Health Organization (PAHO), which serves as WHO’s Regional Office for the Americas (AMRO), focused its activities on supporting priority countries in several key technical areas. These included:

- the strengthening of maternal mortality and morbidity surveillance systems,
- empowering women, individuals, families and communities to contribute to improved maternal and newborn health, and
- policy development in maternal and neonatal health including the promotion of skilled attendance at birth.

In addition, MPS has strengthened existing partnerships with other stakeholders in maternal, newborn and child health at regional and national levels.

This year has been particularly important for the neonatal component of the Department’s work, with great efforts to link it closely with the maternal component, reflecting a health-systems approach (i.e., continuum of care rather than “vertically” organized services). One important example of this approach in action can be seen in Haiti, where the social protection system has been expanded to include mothers and newborns. Local authorities have now committed to providing 55 000 pregnant women with free antenatal, delivery, postpartum and
neonatal care in 56 health institutions during 2007. The Haitian Government plans to expand the policy to cover the entire country.

### Working with medical schools

The past year has seen considerable work done on a project with 14 university medical schools in Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, and Peru. The project aims to achieve a better understanding of the state of medical education in the areas of maternal, neonatal and infant health in the Americas, with the specific objective of defining the clinical and non-clinical competencies needed to improve care provided by general medical doctors. The competencies were agreed following extensive consultations among medical school professors and other experts. A final document on core competencies in maternal, neonatal, child and reproductive health was produced and is available to schools of medicine and other interested parties.

The year also saw important efforts to increase the quality and availability of in-service training for health staff. For example, an international training-of-trainers programme was carried out in September at the University of Chile’s School of Midwifery. The programme was designed to help create a “critical mass” of facilitators available in priority countries to plan, organize and deliver in-service training programmes on midwifery and related life-saving topics.

### Gathering evidence to improve maternal and neonatal health policies

For many years, MPS has been helping countries assess their safe motherhood policies and the availability and use of quality obstetric and neonatal care. The practical payoff from this support was exemplified by progress on strategic needs assessments in Ecuador, Guyana, Haiti, Paraguay, and Suriname during the course of the year. The primary purpose of these studies was to analyse maternal health care at the tertiary level of the health system and at the most important maternity wards. The studies also recommended strategies to further improve the quality of care in maternal and neonatal services.

In Guyana, for example, the needs assessment study was conducted jointly with health providers from the Georgetown Public Hospital and New Amsterdam Public Hospital. The personnel of both hospitals and the PAHO/WHO technical staff participated in all stages of the study, including the design of the questionnaires, collection of the information, analysis of results, and preparation of recommendations. Finding a shortage of specialists in both facilities (one of the hospitals only had one obstetrician and one paediatrician available), the study recommended maternity ward staff receive the necessary training to carry out functions such as identifying complications, stabilizing and referring patients without delay, and administering a first-line drug to resolve the principal complications. They also observed that pregnant women referred from health centres (which refer the greatest numbers of pregnant women to the maternity hospitals) often arrive in late stages of labour. Therefore they recommended improving practices at health centres to ensure that women with obstetric emergencies are assessed, stabilized and transferred to district hospitals with a minimum of delay. At the same time, it may also be necessary to strengthen the capacity of secondary level facilities to attend to these referrals.

In Paraguay, the assessment study found that few districts and regions have the minimum acceptable level of basic and comprehensive obstetric care facilities, as set by WHO standards. In Caaguazu district, only the regional hospital can provide comprehensive obstetric care, while the other district hospitals can provide only three or four essential obstetric care services.
These findings have stimulated national policy discussions in Paraguay, and the Regional Office is working with the Ministry of Health to improve the emergency obstetric and neonatal care (EONC) service in line with the study recommendations.

Empowering individuals, women, families and communities

One of the most important strategies for reducing maternal and neonatal mortality in the region consists of empowering individuals, families and their communities (IFC) to identify priority problems and participate in processes to find solutions. The IFC strategy is based on the framework outlined in the 2003 WHO MPS document titled *Working with individuals, families and communities to improve maternal and newborn health*, which has two objectives:

- to empower women, men, families and communities,
- to increase access to and use of quality maternal and newborn health services, particularly skilled attendants.

In addition, this strategic framework emphasizes a community-participation process to strengthen strategic partnerships with rural, indigenous and community-based organizations to identify the needs of these population groups and to contribute to the cultural adaptation of health services.

Implementation of the framework is being carried out in Bolivia and is at different levels of progress in Colombia, El Salvador, Guatemala and Honduras. The different national experiences were shared in July at a meeting in Copan, Honduras. In response to countries’ requests, an international training course is being developed by a group of partners including PAHO’s Family and Community Health Area, the PAHO WHO Representative (PWR) Colombia, WHO’s Child and Adolescent Health and Making Pregnancy Safer departments, Enfants du Monde and Colombia’s University of Antioquia. This international course will be geared towards public health managers in maternal and neonatal care and adolescent and reproductive health. A module designed to orient public health managers on empowerment was completed and field-tested in Guyana during 2007.
El Salvador: communities and health services working together

In El Salvador the “Working with individuals, families and communities to improve maternal and newborn health” approach has been adopted by the Ministry of Health, which is now working closely with a consortium of local nongovernmental organizations, WHO/PAHO and the Swiss nongovernmental organization Enfants du Monde to scale up the approach across the country. The approach is being integrated into the health delivery system, with particular care to increase and improve interactions between communities and health services.

Initially, two municipalities, Izalco and Nahuizalco, were included in this project. The two municipalities have a total of approximately 50,000 women of reproductive age (15-49 years) and 3500 births per year. The mortality rate is high. Both municipalities include rural communities and show high levels of poverty. In Nahuizalco, indigenous people indicated that cultural barriers are an additional factor in the low use of the services available. In both communities, local committees including women, health workers, traditional birth attendants, men, community leaders and representatives of the local authorities have sat down together and discussed not only the problems related to maternal and newborn health but also possible solutions. The problems that came up during the discussions included: socio-cultural factors (e.g. machismo), poverty and related socio-economic problems, women’s lack of education, absence of skilled care, lack of support by local officials and rural development associations and lack of public transport amongst others.

There is a wide sense that progress is being made in improving maternal and newborn health since work has been undertaken to increase the general awareness for the related problems and to engage a broader group of actors. Based on the experience in Izalco and Nahuizalco the approach will now be scaled up to six other communities in three other departments of the country. A baseline survey will be conducted in early 2007 to monitor and evaluate progress.

Maternal mortality and morbidity surveillance

The achievement of Millennium Development Goals 4 and 5 requires the advancement of comprehensive surveillance systems capable of accounting for every pregnant woman, mother and newborn. To this end, the Regional Office is working jointly with the US Centers for Disease Control and Prevention (CDC) to support the strengthening of maternal mortality surveillance systems in the Region. This includes projects in several countries, as well as the demonstration of a web-based maternal mortality surveillance system (MMSS) in Colombia.

The latter is a web-based maternal mortality surveillance system which introduces novel methods for timely case identification, decision-making and ongoing quality improvement, from the local to the regional level. Since August 2007, Colombia has had a legal requirement making any maternal or perinatal death a “notifiable event” which means it must be reported to and recorded by health authorities. Colombia has been chosen as the “role model” country for MMSS because it provides a unique opportunity to demonstrate not only technical aspects of such systems but also their monetary, human, and organizational requirements. The lessons learnt from their experience will be shared with other countries in the Region, with the ultimate aim of scaling up operations through technology transfer.

During 2007, PAHO and CDC also provided technical support to help strengthen existing surveillance systems in Guyana (see page 40), Honduras, Nicaragua and Paraguay.

Technical cooperation was focused on improving data collection instruments and processes, and included a number of visits by technical experts.
Guyana: moving towards effective health surveillance systems

As one of the poorest countries in the western hemisphere, Guyana faces chronic problems with its reproductive health services. These include a shortage of skilled medical personnel, especially midwives and emergency obstetric and newborn-care staff, poorly functioning referral services, and a deficient infrastructure for health management information. Despite these odds, reported maternal mortality rates in Guyana declined significantly from 380 out of 100 000 in 1992 to an average of 10 in 2005 according to national statistics. A similar decline has also been achieved in reported infant mortality rates from an average of 78 per 1000 live births in 1992 to an estimated 48 per 1000 live births in 2005.

However, it is recognized that maternal and infant mortality data are likely to be inaccurate in Guyana due to its limited system for vital registration. In 2007, Guyana received technical support to improve its maternal mortality surveillance system (MMSS) and to implement a new system covering perinatal information. The current MMSS was assessed through all aspects of the surveillance cycle (identification of cases, data collection and analysis, making recommendations, evaluation, and feedback). As a result, a new maternal and perinatal surveillance and information system is now in place. Training for the use of the perinatal information system has been carried out at a national level, aiming for full coverage of all of the country’s health centres and hospitals.

Ensuring free obstetric care

In Haiti a significant component of the initiative for free obstetric and neonatal care (see above) was the implementation of the perinatal information system to monitoring the coverage and quality of care. This evidence-based perinatal clinical record card, a standard used in most countries of the Region and developed by PAHO, has been accepted by the Haitian Government as the main documentary evidence to reimburse health institutions the costs of the care provided to the mother and her neonate.
This Region, which contains about one quarter of the world’s population, accounts for approximately one third of global maternal and newborn mortality. Conditions vary strikingly from country to country. For example, rates of maternal mortality in 2005 ranged from a low of 14 per 100 000 births in Singapore to a high of 830 in Nepal in 2005, according to WHO figures. Neonatal mortality rates range from eight per 1000 live births in Sri Lanka to 54 in Pakistan. Over 40% of child mortality in the Region occurs in the neonatal period, amounting to about 1.3 million neonatal deaths in 2004. These are due in large part to the direct medical causes of asphyxia, sepsis, premature birth, and congenital malformations. Low birth weight approaches 33% in some countries and is a major contributor to the high neonatal mortality. The Region accounted for 37% of the world’s unsafe abortions in 2003.

While three countries have achieved universal skilled care at birth, three others have a proportion of deliveries assisted by skilled birth attendants between 50% and 70%. In contrast, in five countries it remains below 50%. The latter contribute to more than 80% of maternal deaths in the Region.
Regional priorities

The MPS “Skilled care for every birth” approach is a priority in the Region, with special attention being given to the countries where the proportion of deliveries assisted by skilled attendants is less than 50%. These include Bangladesh, Bhutan, India, Nepal, and Timor-Leste. Technical support was provided to national efforts for improving access to and quality of skilled birth attendants in Bangladesh and Nepal, particularly through upgrading the midwifery skills of existing maternal and newborn health providers at community level. During 2007, four of the five countries reviewed and revised their existing pre-service midwifery training.

The Regional Office has promoted the use of evidence-based standards and practices in maternal and newborn health. This is particularly true of the Integrated management of pregnancy and childbirth (IMPAC) series, which have now been adapted and translated for use in Bangladesh, the Democratic People’s Republic of Korea, Indonesia, Myanmar, Nepal, Sri Lanka and Timor-Leste. The guidelines are also being used in the development of national guidelines and other materials in Bhutan, India and Maldives. Training on different aspects of maternal and newborn health care was carried out in most of these countries.

Financial resources are a key issue in the success of programming and the Region has been successful in the creation of partnerships to provide funding to countries that need it most. Programming is most effective when it can be planned over several years, and four countries benefited from partnerships with an agreed multi-year funding for maternal and newborn care. These were: Bangladesh (with funding from the United Kingdom Department for International Development - DFID), the Democratic People’s Republic of Korea (with funding from the Republic of Korea), Myanmar (with funding from Italy) and Indonesia (with funding from Germany’s GTZ).

Renewed emphasis on service quality in Sri Lanka

Sri Lanka has made steady progress in reducing maternal mortality from 140 per 100,000 births in 1990 to 58 in 2005. However, wide differences remain in maternal mortality between geographical regions, some population groups and progress in reducing mortality rates among newborns which has slowed down in recent years to around eight per 1000 live births. With this in mind, and with a concern for improving the overall quality of programming, the Ministry of Health commissioned an external programme review on maternal and newborn health services. MPS and SEARO supported this external review. The review was followed by a process to develop a new strategic plan on maternal and newborn health for the period 2008-2012 and beyond.

The review was overseen by a team, which included national and international experts in a variety of fields including obstetrics and gynaecology, neonatology, health economics, nursing midwifery, behaviour-change communication and gender. A range of methodologies were used to collect information such as in-depth desk review of programme documents, stakeholder workshops, key informant interviews, focus group discussion and field visits.
Improving organizational efficiency

Among other key findings, the review found that the Ministry of Health’s Family Health Bureau needs to strengthen policy guidance and interact more with provincial authorities in order to improve organizational efficiency. It also discovered that the health system currently had inadequate capacity for planning and budgeting at central, provincial and district levels, which has hampered efforts to rationalize plans. Specific quality-of-service issues were identified in the areas of intra-partum and newborn care. Among other recommendations, the review recommended that Sri Lanka establishes a national steering committee for family health under the Ministry of Health to provide policy level support to the Family Health Bureau. This, it is hoped, will enable it to pursue not just good quality but excellence in maternal and newborn health services.

Innovation in Tamil Nadu, India

In the Indian State of Tamil Nadu, a great expansion in maternal and newborn health services in the past two decades has led to great improvements in cutting the levels of maternal and infant mortality. Between 1980 and 2005, maternal mortality declined from 450 to 90 per 100 000 live births, while infant mortality declined from 93 to 37 per 1000 live births. This was not only achieved by clinical means but just as importantly, through social transformation including improved literacy, reduced incidence of early marriage and early pregnancy, less frequent pregnancies, and high awareness of family planning and nutritional safety.

But the State is not resting on its laurels and is working on a three-pronged strategy to ensure safer pregnancy and newborn survival through:

- prevention and termination of unwanted pregnancies,
- promotion of quality antenatal care and institutional deliveries for planned pregnancies, with routine essential obstetric care and
- promotion of access to quality emergency obstetric care at first referral level.
Quality antenatal care is on an upward trend, with higher levels of early registration and sustained follow-up. Just over 96% of mothers had at least three antenatal visits during their last pregnancy in 2005-06, according to the national family health survey. Promotion of institutional deliveries through appropriate incentive packages has led to 96% institutional deliveries.

Round-the-clock services

One innovation paying rich dividends has been the “24x7” model of providing round-the-clock access to essential obstetric and newborn care and emergency obstetric first-aid services. In this model, three staff nurses work on eight-hour shifts at primary health facilities. This permits skilled attendance to be provided throughout the day, conducting deliveries, attending to sick newborns and arranging for timely referrals. Delivery performance at the primary health facilities has improved significantly while pregnancy complications have been identified early and referred in time to the first referral units for management.

This initiative has been piloted under the “Reproductive and child health programme” in phase I and is currently being phased in to cover the entire State. Another successful initiative, piloted in one district, was to provide ambulance service through partnership with a nongovernmental organization. The organization managed and operated the service, with a vehicle provided by the Government, free of cost to poor pregnant women and charging a nominal fee to others.

Emergency centres reaching out to poor people

Another innovation has been the creation of a network of comprehensive emergency obstetric and newborn care (CEmONC) centres, which are easily accessible through improved ambulance services, and provide all relevant emergency obstetric and newborn care services round the clock. Currently 62 strategically located CEmONC centres are in operation, spatially spread over the State and more are in the process of being established. These centres have separate obstetric and paediatric casualty facilities in addition to general casualty. An obstetrician and a paediatrician are on duty at these centres round the clock while an anaesthetist is on call duty. The centres also have the flexibility to source in private anaesthetists, if needed, on the protocols prescribed by the Government. To address the shortage of anaesthetists in government health facilities, a new initiative is currently on to equip non-specialist physicians and other non-specialists in the public health system with anaesthetics skills through a short-term training regimen.

A baseline survey organized in 2004-2005, following the earliest phase of this programme, found many positive results. For example, it found that the centres reached poor and underprivileged people, as three out of five patients treated were poor and a third of the beneficiaries belonged to underprivileged sections of society. Almost 80% of mothers approached the centres directly, an indication of the extent of community awareness, and 86% of the mothers could reach the CEmONC centres within half an hour. Contributing to these advances were the creation of a committed and sensitized staff with constant skills upgrading, better assured essential drug availability at the health facilities and adequate budgetary support.

Despite its impressive performance in maternal and newborn health over the years, the State recognizes that it needs to improve performance on neonatal health, address the high incidence of stillbirths and extend emergency obstetric care services to the entire State. In addition, there must be improved emphasis on urban health issues and budgetary support must not only be sustained but increased.
Using regional expertise in training of trainers

WHO collaborating centres play an important role in improving health worldwide and are an excellent source of technical assistance to Member Countries. This was reconfirmed in November 2007 by a SEARO collaborating centre, the Faculty of Nursing at Thailand’s Chiang Mai University. The institution not only hosted the regional training of trainers (TOT) on midwifery teaching, but worked with SEARO to develop training modules based on WHO guidelines. The special expertise of the institution helped ensure that the modules meet regional needs and are credible to its users.

Over the course of the year, two series of trainings of trainers on the essential newborn care course were carried out in the Region, with participants from all the countries in the Region. In almost all cases, these were followed up with national trainings or with adaptation of the training materials especially for use in specific countries. To review progress of the activities, an expert group meeting for the expansion of training on newborn care was held in Bangkok in September. This permitted the countries to share their experiences in programming and – looking to the future – to develop country proposals for improving newborn health, particularly through the expansion of training on essential newborn care. The meeting was attended by 24 experts and programme managers from nine countries as well as MPS staff from local and regional offices and from headquarters.

Photos: Participants of a training of trainers on midwifery teaching, held at Thailand’s Chiang Mai University in November 2007. Credits: WHO / SEARO.
IN THE REGIONS

Promoting monitoring and evaluation

Regional Office for Europe (EURO)

The European Region is a highly disparate one. While many countries do not need much assistance from MPS, others have rates of maternal and perinatal mortality comparable to poor countries in other regions. This is particularly true among disadvantaged groups such as migrant populations, ethnic minorities and those affected by conflict. The Department currently works primarily with 12 countries with limited resources or special challenges in making pregnancy safer. They are: Albania, Armenia, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, Romania, the Russian Federation, Tajikistan, Turkey, Turkmenistan and Uzbekistan. In addition to this, a project launched in 2006 covers nine South Eastern European (SEE) countries, among them Albania and the Republic of Moldova, as well as Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Romania, Serbia, and The former Yugoslav Republic of Macedonia.

The countries receiving assistance from the Department have, in global terms high rates of birth in institutions and in the presence of skilled birth attendants, but face other challenges in making pregnancy safer.
A flexible strategic approach

Over the years, MPS has designed, planned, implemented and monitored programmatic activities in 18 of the Region’s Member States, often in collaboration with other WHO programmes and organizations. In 2007, lessons learnt through this experience were collected in a document titled *Improving maternal and perinatal health: European strategic approach for making pregnancy safer*, which can be found on the EURO MPS website (http://www.euro.who.int/pregnancy/20071024_1). The goal of the document is to increase awareness and commitment to improving maternal and perinatal health in the Region, and to provide broad guidance to countries wishing to develop or update their own national and local strategies for the improvement of the health of mothers and babies. The document emphasizes equitable and efficient provision of quality skilled care for all women and their newborn babies, with special attention to poor and vulnerable groups.

Sharing experience on reviewing maternal deaths

The Department takes pride in the expertise of its staff and in their contributions to practical knowledge in the field of maternal and newborn health. In 2007, the journal *Reproductive Health Matters* published an article titled “The introduction of confidential enquiries into maternal deaths and near-miss case reviews in the WHO European Region”. Co-authored by MPS staff and based on activities to which the Department contributed, the article details the introduction of two approaches to reviewing maternal deaths and severe obstetric complications in 12 countries of the Commonwealth of Independent States (CIS). The two approaches were:

- national-level confidential enquiries into maternal deaths, and
- facility-based near-miss case reviews.

The article follows the process beginning with two regional meetings involving stakeholders from the 12 countries held in 2004-2005. The review process was first piloted in the Republic of Moldova, in which training was provided in the form of a technical workshop comprising of: making detailed plans, training staff in how to facilitate and carry out a review, finalizing clinical guidelines against which the findings of the confidential enquiry and near-miss case reviews could be judged amongst other things. So far, the Republic of Moldova’s three main referral hospitals have carried out near-miss case reviews and a national committee to conduct the confidential enquiry has begun its work. The article notes that other countries in the Region have begun a similar process. However, it warns that progress may remain slow, in part because health staff continue to fear punitive action if a mother or baby dies in their care.

Increasing knowledge and capabilities

One of MPS’s major activities in the Region has been to help countries to generate more useful data about pregnancy and childbirth outcomes. The Department therefore continued to provide training in the “Beyond the numbers” methodology, which aims to generate better data about outcomes (maternal deaths and life-threatening complications or “near misses”) and quality of clinical practices. To this end, the Department held workshops in Armenia, Kazakhstan, and Romania where “Beyond the numbers” has already been introduced. In Uzbekistan, the methodology was piloted for the first time and a national technical workshop was held in Tashkent in June 2007. At the workshop, the tools for near-miss case reviews were finalized and tested, basic guidelines were produced on how to facilitate near-miss review.

Footnotes
meetings and implement changes identified as being necessary by the reviews. In addition, participants agreed on how to complete data collection forms and analyse data collection results.

Other forms of capacity building included an inter-country workshop for SEE countries held in Croatia, which focused on the development and use of clinical guidelines. In addition to discussions of specific technical and organizational issues, the participants agreed to exchange good examples of clinical guidelines and protocols using the South Eastern Europe Health Network. Based on a WHO/EURO package for in-service training of professional teams (midwives, obstetricians, neonatologists and nurses), training courses in effective perinatal care were organized in several countries by WHO and partner organizations. These were supported by assessments and follow-up workshops as needed.

The workshop’s objective was to define future plans for implementing the Making Pregnancy Safer agenda across the country and was a joint effort of the Ministry of Health, WHO, UNICEF and other key partners. The basis for this work was an assessment on perinatal care commissioned by UNICEF, which was used as a background document at the workshop. At the end of the workshop, an action plan was agreed upon by the participating organizations. This will include the development of a national strategy and a perinatal programme, under which national clinical guidelines and protocols will be created or updated as needed, with priority given to those areas where no guidelines exist.

Georgia: building capacity at country level

MPS does a significant part of its work directly with individual countries, with an emphasis on promoting the transformation of evidence-based strategies and principles into national policies, laws, norms and regulations and supporting development and or revision of national maternal and child health policies and strategies. For example, a workshop titled “Perinatal care: from assessment to planning” was organized in the Georgian capital Tbilisi in May 2007 under the framework of a bilateral cooperation agreement between WHO and the Republic of Georgia.
The fewer the medicines, the better!

In a small maternity hospital in the town of Kurgan-Tyube, Tajikistan, a group of people, mostly women in long, brightly printed dresses, are seated gazing at a central flip chart containing a long list of medicines. Next to it stands WHO trainer Gelmius Siupsinskas, who is heading a two-week course in essential obstetric and newborn care for a group of local midwives, obstetricians, gynaecologists and neonatologists. The WHO Making Pregnancy Safer training courses are designed specifically for the European Region, to help health workers at the district level acquire new skills for improving women and children’s health.

“Our primary task is not to provide facts and theories,” states Dr Siupsinskas. “It is to encourage the participants to question every prescribed drug and examination carried out on a patient and to select those that are effective and essential.” He illustrates with a blatant case of over-medicalization, where a 38-year-old woman with pre-eclampsia lost her baby after being prescribed 23 different drugs – the medicines on the flip chart – by five different physicians during a period of only three days.

The participants begin discussing the medicines on the list, critically weighing the effects and side-effects of each. After some discussion, they decide to eliminate as many as 20 of the drugs, because they either have no effect or are harmful. The remaining three are deemed to be the only ones necessary.

“Excessive medication is a major problem in many maternity hospitals in the old Eastern Bloc, although this is probably the most blatant example I have seen,” says Dr Siupsinskas afterwards, concluding that the case has served its function very well. “Even though the participants will probably meet resistance once they return to their respective places of work, I believe at least some of these irrelevant medicines will be removed from practice,” he concludes.

Photo: Dr Gelmius Siupsinskas illustrates the dangers of over-medicalization during a course in essential obstetric and newborn care in Tajikistan. Credit: Malin Bring.
IN THE REGIONS

Strengthening maternal health care

Regional Office for the Eastern Mediterranean (EMRO)

As a result of intense efforts by Member States, in collaboration with WHO and other concerned agencies, maternal and neonatal health-care programming in the Region has improved significantly since 1990. However, while some countries are on track to achieve Millennium Development Goals 4 and 5, others – particularly the poorest and conflict-torn countries – face enormous tasks if they are to make the necessary progress. In order to help accelerate progress, the Regional Office recruited eight international and national MPS programme officers in 2007 to support work in countries with high levels of maternal and neonatal deaths, notably Pakistan, Sudan and Yemen.

One of the Department’s most important functions is to spread knowledge as a means of building support for the Making Pregnancy Safer agenda. This can be done in many ways, but one of the most important is ensuring that national officials and specialists have opportunities to meet, share experiences, and both learn from and support each other. For example, as in other regions, the 2003 WHO document *Working with individuals, families and communities to improve maternal and newborn health* is a key source of guidelines. But such guidelines need “buy-in” from decision-makers if they are to be implemented. Accordingly, in April the Regional Office organized an
inter-country meeting in the Syrian Arab Republic, which focused on turning the guidelines into action plans. The meeting was attended by national staff from 10 countries as well as representatives from UNICEF, UNFPA, UNRWA, the European Commission, the Health Section of the United States Embassy, International Planned Parenthood Federation (IPPF), and important Syrian organizations (the Commission for Family Affairs, Syrian Association of Obstetricians and Gynaecologists, and Syrian Association for Health Promotion and Development). The meeting resulted in national work plans for each country, which the Regional Office and MPS will support with two new guide manuals for community health workers on (a) planning for safe delivery and (b) birth spacing, both of which are expected to be completed in 2008.

Getting Pakistan back on track

Pakistan is struggling to get on track to meet Millennium Development Goals 4 and 5. Some gains have been achieved, particularly in antenatal care yet postnatal care remains low at 22% and a skilled birth attendant is present at only four in 10 births. Maternal mortality stands at 350 per 100 000 live births. The leading causes of maternal mortality – responsible for two thirds of all maternal deaths in hospital and community settings – remain haemorrhage, puerperal sepsis, hypertensive disease of pregnancy and obstructed labour. The infant mortality rate stands at 78 per 1000 live births, while the neonatal mortality rate is 54 per 1000 live births. About half of all infant deaths in Pakistan can be attributed to poor maternal health and nutrition and it is estimated that 25% of babies are born with low birth weight. Leading causes of newborn death remain asphyxia, low birth weight, neonatal tetanus and other infections.

Maternal health is closely linked to infant survival. Maternal nutritional status in Pakistan is poor, with 13% of lactating mothers estimated to be underweight. The performance of family planning and contraceptive services remains mixed. The fertility rate stays at 4.1, and the unmet need for family planning and contraception is still high at 43%, although knowledge about family planning is at 90%. The standard measure of the contraceptive prevalence rate (CPR) actually dropped from 34% in 2006 to 30% in 2007.

National MNCH programme

The country adopted a national programme of maternal, neonatal and child health (MNCH) in 2007. The programme aims to reduce the maternal mortality ratio to 200 per 100 000 live births and the neonatal mortality rate to less than 40 per 1000 live births by 2011, in line with Pakistan’s Millennium Development Goal targets. This would help avert serious ill-health for about 3.5 million women, and provide better access to maternal, neonatal and child health services for about 10 million families. The federal Ministry of Health appointed the federal project director in December 2007.

A variety of partners have pledged support for the programme. In 2007, for example, the President of Pakistan and the Prime Minister of Norway announced that the Norwegian Gov-
The Norwegian government will provide a grant of NOK 250 million (approximately US$41 million) for the five-year period 2008-2012. The Norway Pakistan Partnership Initiative (NPPI) will focus its support on several areas such as strengthening the enabling MNCH planning and management environment as a means of increasing productivity – and eliminating bottlenecks – at district, provincial and federal levels. There will also be innovative efforts to increase demand for MNCH services by introducing health vouchers and other incentive-based mechanisms. MPS at country level is working with both the Norwegian and the Pakistani governments on implementing the NPPI in the years to come.

A boost for maternal and newborn health in Yemen

In Yemen, a country where women in reproductive age (15-49 years) form 20% of the population, levels of maternal mortality are very high at 365 per 100,000 live births – and UNICEF data suggest that this is a serious underestimate. Conditions are especially difficult in rural areas owing to high illiteracy, poverty, lack of awareness of rights and available services, and early marriage. Pregnancies tend to be too early, too close and too frequent. The 2003 family health survey showed low levels of contraceptive use and low utilization rates of maternal health and family planning services, due to distance from service centres, cost barriers, and poor perception of quality of the services.

Photo: A variety of partners came together in May 2007 to establish Yemen’s Safe Motherhood Alliance. From left: Dr Mohamed Khalifa, acting representative WHO Regional Office, Yemen; Mr Ali Saleh, Deputy Minister of Social Affairs and Labour; Dr Nafisa Aljaifi, General Secretary of the Higher Council of Motherhood and Childhood; Dr Arwa Alrabei Deputy Minister of Health; and Dr Hamouda Hanafi Director of the basic development needs project, USAID. Credit: WHO / EMRO.
Wisely, the Government has chosen reproductive health and maternal mortality as development priorities in its current five-year plan for health development and poverty alleviation. The national reproductive health strategy 2006-2010 (developed with WHO support) sets ambitious targets to achieve Millennium Development Goals 4 and 5. However, despite this political commitment, health expenditure remains low and unevenly distributed among the regions. In 2006, less than 2% of the Ministry of Public Health and Population’s budget was allocated to the population sector, which is responsible for the national reproductive health study. This level of public health expenditure is not sufficient to support sustainable strategies. Moreover, district management is still weak. While decentralization is still being implemented, there is a lack of ownership of the strategy, and there is poor accountability, support and supervision in maternal and newborn health systems.

Promising initiative

During 2007, MPS worked on a variety of initiatives in Yemen. Technical support was provided in efforts such as updating health facility registers covering family planning, antenatal care and obstetrics. The improved registers are being piloted in a number of governorates (equivalent to provinces) with support from WHO, UNICEF and United States Agency for International Development’s (USAID) Partners for Health Reform (PHR). Efforts to increase access to skilled birth attendance are being supported through the National Association of Yemeni Midwives, notably through a survey to establish baseline data.

One important initiative begun in 2007 was the creation of a national Safe Motherhood Alliance. The alliance includes well-positioned individuals in nongovernmental organizations, the Government (including the Office of the Prime Minister), private sector, universities, and UN agencies working in maternal and newborn health. Among other potential benefits, the alliance will permit better coordination of different partners’ activities according to their technical and financial capacities.

Morocco places MNH at the centre of health reform

For much of the current decade, Morocco has made the reduction of maternal and neonatal mortality (MNH), a government priority and frequently stated this in public announcements. However, though significant improvements were achieved in the 1990s, since then progress has stalled. Despite efforts by national health services and significant international assistance, the maternal mortality rate still remains very high at 227 per 100 000 live births according to the last national survey in 2003-2004, as does the neonatal mortality rate at 27 per 1000 live births. This is considerably worse than in neighbouring Algeria and Tunisia. Moreover, there are serious differences in rates between urban and poorly-served rural areas. Almost half of the women still lack access to safe motherhood services, particularly the emergency obstetric services. In 2004, it was estimated that skilled health personnel attended only 68% of pregnant women and 63% of deliveries nationally.

Recently, the newly appointed Minister of Health Yasmina Baddou (former Secretary of State for families, children and people with disabilities) announced sweeping changes to Morocco’s health sector. The reforms emphasize two basic priorities in the period 2008-2012:

- making treatment accessible to the least privileged Moroccans, and
- reducing the costs of care and medicines.
Improving resource management

The Minister has publicly stated that the fundamental challenges are not lack of money or human resources – she praised the professionalism of many people working in the health sector – but resource management. Problems that need to be tackled range from lack of ongoing training opportunities to poor drug distribution and widespread inappropriate use of health-related resources. Echoing many of the recommendations made by a joint working group of Moroccan health officials and UN system partners in 2007, the Minister called for the childbirth services to be made more user-friendly (humanization), and for improved referral arrangements between different levels of health institutions, as well as improved communications and coordination mechanisms for the ambulance service.

Within the reforms, a renewed priority has been given to making pregnancy safer, with ambitious targets of reducing maternal mortality to 50 deaths per 100,000 live births and neonatal mortality to 15 deaths per 1000 live births by 2012. To achieve this goal, a national commission on “Neonatal and maternal mortality” has been created to guide the task of bringing high-quality maternal and newborn health services to all Moroccans. WHO, UNFPA and UNICEF are members of this commission which has already begun its work. It is still too soon to gauge the results of this and related initiatives, but MPS is encouraged by the evident determination of the new Minister and the energy shown in the initial stages of the commission.

Footnote:
10. WHO (2004), Pan Arab Family Health Survey (PAPFAM for Morocco).
Sudan loses ground

The 2006 Household health survey in Sudan shows that at 1107 deaths per 100,000 live births, the maternal mortality rate has risen sharply since the 1999 figure of 509 per 100,000, while newborn mortality rose by almost a third. Coverage by doctors trained in emergency obstetrics in rural hospitals fell during the same period from 67% to 57%, while overall the number of deliveries by skilled birth attendants was static at about 57%.

While no one can or should underestimate the challenges faced by Sudan in making pregnancy safer, there are a few positive points to report. The period 1999-2005 saw a marked fall in female genital mutilation from 90% to 70%. Utilization of prenatal care rose from 15% to 19%, and the proportion of institutional deliveries rose in similar numbers. Despite the difficult circumstances facing much of the country some important work is going on.

Carrying out and publishing the Household health survey was a significant accomplishment, which provided information on the whole country for the first time in many years. Some progress was also made in efforts to increase both the numbers and capacity of skilled birth attendants. This included 42 tutors trained in MPS guidelines, 25 midwifery school tutors completing a training-of-trainers course, and 38 senior health visitors receiving training on supportive supervision of midwifery services.

Yet this is only “a drop in the ocean” considering the needs of Sudanese women and their children. However, the launch of a national Road Map for the reduction of maternal and child mortality in 2007 shows that there is some political will and commitment to strengthen the area of maternal and newborn health in Sudan. The Department of Making Pregnancy Safer calls on both national and international partners to support these efforts.
There are about 25 to 30 million deliveries in this highly populated Region each year. Of these, more than 20 000 result in maternal death. It is estimated that there are about 400 000 newborn deaths each year and that these account for about 40% of all deaths in children under the age of five. However, these aggregate figures obscure the big differences between countries in the Region. Member States can be divided into four groups. First, industrialized countries such as Australia, Japan and New Zealand have very low maternal mortality rates of less than 10 per 100 000 live births. A second group of countries, which includes China and Malaysia, can be characterized as having middle level maternal mortality ratios (less than 100 per 100 000 live births). A third group of countries which have high rates of maternal mortality, includes the Lao People’s Democratic Republic (660 per 100 000 live births) and Cambodia (540 per 100 000 live births). A fourth group is formed by the South Pacific Island countries, whose relatively small population sizes make it difficult to use the maternal mortality to measure the actual situation of maternal health service.

More than 90% of maternal deaths in the Region occur in Cambodia, China, the Lao People’s Democratic Republic, Mongolia, Papua New Guinea, the Philippines and Viet Nam. These seven
countries are currently MPS’s priority countries for support in reducing maternal mortality.

The Region faces a variety of challenges in making pregnancy safer. In many countries, under-utilization of existing maternal health services is an important factor behind maternal deaths, particularly among socially and economically disadvantaged women and in rural settings. A host of socio-economic, cultural, legal and institutional factors are also known to contribute to high levels of maternal and newborn deaths in some settings, as do lack of coordination between maternal and child health policies and related social policies, inadequate funding, and systematic inefficiency. In certain countries, particularly the Philippines, an additional problem is presented by fast turnover of skilled health workers as many of them leave their home countries seeking better employment opportunities in other parts of the world.

The Lao People’s Democratic Republic: “Silk Homes” improve mothers’ health – and much else

In the Lao People’s Democratic Republic, where an estimated 204 000 babies are born every year, approximately 50 babies in every 1000 live births do not survive their first month of life. Maternal mortality in the country is also very high: there are 660 maternal deaths in every 100 000 live births due to causes related to pregnancy and childbirth. The country is making great efforts to make pregnancy safer, but faces many challenges.

In order to improve access to health facilities and medical care for mothers and children in the regions along the borders with Cambodia and Viet Nam, the Ministry of Health has been establishing “Silk Homes” – maternity waiting homes – in isolated or economically disadvantaged areas. The homes have between eight and 12 beds, and are located either on the grounds of district hospitals or nearby. The original concept of waiting homes, which were designed primarily to increase access to safe birth, has been expanded in recent years to address a number of facets in women’s daily lives that affect their health situation. The Silk Homes are thus more than places where women are accommodated and receive proper medical care during the last stage of pregnancy; they have become multi-functional centres for information, education and safe delivery. During the waiting period, mothers receive nutritious food and any medical attention needed either for themselves or for any existing children who accompany them at the home. With properly trained personnel to attend the women during the final weeks of pregnancy and the delivery, minor complications are handled by the district hospital; major complications are referred from the district level to provincial hospitals.

Learning opportunities: from breastfeeding to farming

During the delivery waiting period, women can participate in discussions of topics such as immediate breastfeeding, nutrition education, food safety, basic principles of hygiene, prevention of malaria, immunization and family planning. In addition, Silk Homes also provide an opportunity for the women to learn how to increase their income. Options include learning to improve handicraft production, farming skills and establishing small scale businesses through micro credits. To this end, the homes are equipped with sewing machines, embroidery supplies, weaving looms, facilities for dyeing silk and similar activities already familiar to village women. Each of the maternity waiting homes has a piece of land devoted to a demonstration vegetable garden and small animal rearing. Women and their family members learn appropriate technologies, such as composting and fertilizing, which are useful for their food production and food security back home.

So far, four Silk Homes are already operational in the country, and there are plans to establish one in each of 17 districts of the provinces of Saravan, Sekong and Attapeu. The project has been financed by the Italian Government.
Priority activities

The Regional Office has been active in a number of fields. One of its priorities has been to ensure that the most up-to-date guidelines and technical information are available to different countries in their own languages. For example, Member States in the Region have indicated great interest in the MPS publication *Managing complications in pregnancy and childbirth*, which is aimed at referral level hospitals. The publication has now been translated into five languages (Cambodian, Chinese, Lao, Mongolian and Vietnamese); gratifyingly, most of these countries have gone further, developing their own guidelines and service protocols based on the manual. This follows the success of *Pregnancy, childbirth, postpartum and newborn care*, whose Chinese, Mongolian and Vietnamese versions have been incorporated into training of staff at primary care level.

A considerable amount of effort was invested during 2007 in the South Pacific Islands. There was, for example, training conducted in six island countries to roll out the maternal and child health surveillance system software, which had been developed and tested in the Solomon Islands in 2006.
China: stretcher parties save lives in remote mountain areas

Expectant mothers in the isolated villages of China’s Nandan County face special challenges as delivery draws closer. Located in Guangxi Zhuang Autonomous Region, 60% of villages have no roads and the most remote ones are more than 50 km away from the nearest hospital – about six hours on foot. In an effort to improve access to hospital births, the Autonomous Regional Health Department and Division of Maternal and Child Health have organized a programme of “stretcher parties”.

Normally, a stretcher requires four individuals to carry it. However, on remote mountain roads and with no time to take a rest, stretcher bearers carrying an expectant mother have to have breaks. Therefore, the minimum number a stretcher party requires is six people. Since 2004, about 1800 people have participated in Nandan County’s “Stretcher action” programme, and 225 stretcher parties have been organized.

A local newspaper describes a typical case where a stretcher party was called into action: There are 12 to 16 volunteers in the stretcher-party from Huaili village. It normally takes three to four hours to walk from the village to the road at the outskirts of the village, but that can take six hours when carrying a pregnant woman. A woman named He Danying began to have complications close to the time of delivery. The local health facility diagnosed the symptoms of obstructed labour, putting her in the high-risk category. The facility contacted the village stretcher party, who picked up He Danying immediately and began their journey on the mountain road. One bearer rushed to the village office and phoned the County Maternal and Child Health Institute. Because the homemade stretcher did not have a safety belt, the party had to be extra careful to ensure the pregnant women did not drop out of it. After a six-hour march starting at eight o’clock in the morning, He Danying finally reached the highway and was transferred to the care of the health staff who were waiting for her. Later in that day, He Danying safely delivered a baby girl.

Recently, new high-quality stretchers were obtained for use in the villages. These were funded by the provincial Working Committee for Women and Children, the provincial Health Bureau and the Federation of Women. The voluntary bearers have expressed great satisfaction with the new stretchers, which will make their life-saving activities considerably easier and safer.

Photos: Stretcher-party volunteers at work with their homemade stretcher. Credits: Chen Lili.
2006 - 2007 Budget allocation for Making Pregnancy Safer (in thousands)

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Key:
- Approved budget
- Regular budget contribution
- Extra budget contribution
Donors’ contributions to Making Pregnancy Safer: 2006 and 2007 (in thousands)
List of countries contributing to 97% of maternal deaths worldwide
Grouped by WHO regions, listed in descending order by maternal mortality ratio

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## List of countries contributing to 97% of maternal deaths worldwide

Grouped by WHO regions, listed in descending order by maternal mortality ratio

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<th>Country</th>
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<th>Deliveries in health facilities (%)</th>
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<th>Stillbirth rate</th>
<th>Still-births</th>
<th>NMR</th>
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Abbreviations and definitions (referring to tables on p. 62-64)

**: at least four antenatal care visits

MMR: maternal mortality ratio (maternal deaths per 100 000 live births)

Stillbirth rate: per 1000 total births

NMR: neonatal mortality rate (neonatal deaths per 1000 live births)

CMH: commission on macroeconomics and health