The WHO Department of Reproductive Health and Research combines groundbreaking research and the implementation, especially in developing countries, of new solutions to reproductive health problems. The Department aims to strengthen the capacity of countries to enable people to promote and protect their own health as it relates to sexuality and reproduction and to have access to, and receive, sound sexual and reproductive health care when needed. To achieve this, the Department:

- conducts research to identify reproductive health problems and to find evidence-based solutions to them
- uses new research knowledge to develop norms, guidelines, tools and interventions for developing countries
- develops mechanisms for the delivery and implementation at the country level of the new tools and interventions
- undertakes advocacy work to promote a rights-based approach to reproductive health and the social and other changes needed for sound sexual and reproductive health for all.

The specific thematic areas of work of the Department, selected on the basis of its comparative advantage, include: promoting family planning, making pregnancy safer, controlling sexually transmitted and reproductive tract infections, preventing unsafe abortion, and monitoring and evaluating reproductive health.

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Sexual and reproductive health – research and action in support of the Millennium Development Goals

Biennial Report
2006–2007
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Abbreviations used in this report

AIDS acquired immunodeficiency syndrome
CAC comprehensive abortion care
CEDAW Committee on the Elimination of all forms of Discrimination Against Women
CIRE Continuous Identification of Research Evidence
ECP emergency contraceptive pill
FGM female genital mutilation
HIV human immunodeficiency virus
HPV human papillomavirus
HRP UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
IBP Implementing Best Practices
ICPD International Conference on Population and Development
IOS International Organization for Standardization
IUD intrauterine device
JHPIEGO Johns Hopkins Program for International Education in Gynecology and Obstetrics
JHU/CCP Johns Hopkins University/Center for Communication Programs
MDG Millennium Development Goal
MR menstrual regulation
MTCT mother-to-child transmission
MVA manual vacuum aspiration
NET-EN norethisterone enantate
RHL The WHO Reproductive Health Library
RHR Department of Reproductive Health and Research
RTI reproductive tract infection
SPP Strategic Partnership Programme (of WHO and UNFPA)
STI sexually transmitted infection
UNAIDS Joint United Nations Programme on HIV/AIDS
UNDP United Nations Development Programme
UNFPA United Nations Population Fund
UNICEF United Nations Children’s Fund
WHO World Health Organization
Since 2000, development activities throughout the world have been carried out within the framework of the Millennium Development Goals (MDGs) – eight specific goals, all with a target date of 2015 and focused on improving the socioeconomic, health, and environmental conditions of the poorest people in the world. From the beginning, improving sexual and reproductive health was implicitly seen as key to achieving all of these goals, but particularly those concerned with: improving maternal health (goal 5); reducing child mortality (goal 4); combating HIV/AIDS (goal 6); and promoting gender equality and empowering women (goal 3). However, reproductive health per se, and more specifically the goal of universal access to reproductive health by 2015 that was adopted at the 1994 International Conference on Population and Development, was purposely “forgotten” when the MDGs were formulated.

In October 2007, this historic mistake was corrected when the 62nd United Nations General Assembly adopted a revised MDG framework, which includes two new explicit targets related to sexual and reproductive health. The first – the achievement, by 2015, of universal access to reproductive health – has been added as a second target of goal 5. The second – the achievement by 2010 of universal access to treatment for HIV/AIDS for all those who need it – has been added to goal 6.

The formal adoption of these targets represents a noteworthy achievement for our Department and its partners, who worked intensively since 2000 for the correction of what we – and many others – considered a serious oversight. As noted by the former Secretary-General of the United Nations, Kofi Annan, “The Millennium Development Goals, particularly the eradication of extreme poverty and hunger, cannot be achieved if questions of population and reproductive health are not squarely addressed.”

But the recognition of the central role of sexual and reproductive health is only a first, albeit vital, step. The challenge now, for countries and the international community, is to turn these formal statements of good intentions into reality, by implementing policies and programmes that move us more quickly towards the goals and targets. The inclusion of these new sexual and reproductive health targets in the MDG framework can be expected to have a number of immediate practical consequences. For example, countries will now include sexual and reproductive health indicators in their reporting on progress towards the MDGs. Our Department has been working with the Interagency and Expert Group on MDG indicators and UNFPA to develop appropriate indicators that countries can use for this purpose.

Donor agencies and countries are also likely to start providing more consistent support to sexual and reproductive health. In this context, WHO’s Global Strategy on Reproductive Health, adopted by the World Health Assembly in May 2004, provides a solid foundation for collaboration. Based on human rights principles, the strategy focuses on five core aspects of sexual and reproductive health: improving antenatal, perinatal, postpartum and newborn care; providing high-quality services for family planning, including infertility services; eliminating unsafe abortion; combating sexually transmitted infections, including human immunodeficiency virus (HIV), reproductive tract infections, cervical cancer and other gynaecological morbidities; and promoting sexual health. This strategy has already been guiding WHO’s work with and for countries for a number of years, and is likely to grow in importance as sexual and reproductive health becomes more visible again on the international development agenda.

Finally, the strengthened focus on moving towards access to treatment for HIV/AIDS for all who need it highlights the imperative for closer linkages between sexual and reproductive health services and HIV/AIDS programmes. One of the most cost-effective and efficient means of attaining universal access to HIV treatment, and to combating the HIV epidemic generally, is likely to be the scaling-up of effective services that address the whole range of sexual and reproductive health needs, including HIV prevention, testing, treatment, care and support. This will be one of our priority areas for action in the coming biennium.

This report presents an overview of our work over the biennium 2006–2007. It covers both the Department’s
research activities – coordinated by the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP) – and our technical support initiatives.

Chapter 1 presents some of our general activities to advance sexual and reproductive health in the world. In this regard, we continue to map best practices through systematic reviews and to promote implementation of best practices in countries. This chapter also describes our work in developing a monitoring framework for tracking progress towards the MDGs, as well as the actual collection and synthesis of global data. We are also involved in an innovative advocacy project called “Art for Health”, which uses contemporary art as a medium for increasing people’s awareness of sexual and reproductive health issues around the world.

Chapter 2 looks at activities in the area of family planning, a field that has seen tremendous advances in the past 30 years. Yet, still more than 120 million couples do not use a method of contraception, even though they do not want a child, and some 300 million more couples are not satisfied with the method they use. Our research in this area focuses on expanding the range of products available, assessing the safety and effectiveness of existing methods, and gaining a better understanding of the attitudes of sexually active couples and of health care providers to contraceptives. For example, we have investigated the fertility intentions and use of contraception by people in South Africa who are HIV-positive. The finding that a number of HIV-positive women had had an unplanned pregnancy since finding out their HIV status has immediate practical implications for local health services, and highlights the importance of close links between HIV and sexual and reproductive health services. In parallel, we continue to produce evidence-based and consensus-driven guidelines and tools, aimed at strengthening and supporting national family planning programmes.

Activities aimed at improving maternal and perinatal health are outlined in Chapter 3. Research in this area seeks to improve knowledge of the burden of leading causes of maternal and newborn mortality and morbidity and to generate evidence on the effectiveness of interventions. All our research activities are intended ultimately to contribute to improving clinical and public health practices in countries, and we are actively developing a range of tools for use in national programmes.

Chapter 4 describes our work in the area of reproductive tract and sexually transmitted infections, including HIV infection. For instance, we are supporting a large study in Africa to determine the optimum antiretroviral drug regimen for prevention of mother-to-child transmission of HIV, with a focus on preserving the health of the breastfeeding mother and her baby and keeping side-effects to a minimum. The increasing popularity of the female condom as a method of both contraception and protection against sexually transmitted infections has led us to establish a committee to evaluate the new products that are appearing on the market. In support of countries, the Department has elaborated a Global Strategy for the Prevention and Control of Sexually Transmitted Infections, which was adopted by the World Health Assembly in 2006 and provides a framework for national programmes for the control of sexually transmitted infections over the next decade. We also produced a range of guidelines and tools for use by countries, on topics as diverse as the role of sexually transmitted infection control in HIV prevention, cervical cancer prevention and management, male circumcision, and elimination of congenital syphilis.

Our work on unsafe abortion is described in Chapter 5. This work responds both to WHO’s Global Strategy on Reproductive Health, and to the recommendations of the International Conference on Population and Development and its five-year follow-up review. In addition to documenting the size of the problem of unsafe abortion and the associated mortality, we support research aimed at developing improved regimes for medical abortion, and
increasing access to safe abortion to the full extent of the law. We have also worked with a number of countries to assess and improve the quality of their abortion services.

Chapter 6 describes our work in the fields of gender equity, reproductive rights, sexual health and adolescent sexual and reproductive health. Research in this broad field includes initiatives in the areas of harmful sexual practices and intimate partner violence, as well as a range of studies on various aspects of adolescent sexual and reproductive health. We have also developed and field-tested a human rights framework for examining laws and policies related to maternal and neonatal health, and our curriculum on gender and rights in reproductive health is now available in five languages and is being used in health systems and medical schools throughout the world. We are also developing guidance on the sexual and reproductive health needs and rights of people living with HIV and, in collaboration with other United Nations agencies, have prepared a statement on the elimination of female genital mutilation.

Finally, Chapter 7 looks at our technical cooperation activities with countries, including our research strengthening activities. Our strategic planning method, known as the Strategic Approach, has already been used by some 30 countries to improve a range of sexual and reproductive health services. A new network, ExpandNet, has been formed, bringing together policy-makers, programme managers, researchers and technical experts to share experiences and promote scaling-up of successful sexual and reproductive health interventions. We are also developing research projects to investigate the most effective ways for governments to link up with the private health-care sector.

At the half-way point between the Millennium Declaration and the target date of 2015, it is particularly appropriate to reflect on what has been achieved so far, and on what still remains to be done. As might be expected, progress towards the MDGs has been uneven. Sadly, the goal towards which progress has been slowest is goal 5 – improving maternal health. As we note in this report, maternal mortality is decreasing too slowly all over the developing world, and particularly in sub-Saharan Africa. There are multiple reasons for this, but most of them could be successfully addressed if there was sufficient political will to allocate the necessary human and financial resources. Regrettably, in the field of sexual and reproductive health and rights, politics too commonly overshadows public health imperatives. The challenge for all of us in the sexual and reproductive health field, at both national and international levels, is to advocate for, and to implement, appropriate action at all levels in support of this key aspect of human life and health.

On the eve of my departure from WHO, I am reminded of the words of Benjamin Mays, “It isn’t a disgrace not to reach the stars, but it is a disgrace to have no stars to reach for.” Let us make sure the sexual and reproductive health and well-being of our fellow human beings, wherever they live, is one of the stars in our lives.

Paul F.A. Van Look, MD PhD FRCOG
Director, WHO Department of Reproductive Health and Research
Chapter 1. General activities to advance sexual and reproductive health

The mission of the WHO Department of Reproductive Health and Research (RHR)\(^1\) is to help people to lead healthy sexual and reproductive lives. In pursuit of this mission the Department strives to strengthen the capacity of countries to enable people to promote and protect their own sexual and reproductive health and that of their partners, and to have access to, and receive, high-quality sexual and reproductive health services when needed. In addition, the Department seeks to stimulate support and action at international level, by disseminating evidence on the prevalence and impact of sexual and reproductive ill-health.

This Chapter describes selected general activities of the Department to advance sexual and reproductive health in the world.

Mapping best sexual and reproductive health practices

Many health workers do not have access to the knowledge they need to make informed decisions on programmes and policies or to provide the most effective care. RHR seeks to help bridge this so-called “know–do gap” through two main approaches. First, RHR maps best practices by conducting and disseminating the results of systematic reviews on aspects of sexual and reproductive health care. Second, RHR leads a global collaborative effort, described below, known as the Implementing Best Practices Initiative.

\(^1\) The Department was established in November 1998 by bringing together the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP) and the former WHO Division of Reproductive Health (Technical Support) (RHT). The primary objective of joining these two entities was to integrate within one Department activities related to research and programme development in sexual and reproductive health within WHO. HRP was established in 1972 by WHO. In 1988, the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), and The World Bank joined WHO as the Programme’s cosponsors.

The WHO Reproductive Health Library

A key tool in disseminating evidence on the effectiveness of health-care interventions is The WHO Reproductive Health Library (RHL). This is an electronic journal, available on CD-ROM and online, containing Cochrane reviews of various aspects of sexual and reproductive health care, accompanied by commentaries and practical recommendations prepared by authors with extensive knowledge of medical practice in developing countries. Issue No. 9 was published in 2006 and issue no. 10 in 2007. Both the online version and the CD-ROM are free to users in developing countries.

The content of the Library was expanded in 2006–2007, with the inclusion of quizzes for each topic, so that users can test their knowledge, as well as a detailed list of RHL focal points. A video on active management of the third stage of labour, produced by Khon Kaen University, Khon Kaen, Thailand, was also distributed in 2007.

RHL is available in English and Spanish. Abridged Chinese and French versions of RHL were published for the first time in 2006, and an abridged Vietnamese version appeared in 2007. A Russian translation is planned for
2008. In 2006, a meeting was held in Geneva, Switzerland, to standardize the translation approaches used in the various language versions.

To mark the tenth anniversary of RHL in 2007, an international scientific meeting was held in Khon Kaen, Thailand. Some 90 participants discussed new developments in sexual and reproductive health and evidence-based decision-making. A survey of the meeting participants found that the current focus and mode of distribution of RHL were reasonable, but that the content could be expanded to include guidelines.

The Implementing Best Practices Initiative

The Implementing Best Practices (IBP) Initiative is a global partnership of 27 international agencies. It aims to help countries develop the capacity to access, interpret, critically appraise and apply evidence-based practices in health care, training and performance improvement.

The IBP Knowledge Gateway is an electronic communication system, accessed through email and with direct links to virtual Web-based workspaces, aimed at promoting collaborative learning and knowledge sharing. Since it was launched in 2004, over 5000 people from more than 100 countries have joined the IBP community, and participate in nearly 100 online communities of practice on specific topics. In 2006–2007, the Gateway has been used to organize and manage virtual discussion forums on a range of topics, such as the challenges faced by individuals with disabilities in accessing sexual and reproductive health care, client–provider interaction in family planning, sexual and reproductive health and HIV integration.

The success of the IBP Knowledge Gateway has stimulated other WHO departments and their partners to use the system, so that there are now five independently owned global communities, with over 200 subcommunities and more than 10,000 users.

In September 2007, a conference in Bangkok, Thailand, on Dissemination of high-impact family planning, maternal and neonatal health best practices for scaling-up to achieve the Millennium Development Goals, brought together almost 500 participants from countries in Asia and the Eastern Mediterranean. Each country identified the best practices they wanted to scale up and drafted initial plans to do so.

Monitoring and evaluating sexual and reproductive health

Monitoring and evaluation work in RHR encompasses a number of activities to track progress towards sexual and reproductive health goals and targets, including the Millennium Development Goals. The focus is on data collection and synthesis at global level, and on providing guidance for both international agencies and national governments on measuring sexual and reproductive health status.

An e-learning project on evidence-based medicine

The content of RHL has been used to adapt an integrated learner-centred education programme on evidence-based medicine developed by a European consortium funded by the European Union Leonardo da Vinci programme. The curriculum, which covers evidence-based decision-making in clinical medicine, has been modified, using RHL, to be suitable for use in sexual and reproductive health care in low- and middle-income countries.

A research project has been launched in collaboration with the University of Birmingham, Birmingham, England, and the Geneva Foundation for Medical Education and Research, Geneva, Switzerland, to evaluate the impact of the adapted course through an international, multicentre randomized controlled trial. The trial is expected to start in 2008.
General activities to promote sexual and reproductive health

Monitoring framework for the Millennium Development Goals

In 2007, the United Nations General Assembly adopted a new monitoring framework for the MDGs, which includes two new targets related to sexual and reproductive health: the achievement, by 2015, of universal access to reproductive health; and the achievement, by 2010, of universal access to treatment for HIV/AIDS for all those who need it. The Interagency and Expert Group on MDG indicators, in which RHR participates, has agreed on four indicators to monitor progress towards the target of universal access to reproductive health: contraceptive prevalence, adolescent birth rate, antenatal care coverage, and unmet need for family planning.

In collaboration with the United Nations Children’s Fund (UNICEF), RHR has developed a database for antenatal care coverage, in response to its inclusion as an MDG indicator.

To help ensure consistent monitoring and evaluation of progress towards the sexual and reproductive health targets in the MDGs, RHR has issued a document entitled Reproductive health indicators: guidelines for their generation, interpretation and analysis for global monitoring.

Maternal mortality and morbidity

In collaboration with UNICEF, UNFPA and the World Bank, RHR developed global, regional and country estimates for maternal mortality in 2005, and for global and regional trends from 1990 to 2005. It was estimated that, in 2005, 536 000 women died of maternal causes, compared with 576 000 in 1990. Almost all these deaths occurred in developing countries, with 86% in sub-Saharan Africa and South Asia. In 2005, there were 450 maternal deaths per 100 000 live births in developing countries, compared with nine per 100 000 in developed countries.

The decline in maternal mortality was estimated at less than 1% per year from 1990 to 2005. No region achieved the 5.5% annual decline required to reach MDG 5; Eastern Asia came closest, with an annual decline of 4.2%. In sub-Saharan Africa, the decline was only 0.1% per year.

A workshop on measuring maternal mortality was held in December 2007 in Dakar, Senegal, in collaboration with UNFPA and the World Bank, with participants from 11 English-speaking and 12 French-speaking countries. The workshop aimed to increase awareness about the methods, findings and limitations of the estimates.

A systematic review of maternal mortality and morbidity was also completed in 2006. The review found that postpartum haemorrhage is the main cause of maternal death in Africa and Asia, while hypertensive disorders are the leading cause in Latin America and the Caribbean. The results also highlight the importance of a number of conditions that have not previously been systematically examined (see Fig. 1.1).

Systematic reviews

- A systematic review of 106 studies of chronic pelvic pain was published in 2006. On the basis of the high-quality studies with representative samples, the prevalence of dysmenorrhoea was found to be 17–81%, that of dyspareunia (pain during intercourse) 8–22%, and that of non-cyclical pain 2–24%.

- A systematic review of risk factors for stillbirth found that the main contributors were maternal syphilis, chorio-amnionitis, maternal malnutrition, lack of antenatal care and maternal socio-economic disadvantage.
Measuring equity of sexual and reproductive health care

A project has been initiated to develop and test a series of instruments to examine inequalities in the use of sexual and reproductive health care. A focus group study in South Africa has provided information on the potential context-specific factors that influence use of such health care. This study informed the development of the questionnaire for a household survey that was conducted in the Eastern Cape Province of South Africa. The findings, which are expected to be published in late 2008, will help enhance local health-care programmes and improve other surveys in terms of questionnaire development.

Reaching out with information

- In 2006–2007, some 135 publications were produced in print or electronic form. Nearly half were in a language other than English.
- The RHR Web site had over 5 million visitors, and nearly 3 million documents were downloaded.
- The entire contents of the Web site were made available on CD-ROM.

The “Art for Health” project

The “Art for Health” project uses contemporary art as a medium for increasing people’s awareness of sexual and reproductive health issues around the world. It includes paintings depicting women from diverse ethnic and social backgrounds, incorporating messages from the women themselves. In the course of 2006–2007, the art works have been exhibited in France, Italy, Malaysia, South Africa, Switzerland, the United Kingdom and the United Republic of Tanzania. In 2008, several of the paintings will be sold at auction, and the proceeds will go to activities aimed at improving sexual and reproductive health in developing countries.
In recent decades, tremendous advances have been made in the development of safer and more effective contraceptives, and in the provision of affordable and accessible family planning services. Yet, still millions of individuals and couples around the world are unable to plan their families as they wish. It is estimated that over 120 million couples do not use contraceptives, despite wanting to space or limit their childbearing. In addition, many women who use contraceptives nevertheless become pregnant. At the same time, many couples who want to have children are unable to conceive.

The underlying causes of this unmet need for family planning are many and varied. In some areas, services may be difficult to access or of poor quality; providers may not have the necessary technical competence or the skills to interact optimally with clients; they may not have access to up-to-date information; or the service delivery system may be poorly designed or managed. The choice of methods available may be limited or inappropriate, and clients may be wary of potential or actual side-effects. On a broader scale, a number of social issues – people’s lack of knowledge, power imbalances within couples and families, and sociocultural, religious and gender-related factors – can also affect the availability and uptake of family planning services.

The Department of Reproductive Health and Research (RHR) is working to ensure that as many people as possible are able to access the services they want and need. In doing so, it focuses on three key objectives:

1. to increase the availability of high-quality services;
2. to broaden the range of safe, effective, acceptable and affordable family planning and infertility-care methods available to women and men; and
3. to strengthen the capacity of national health systems to ensure high-quality, sustainable family planning programmes and services in resource-poor settings.

Research activities

HRP is the research arm of the Department. Research activities in 2006–2007 in the area of family planning encompassed investigations into barriers to services, the attitudes of users and providers, and the safety, efficacy and acceptability of a number of contraceptive methods. Some of the highlights are briefly outlined below.

Medical barriers to services

In many countries, women are unnecessarily refused family planning services, simply because, when they go to the clinic, they are not menstruating and, as a result, staff consider that there is a risk that they might be pregnant. A study in Guatemala, Mali and Senegal has evaluated whether use of a “pregnancy checklist” could help providers determine more accurately which clients are likely to be pregnant, and thus avoid refusing services unnecessarily. A total of 4823 women attending 16 clinics were included in the study. In Guatemala, women who were not menstruating were initially six times more likely to be refused their preferred contraceptive method than those who were menstruating. Use of the checklist significantly reduced refusal rates in both Guatemala and Senegal. In Mali, however, refusal rates were already relatively low, and introduction of the checklist did not lead to any significant change.
As a result of these studies, the Ministry of Health in Senegal has incorporated the checklist into the national family planning client card. The checklist has also been introduced into all public sector clinics in Guatemala, as well as urban clinics of the Asociación Pro Bienestar de la Familia (APROFAM), a non-profit, private organization.

**Provider perspectives**

As part of a broad social science research initiative, launched in 2000, a study was carried out in Egypt, Peru and Uganda to document the perspectives of providers on quality of care in family planning services. Using focus group discussions, in-depth interviews, and key informant interviews, investigators obtained rare insights into the perceptions of service providers. In all three countries, providers described the quality of family planning care as inadequate. Lack of training and shortages of equipment and supplies were frequently mentioned as barriers to quality service provision. In Uganda, providers also mentioned long waiting times, widespread misinformation about contraception in the community, and lack of supportive leadership. In Egypt, providers noted that it was difficult to provide confidential counselling in the restricted space available to clinics.

The study also revealed some misunderstandings among the providers, particularly with regard to medical restrictions on contraceptive use. In Egypt and Uganda, providers described excessive restrictions on hormonal contraceptives, particularly injectable ones. Some providers even believed that injectables could compromise fertility, and should be given only to women who did not want any more children.

When asked what might improve the quality of care, providers in Egypt and Uganda suggested a need for additional staff, but also for increased incentives to improve performance. Those in Uganda also considered that additional training and more support from supervisors would help them perform their duties better.

**Condom use in marriage**

A study in Kenya, South Africa, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe continued to provide new insights into the relative importance of the motivation and attitudes of men and women in the decision to use condoms, in a context of high prevalence of human immunodeficiency virus (HIV) and other sexually transmitted infections (STIs). Investigators found that almost all the men and women in all the study sites had some knowledge of HIV and acquired immunodeficiency syndrome (AIDS). The percentage of men who rated their chance of infection as medium or high ranged from 16% in Kenya to 45% in the United Republic of Tanzania. Except in the United Republic of Tanzania, more women than men considered themselves vulnerable to infection. Most people also knew about condoms and how to obtain them. However, many people had doubts about whether condoms could effectively prevent transmission of HIV infection.

In practice, consistent use of condoms within marriage was found to be below 5%. However, occasional use was much higher, at about 20%, and as high as 30% among urban, educated couples in South Africa. In general, younger, better educated couples were more likely to use condoms than older, less well educated couples. In South Africa, a woman’s perceived risk of acquiring HIV infection from her partner was found to be the most powerful determinant of condom use.

Building on these results, a new study was launched in 2007 to explore the dynamics of condom negotiation and use among married couples in South Africa and Uganda. Its aim is to elicit information that could be useful to policy-makers and programme managers in developing strategies to influence behaviour.

**Fertility intentions of people living with HIV/AIDS**

A clinic-based survey in South Africa among HIV-positive patients found that 81% of the women and 70% of the men were sexually active. About half of the respondents
did not want to have another child (Fig. 2.1). A higher proportion of the men wanted to have a child in the future. Among the women, 19% reported that they had been pregnant since knowing their HIV status, and 61% of these pregnancies had been unplanned. More than a quarter of the women said that they could not obtain contraceptives during their visits to HIV facilities for care and treatment, and 35% were unsure if family planning services were available. As a result of this research, local health departments are exploring ways of providing integrated HIV care and family planning services.

**Hormonal contraception for men**

For some years, researchers have sought to develop a hormonal contraceptive method for use by men that would be as effective, safe and convenient as those available for women. HRP has taken a lead in this field, overseeing clinical trials as well as research into users’ perspectives and acceptability of the method.

- The world’s first phase III trial of a hormonal contraceptive for men was completed in 2007. The study included over 1000 Chinese couples, who used the male steroid hormone, testosterone undecanoate, as their only method of contraception for two years. The failure rate – defined as the percentage of men whose sperm concentration was not adequately suppressed plus those who caused a pregnancy or whose sperm concentration rebounded – was 7.05 per 100 couple-years of use. The method did not cause any serious adverse events (Table 2.1).

- Following observations that suppression of spermatogenesis by an androgen alone is less effective in Caucasian than in Asian men, HRP is planning a multicountry study to investigate the efficacy of a combination of testosterone undecanoate with the long-acting progestogen, norethisterone enantate. Some 400 men in nine countries will be given injections every eight weeks of 1000 mg of testosterone undecanoate plus 200 mg of norethisterone enantate. The study is expected to start in 2008.

- A study in China, involving 380 men, investigated the acceptability of testosterone undecanoate as a once-a-month injectable contraceptive. Structured questionnaires and focus group discussions were used to obtain the views of both the users and other stakeholders, such as partners, service providers and policymakers. The men receiving the contraceptive generally found it acceptable, reporting either no change or an improvement in their well-being. However, the wider acceptability of the method requires further study.
Implantable contraceptives for women

In 2003, HRP initiated a randomized controlled trial of two implantable contraceptives, Jadelle and Implanon. The trial is being conducted in seven countries, and is investigating the clinical performance and contraceptive efficacy of the two contraceptives in comparison with an intrauterine device (IUD). A total of 2000 women have been recruited to receive one or other of the implantable contraceptives, and an age-matched cohort of 1000 women are using an IUD. The original proposal was to follow the women for three years (the approved duration of use of Implanon in countries where it is registered). However, data from several studies have suggested that Implanon offers a high contraceptive effectiveness beyond three years, and in 2006, the research protocol was modified to allow the study of Implanon for up to five years of use. The first recruits have already completed four years of use, and initial results are expected in late 2008.

Vaginal ring

HRP is funding two of 12 research centres participating in a phase III clinical trial of a contraceptive vaginal ring developed by the Population Council. The ring releases 150 µg of nesterone and 15 µg of ethinyl estradiol daily for a year. So far, 735 of a planned 1000 volunteers have been recruited to the study.

Progestogen-only contraceptives and bone mineral density

Over 20 million women are currently using progestogen-only contraceptives, including oral preparations, injectables [depot-medroxyprogesterone acetate (DMPA) and norethisterone enantate (NET-EN)], implants, vaginal rings, and the levonorgestrel-releasing IUD. Concerns have been expressed that use of these methods can lead to loss of bone mineral density, and thus increased risk of osteoporotic fracture. A study in Durban, South Africa, has investigated the impact of use of such contraceptives on women aged 15–19 years, when acquisition of bone mass is maximal, and 42–49 years, entering menopause. A total of 986 women were followed every six months for five years. In the older group, there was little difference between the groups using DMPA, NET-EN, or combined oral contraceptives and controls. However, there was a clear trend of increasing bone mineral density and body mass index with increasing age. In the younger group, a similar increase in bone mineral density was seen in those using DMPA or combined oral contraceptives and in controls. The increase was smaller among those using NET-EN.

### Table 2.1. Side-effects experienced with use of testosterone undecanoate as a male contraceptive, among 1045 Chinese men

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<th>Side-effect</th>
<th>Number reported</th>
<th>Number withdrew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased libido</td>
<td>106</td>
<td>3</td>
</tr>
<tr>
<td>Acne</td>
<td>77</td>
<td>3</td>
</tr>
<tr>
<td>Local pain</td>
<td>41</td>
<td>0</td>
</tr>
<tr>
<td>Coughing</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Decreased libido</td>
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<td>2</td>
</tr>
<tr>
<td>Fatigue</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Skin rash and/or facial puffiness</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Mood change</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>324</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
Support for national programmes

Guidelines for service delivery

National family planning programmes face a double challenge: to ensure that the care they provide is of high quality and to extend that care to the widest possible audience. To support them in these efforts, RHR has produced evidence-based and consensus-driven guidance, constructed around four “cornerstones” (Fig. 2.2):

- **Medical eligibility criteria for contraceptive use.** The third edition of this guide for policy-makers and programme managers was published in 2004, providing guidance on who can safely use various contraceptive methods. It is currently available in 12 languages. A companion job aid for family planning providers – the **Medical eligibility criteria wheel** – was finalized in 2007, and 40,000 copies in English were disseminated (Fig. 2.3). The wheel is also available in six other languages and additional translations are ongoing.

- **Selected practice recommendations for contraceptive use.** The second edition of this guide was published in 2004. It is available in nine languages.

- **Decision-making tool for family planning clients and providers.** Published in English in 2005, this guide has since been translated into 22 other languages. National adaptations are also being prepared in 13 countries.

**Fig. 2.2 The four cornerstones of evidence-based guidance in family planning**
Family planning: a global handbook for providers. This final cornerstone was published in 2007. Developed in partnership with the INFO project of Johns Hopkins University/Center for Communication Programs (JHU/CCP), it involved the collaboration of nearly 50 other agencies as well as a number of individual family planning experts.

The handbook incorporates guidance from the first two documents mentioned above, together with consensus recommendations from a series of meetings with experts. Over 40 000 copies in English have been disseminated and it is currently being translated into 11 languages.

In order to keep its family planning guidance up to date, RHR uses the Internet-based Continuous Identification of Research Evidence (CIRE) system to identify and appraise relevant new evidence. CIRE is operated by RHR in collaboration with JHU/CCP and the Centers for Disease Control and Prevention in the USA.

Reproductive choices and family planning for people living with HIV

In collaboration with JHU/CCP and WHO’s Department of HIV/AIDS, RHR has developed a set of materials on Reproductive choices and family planning for people living with HIV. The materials include a counselling tool, which was finalized in 2006, and documentation for a two-day training course, which was completed in 2007. They are intended to help integrate reproductive choices and family planning into HIV treatment services. A guide to adapting the materials for use in individual countries has also been prepared, and it is planned to publish all the materials together on a CD-ROM.

The WHO-UNFPA Strategic Partnership Programme

The Strategic Partnership Programme (SPP) provides financial and technical support to countries that wish to introduce and use RHR’s evidence-based guidelines. In this context, family planning guidance was introduced to 70 countries. The SPP is described in more detail in Chapter 7.
Some 530,000 women and 3 million newborn infants die each year as a direct result of complications related to pregnancy and childbirth. Almost all these deaths occur in developing countries, reflecting what is perhaps currently the starkest example of health inequity between the developed and the developing world. The figures – and the underlying health differentials they represent – go beyond simple public health concerns to acquire the status of a major social injustice. This was explicitly recognized by all countries in the Millennium Development Goals (MDGs), which include the pledge to reduce, by 2015, the maternal mortality ratio by three-quarters and the under-five mortality rate by two-thirds from their respective 1990 baselines.

To date, most research in the field of maternal and perinatal health has been driven by the needs of developed countries, often resulting in the development and refinement of interventions that have little or no relevance to resource-poor areas. Conditions that affect mainly poor countries have been largely neglected. Pre-eclampsia/eclampsia and preterm delivery, for example, are two conditions that cause considerable morbidity and mortality in the developing world, but that are still poorly understood and receive little international funding.

**Research activities**

HRP’s activities in the area of maternal and perinatal health are aimed at meeting the needs of all populations, especially those that are most vulnerable and in greatest need of affordable preventive and therapeutic interventions. They are carried out in collaboration with institutions and individuals throughout the world and are focused on:

- defining lines of research that will benefit the health system globally;
- coordinating research efforts at all levels, from the laboratory to the health system;
- making research accessible to researchers from low-income countries and institutions; and
- stimulating new thinking.

HRP also recognizes that improving maternal and perinatal health will require action and support from political leaders and civil society. It therefore seeks to reach out beyond the public health field to a broader audience.

Some of the highlights of HRP’s work in this area in 2006–2007 are described below.

**Mapping maternal and perinatal ill-health**

In view of the general lack of accurate, reliable and up-to-date health data in many countries, HRP has initiated a Global Survey on Maternal and Perinatal Health. The first phase of the survey, involving Africa and Latin America, was completed in 2005, and the first results for the Latin American component were published in 2006. Data collected in eight countries in the region showed a positive
association between rates of caesarean section and postpartum antibiotic treatment and severe maternal morbidity and mortality. Higher rates of caesarean delivery were also associated with higher fetal mortality rates and neonatal mortality and morbidity. These findings demonstrate that higher rates of caesarean delivery do not necessarily indicate better perinatal care; on the contrary, they may reflect practices that ultimately lead to poorer maternal and newborn health outcomes.

These results were extended in an analysis of nationally representative data from both developed and developing countries. This study, published in 2007, found a direct association between caesarean section rates and maternal, infant and neonatal mortality in countries with low mortality, and a strong inverse relationship in countries with high mortality.

**Preventing and treating pre-eclampsia/eclampsia**

Pre-eclampsia is a little-understood disorder of pregnancy, characterized by high blood pressure, excessive protein in the urine, gastric pain, swollen limbs, headache and visual disturbances. In about one case in 200, pre-eclampsia progresses to eclampsia, which is marked by convulsions and can be fatal. Up to 12% of infants born to women with pre-eclampsia die before the age of one month. WHO’s Global Programme to Conquer Pre-eclampsia/Eclampsia continues to stimulate productive collaboration with and between institutions around the world. On the basis of systematic reviews of the literature, HRP selects promising hypotheses for further research, which is then carried out in centres affiliated with the Maternal and Perinatal Research Network (Fig. 3.1). Some examples are briefly outlined below.

**Fig. 3.1 The WHO Maternal and Perinatal Research Network**

![Map of countries participating in the network](image-url)
In 2006, the results of a randomized trial to assess the effect of calcium supplements during pregnancy were published. The study, involving more than 8000 women in six countries, showed that a daily supplement of 1.5 g of calcium significantly reduced severe complications of pre-eclampsia, as well as maternal morbidity and neonatal mortality. These results are particularly important, since pregnant women, especially in low-resource settings, tend to consume inadequate amounts of calcium.

A multicountry study of the effects of supplementary vitamin C and vitamin E, which was completed in 2006, showed that such supplements are unlikely to reduce the risk of pre-eclampsia.

In February 2007, an observational study was launched in eight countries to determine whether changes in angiogenic proteins during pregnancy, as detected with a simple urinary screening test, can be used to identify women at high risk of developing pre-eclampsia. This unprecedented effort will involve over 12 000 women, followed up three times during their pregnancy. Data collection is expected to be completed in 2010.

A systematic review of maternal infections concluded that there was no association between the risk of pre-eclampsia and the presence of antibodies to *Chlamydia pneumoniae*, *Helicobacter pylori*, cytomegalovirus, HIV infection, or malaria. Similarly, infection with herpes simplex virus type 2, bacterial vaginosis, or *Mycoplasma hominis* was not associated with pre-eclampsia. However, urinary tract infection and periodontal disease in pregnancy were associated with an increased risk of pre-eclampsia.

A second systematic review concluded that increased soluble fms-like tyrosine kinase-1 receptor and decreased placental growth factor during the third trimester are associated with pre-eclampsia.

**Showing what works**

Some countries have managed to achieve remarkable reductions in maternal or perinatal mortality in spite of limited resources. RHR is collaborating with a number of these countries to examine their experiences, analyse the underlying reasons for the improvements, and disseminate the information to a wide audience.

- In Chile, the neonatal mortality rate decreased from 8.3 per 1000 live births to 5.7 per 1000 between 1990 and 2000. This was largely a result of the introduction of specific sector-wide interventions aimed at improving newborn care, and suggests that similar reductions in newborn mortality are possible in other developing countries, with the implementation of effective, coordinated interventions.

- In Mongolia, the implementation of a specific strategy led to a reduction in maternal mortality, from 169 to 99 per 100 000 live births in the space of just four years. The strategy was based on a coordinated approach, involving the Ministry of Health, national and international agencies and donors, health care workers, nongovernmental organizations, the media and the general public.

Since 2004, HRP has played an active role in the Preterm Birth International Collective (PREBIC). This collaboration promotes international networking among researchers investigating preterm birth, and supports multicountry research projects. The group has established a non-profit organization to support research on the genetic factors associated with preterm birth, and is carrying out a number of systematic reviews aimed at clarifying the role played by genetic factors. In addition, an international consortium, which includes Australia, Mexico, the Republic of Korea and the USA, has been established to investigate the interactions between genetic and environmental factors associated with preterm births.
**Preterm birth**

A secondary analysis was carried out on the data from the trial of calcium supplementation (mentioned above), to examine the link between blood pressure and spontaneous preterm birth. It was found that an increase of 30 mmHg or more in systolic pressure or an increase in diastolic pressure of 15 mmHg or more from the first to the mid-third trimester was associated with spontaneous preterm birth in a dose–response pattern.

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**Support to countries**

**Guidelines and tools**

All HRP’s research activities in the field of maternal and perinatal health are intended ultimately to contribute to improving clinical and public health practices in countries. In support of this, the Department has collaborated with the Boston University School of Medicine to develop an online course for health professionals on the WHO model of antenatal health care. The course uses video, online modules, and discussion boards to present and teach the application of the model.

Work is also beginning on the development of two important new tools. The first is a set of growth standards from conception to delivery, for use as an international framework for assessing fetal and newborn growth. The second is a tool for the diagnosis of birth asphyxia that can be used in health facilities in developing countries.

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**Advocacy**

As mentioned in the introduction, maternal and perinatal health can only be improved with the active support of a broad range of stakeholders, including political leaders and civil society. For this reason, RHR has been actively engaged in a number of innovative projects to raise the profile of women’s sexual and reproductive health.

For example, together with the newly formed Partnership for Maternal, Newborn and Child Health, RHR is collaborating with the Oslo Centre for Peace and Human Rights. The founder of the Centre, Mr Magne Kjell Bondevik, former Prime Minister of Norway and United Nations Special Peace Envoy for the Horn of Africa, has been appointed as an ambassador of the Partnership, and has undertaken to keep maternal and newborn health high on the agendas of the meetings he attends.
Chapter 4. Controlling sexually transmitted and reproductive tract infections

Sexually transmitted infections (STIs) and reproductive tract infections (RTIs) are responsible for considerable ill-health throughout the world, both directly and by increasing the risk of HIV transmission. Each year, there are an estimated 340 million new cases of curable STIs, as well as many millions of incurable viral STIs, including some 2.5 million new HIV infections (2007 data).

In the 1980s, the prevention and treatment of STIs was identified as one approach to controlling the HIV epidemic. In July 2006, a meeting of experts, convened by RHR, concluded that treating people with an STI does indeed reduce HIV incidence, with the degree of impact depending on the phase of the HIV epidemic in the community.

As antiretroviral treatment of people with HIV/AIDS acquires a higher profile, it is important not to lose sight of the continuing need for prevention, of which STI control is an important component. In addition, sexual and reproductive health services offer an opportunity to provide counselling and advice on HIV prevention and to offer HIV testing.

Research activities

HRP’s work in this area is focused on broadening the range of safe, effective, acceptable and affordable methods for the prevention and management of STIs and RTIs, and the prevention of mother-to-child transmission (MTCT) of HIV and other STIs, such as syphilis. This includes the assessment of the safety and effectiveness of antiretroviral therapy in preventing MTCT of HIV, and epidemiological studies of STIs and RTIs.

Prevention of MTCT of HIV

The rapid expansion of antiretroviral treatment in developing countries provides an opportunity to treat pregnant and breastfeeding women in order to reduce the risk of HIV transmission to their infants. However, there is still considerable uncertainty about the most effective and practical regimens for these women. In collaboration with research teams from Belgium, France and the USA, HRP is coordinating a study in five sites in Africa to determine the optimum antiretroviral regimen for use in late pregnancy and during the first six months of breastfeeding, with a focus on preserving the health of the mother, keeping side-effects to a minimum, and reducing the risk of MTCT of HIV.

This Kesho-Bora project (“a better future” in Swahili) is a randomized controlled trial among HIV-infected women with intermediate disease (CD4+ count in the range 200–500 cells per mm^3). The trial compares a triple-combination antiretroviral regimen, given from the 28th week of pregnancy and continued for a maximum of six months of breastfeeding, with a short-course regimen. All infants receive a single dose of nevirapine within 72 hours of birth. The health status of all women and their children is monitored regularly for one year.

The primary end-points of the trial are:

- HIV-free infant survival at six weeks and 12 months;
- AIDS-free survival among mothers at 12 months postpartum; and
- incidence of severe adverse effects in mothers and children.

By the end of 2007, a total of 671 HIV-positive pregnant women had been recruited in five sites: Bobo-Dioulasso (Burkina Faso), Mombasa and Nairobi (Kenya), and Durban and KwaMsane (South Africa). Some 75% of the women declared that they intended to breastfeed. The first cohort of 250 babies born in the study reached their first birthday in 2007. The project is expected to complete enrolment by mid-2008.

Epidemiology of STIs and RTIs

In many countries, the lack of data regarding the prevalence and etiology of STIs and RTIs limits the effectiveness and efficiency of prevention and care programmes. This is a particular concern in the WHO South-East Asian
and Western Pacific Regions, where HRP supported six epidemiological studies in 2006–2007:

- a study of the prevalence of RTIs at the Central Women’s Hospital, Yangon, Myanmar;
- a study of the prevalence of STIs and RTIs among antenatal clinic patients in Vientiane, Lao People’s Democratic Republic;
- a community-based cluster study of the prevalence of lower genital tract infections in rural women in Sichuan Province, China;
- two studies in Indonesia to assess the prevalence of RTIs and STIs among university students; and
- a case–control study to assess the association between STIs and other risk factors and ectopic pregnancy in Myanmar.

**Support for national programmes**

RHR acts on a number of fronts in support of national programmes aimed at preventing and treating STIs and RTIs. In addition to the elaboration of a global strategy and development of associated guidelines for the control of STIs, the Department is involved in a number of collaborative, innovative activities, some of which are described below.

**Global strategy**

In 2006, the World Health Assembly adopted a global strategy for the prevention and control of sexually transmitted infections, which provides a framework for national STI programmes up to 2015. Taking into account regional epidemiological variations, the strategy recommends a mix of interventions, and highlights the need to ensure that services are well integrated with other sexual and reproductive health services. A document summarizing the key messages of the strategy was published in 2006.

In June 2007, a meeting was held to develop a global action plan for implementation of the strategy. On the basis of this plan, and with technical assistance from RHR, the WHO regional offices are developing their own regional implementation plans.

**Guidelines and tools**

In support of national programmes, RHR develops and promotes guidelines and tools dealing with the control, prevention and management of STIs and RTIs in various settings and among different populations. The guidelines reflect a comprehensive view of STI and RTI prevention and control, which goes beyond clinical management to address population-level factors that affect sexual and reproductive health.

- **Guidelines for the management of sexually transmitted infections.** Training modules to accompany these guidelines have been widely distributed, both in print form and as a CD-ROM for self-learning.
- **Sexually transmitted and other reproductive tract infections: a guide to essential practice.** This guide has so far been translated into nine languages. Operations research has been carried out in Kenya to adapt and introduce the guide, and to assess its effectiveness and impact. The evidence base supporting the recommendations and strategies in the guide has been made available on RHR’s Website and on a CD-ROM.
- **Strengthening control of reproductive tract and sexually transmitted infections: use of the programme guidance tool.** This document, which is in the final stages of preparation, describes the application of RHR’s Strategic Approach to the strengthening of STI and RTI control programmes.

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1 See section on “Policy and programme issues” in Chapter 7.
Cervical cancer control

Cancer of the cervix is the second most common cancer in women, with about 500,000 new cases and 250,000 deaths each year. Almost 80% of cases occur in low-income countries, where it is the most common cancer in women. Virtually all cervical cancer cases are linked to genital infection with human papillomavirus (HPV), which is the most common viral infection of the reproductive tract. RHR is collaborating with other WHO departments and external agencies to develop a number of tools and guidelines to help reduce the incidence of this disease.

- In collaboration with the WHO Department of Chronic Diseases and Health Promotion, the Alliance for Cervical Cancer Prevention, the International Atomic Energy Agency and the WHO International Agency for Research on Cancer, RHR published in 2006 a handbook entitled *Comprehensive cervical cancer control: a guide for essential practice*. The guide, which is available in six languages, is intended for use by service providers at primary and secondary health care levels. A programme was also launched to introduce the guide in Madagascar, Malawi, Nigeria, Uganda, the United Republic of Tanzania and Zambia.1

- In March 2006, together with UNFPA and with other WHO departments, RHR convened a consultation to define the role of sexual and reproductive health services in the introduction of vaccines against HPV. As a result, a guidance note, *Preparing for the introduction of HPV vaccines: policy and programme guidance for countries*, was published. This document, which has been widely disseminated, discusses the key issues that policy-makers and programme managers need to consider in deciding whether and how to introduce HPV vaccines. Arabic, French, Russian and Spanish versions of this document are now available.

- In 2007, meetings were held in WHO’s South-East Asian, Western Pacific and European Regions to develop action plans for the strengthening of cervical cancer prevention programmes, taking into account the newly licensed HPV vaccines. A new “community of practice” was established, as an online global network of stakeholders in prevention of HPV-related disease.

Male circumcision for HIV control

Male circumcision has been performed on boys and young men for many years, primarily for religious and cultural reasons. Studies conducted since the mid-1980s have suggested that circumcised men have a lower prevalence of HIV infection than uncircumcised men, but it was not clear whether promoting circumcision among men who would not otherwise be circumcised would result in a lower incidence of HIV infection. Recently, three randomized, controlled trials, in Kenya, South Africa and Uganda, have provided strong evidence that male circumcision reduces the risk of heterosexually acquired HIV infection in men by up to 60%. In response to these new data, RHR, together with the WHO Department of HIV/AIDS and the Joint United Nations Programme on HIV/AIDS (UNAIDS), launched a number of new initiatives in 2006–2007.

- In partnership with other WHO departments, UNAIDS, and the Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO), RHR has developed a *Manual for male circumcision under local anaesthesia*. The manual is intended for...
use by clinical officers, who can be trained to perform uncomplicated circumcision, and to refer more complex cases. The manual is expected to be published in 2008.

- The manual itself is supported by training guides and a certification framework, to facilitate the upgrading of skills of officers who are not otherwise authorized to perform surgery.
- RHR is also supporting the development of a toolkit that will allow countries to assess their preparedness for introducing or expanding male circumcision services.
- RHR contributed to a number of other documents dealing with various aspects of male circumcision, including a review of global trends and determinants of prevalence, safety and acceptability, and a guide to enhancing the quality of male circumcision services.

Elimination of congenital syphilis

Congenital syphilis is a serious but preventable disease, which could be eliminated through effective screening of pregnant women for syphilis and treatment of those infected. In collaboration with the WHO Departments of Making Pregnancy Safer and HIV/AIDS, RHR developed a document entitled The global elimination of congenital syphilis: rationale and strategy for action. During the “Women Deliver” conference in London, England, in October 2007, the Ministers of Health of Mongolia and Nigeria, together with the Directors of RHR and of the WHO Department of Making Pregnancy Safer, launched an initiative for the global elimination of congenital syphilis. A statement of commitment to the initiative, prepared by UNFPA and WHO, was endorsed by a number of countries and governmental and nongovernmental organizations.

Female condoms

Condoms are currently the most efficient available technology to reduce the sexual transmission of STIs, including HIV. The female condom, which was introduced in the 1990s, has the advantages that it is controlled by the woman and can be inserted several hours before intercourse. It is gradually gaining in popularity, and new products are appearing on the market. However, there is, as yet, no internationally accepted standard for effectiveness and safety. RHR is currently working with the International Organization for Standardization to develop such a standard, but the process is long and complex. In the meantime, the new products have to be evaluated individually.

Following a request from the United Nations Population Fund (UNFPA) for technical guidance on such new products, RHR has established a Female Condom Technical Review Committee. This Committee reviews dossiers provided by the manufacturers of latex and synthetic female condoms that are under development or expected to come onto the market soon. At its first meeting, in January 2006, the Committee established criteria for reviewing the dossiers and agreed on definitions of clinical failure modes. The review process for a number of products is under way, and one new synthetic female condom has already been recommended as acceptable for bulk procurement by United Nations agencies.
Unsafe abortion – defined as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking minimal medical standards or both – results in the deaths of between 68,000 and 70,000 women every year and leaves an additional five million temporarily or permanently disabled. Yet unsafe abortions are entirely preventable: they are a result of unmet need for family planning, contraceptive failure, a lack of information about contraception, and restricted access to safe abortion services.

As noted in WHO’s Global Strategy on Reproductive Health, adopted by the World Health Assembly in May 2004: “As a preventable cause of maternal mortality and morbidity, unsafe abortion must be dealt with as part of the MDG on improving maternal health and other international development goals and targets.” HRP’s work in this area responds to this call, as well as to the Programme of Action of the International Conference on Population and Development (ICPD), which urged countries and organizations “to deal with the health impact of unsafe abortion as a major public health concern”.

HRP’s overall strategy comprises four inter-related activities: to collate, synthesize and generate scientifically sound evidence on unsafe abortion prevalence and practices; to develop improved technologies and implement interventions to make abortion safer; to translate evidence into norms, tools and guidelines; and to assist in the development of programmes and policies that reduce unsafe abortion and improve access to safe abortion and high-quality postabortion care.

The size of the problem

In 2006–2007, in collaboration with the Guttmacher Institute, HRP developed estimates of the global and regional incidence of safe and unsafe abortion in 2003 (Fig. 5.1). Some 42 million abortions were estimated to have taken place, down from 46 million in 1995. The induced abortion rate was also found to have declined, from 35 abortions per 1000 women aged 15–44 years in 1995 to 29 in 2003. Much of the decline occurred in safe and legal abortions, and in countries of the former Soviet Union and Eastern Europe, where contraceptive use has risen significantly. The findings were summarized in a paper published in 2007 in a special issue of The Lancet. They were also presented at a press conference organized by The Lancet, and during the “Women Deliver” conference in October 2007, in London, England, and were widely disseminated by the mass media.

Improving technologies and interventions

Medical abortion

Improving abortion technologies and expanding the choice of safe and effective methods to the full extent of the law are critical to reducing the incidence of unsafe abortion.

Medical abortion offers women an effective alternative to surgical procedures. HRP’s work over the past three decades has contributed significantly to the development and wide acceptance of the current recommended regimen of 200 mg of mifepristone, given orally, followed 36–48 hours later by a prostaglandin – either 0.8 mg of misoprostol or 1 mg of gemeprost – given vaginally.

HRP’s current clinical research in this area is directed at simplifying and improving the regimens for medical abortion. Results from three studies are highlighted below.

- A randomized, multicentre trial has been carried out to determine whether the dose of mifepristone in the standard regimen could be lowered from 200 mg to 100 mg, and whether the interval between the administration of mifepristone and misoprostol could be shortened from 36–48 hours to 24 hours. A total of 2181 women in 11 countries were included in the study. The combination of the lower dose of mifepristone and the shorter interval was effective in 93% of women with a pregnancy of up to 63 days. There was no difference in efficacy between the two doses of mifepristone or between the two intervals of administration of mifepristone and misoprostol.

- In the context of a multicentre clinical trial to compare sublingual and vaginal administration of three doses of misoprostol for termination of early pregnancy, women’s perceptions of the positive and negative features of the misoprostol-only regimens were compared with those of women who chose surgical abortion (vacuum aspiration). Of the 3127 women in the trial, 2066 chose a misoprostol-only regimen while 1061 opted for vacuum aspiration. Most of those who chose medical abortion did so because it was thought to be more natural and private, not to interfere with work and to be less painful. The most common reasons for choosing surgery were the speed of the procedure, the fact that the outcome was known earlier, and the need for fewer visits. Over 90% of the women who had a medical abortion reported that they were highly satisfied or satisfied with the procedure, compared with 74% of those who had surgery. Some 74% of those having surgery reported pain as the worst feature of the procedure, while among those having medical abortion, 31% ranked the duration of the procedure and 27% the bleeding as the worst feature.

![Fig. 5.1 Estimated number of induced abortions in the world, 2003](image-url)
Preventing unsafe abortion

A study is under way to compare two doses of misoprostol – 0.8 mg and 0.4 mg – in the combined mifepristone-misoprostol regimen. The four-armed, randomized, double-blind trial will include over 3000 women in 16 centres, and is expected to be completed by mid-2008.

Publications on medical abortion

The July 2006 issue of Contraception was devoted to medical abortion, and included 13 papers presented at the Bellagio Consensus Conference on Medical Abortion, organized by HRP in November 2004.

The Conference also resulted in an evidence-based publication for service providers, Frequently asked clinical questions about medical abortion. Over 30 000 copies of the English version have already been distributed. It has been translated into Spanish, and a French translation is in preparation. Russian and Vietnamese versions are also planned.

Papers on use of misoprostol

A set of papers was published in a supplement to the International Journal of Gynecology and Obstetrics, on the use of misoprostol for various indications in obstetrics and gynaecology. Based on a meeting of experts organized by HRP in February 2007, the papers summarize the available evidence and provide guidance on how to use misoprostol for nine clinical indications.

Priming the cervix with misoprostol

In order to reduce the incidence of complications related to vacuum aspiration, WHO recommends preparation of the cervix before the procedure for all women under 18 years of age, nulliparous women with a gestation of nine weeks or more, and all women with a gestation of 12 weeks or more. In practice, however, this is often not done because it increases the cost and the time needed for the abortion procedure.

In October 2002, HRP launched a large, randomized, double-blind trial to test whether routine vaginal administration of misoprostol three hours before vacuum aspiration would reduce the rate of complications. A total of 4971 women were enrolled for the study at 12 centres in Armenia, China, Cuba, Hungary, India, Mongolia, Romania, Slovenia and Viet Nam. The data showed that, compared with placebo, there was increased dilatation of the cervix in the misoprostol group, and less need for further dilatation, before evacuation; the vacuum aspiration procedure was quicker; and there was a lower risk of cervical injuries and need for re-evacuation. However, 55% of the women in the misoprostol group reported pain before evacuation, compared with 20% in the placebo group. Secondary analyses are currently being carried out to determine whether routine priming with misoprostol was equally beneficial to all women.

Improving access to, and quality of, services

Decision-making about abortion in Kenya

Abortion is legal in Kenya if done to preserve the woman’s life or her physical or mental health. However, apart from safe abortions a large number of unsafe abortions are known to occur. A qualitative study was carried out to explore women’s experience of induced abortion, in particular the obstacles they face in finding safe services. The results highlighted the complexity of the decision-making process in a context of restricted availability of legal abortion. Reasons given for seeking an abortion included pregnancy as a result of forced sex, premarital pregnancy, too many children, young age of the last child, and poor social and economic conditions. Decision-making was generally done in secrecy, and financial considerations played a major role in whether the abortion was safe or unsafe. Women with higher income were able

1 Either hydrophilic dilators or prostaglandins, such as misoprostol, are commonly used to prepare the cervix.
to procure safe abortion, usually from private physicians, in spite of the restrictions, while most poor women had unsafe abortions.

**Quality of postabortion care in Argentina**

A study was carried out to test an intervention package aimed at improving the quality of postabortion care in a public hospital in Buenos Aires. Using key informant interviews, a self-administered questionnaire for the health-care staff, a patient survey and direct observations, the investigators documented levels of professional competence, user satisfaction, and availability of technical resources. An intervention package to train health professionals in manual vacuum aspiration (MVA), pain management, diagnosis and treatment of complications, use of antibiotics, post-MVA care, postabortion contraceptive counselling, and ethical, psychological, and social aspects of the doctor–patient relationship was then designed and implemented. A post-intervention evaluation found significant improvements in quality of care. Most significant was the increase in the proportion of clients who were given information on contraception before discharge (78% versus 45% before the intervention). The proportion of women receiving a contraceptive method before discharge also increased from 40% to 65%. Subsequently, the Argentinian Ministry of Health recruited the project team to carry out a nationwide training programme on postabortion care.

**Technical support to countries**

In April 2007, HRP, in collaboration with Ipas, conducted a regional workshop for countries of sub-Saharan Africa on the application of the Strategic Approach\(^2\) to the prevention of unwanted pregnancy and unsafe abortion. Participants included country teams from Malawi, Nigeria, Uganda and Zambia. In recent years, HRP has also supported a number of individual countries, at their request, to assess the quality of their abortion services using the Strategic Approach, and to follow up on the findings.

- **Bangladesh.** In December 2005, a team led by HRP staff conducted a rapid needs assessment aimed at strengthening the national menstrual regulation (MR) programme. Key recommendations of the assessment focused on improving MR service delivery and quality; generating demand for MR services, as opposed to reliance on more easily accessible unsafe abortion; improving knowledge of sexual and reproductive health and rights; and addressing policy and advocacy issues related to the MR programme. The WHO Country Office was also recommended as management agency for the revised programme.

- **Ghana.** HRP has worked closely with the Ministry of Health and Ipas to draft national standards and guidelines for comprehensive abortion care (CAC). In September 2006, a programme to reduce maternal morbidity and mortality was launched, with a focus on family planning and safe abortion.

- **Mongolia.** HRP assisted the Mongolian Ministry of Health with its national strategic assessment of abortion in 2003, and has continued to provide technical support since then. In 2007, HRP supported the Ministry in assessing improvements in infrastructure, skills of providers, and training needs in three pilot facilities. It also worked with key stakeholders to develop a process for expanding CAC to the Western and Eastern Regional Diagnostic and Treatment Centres.

- **Republic of Moldova.** Following the strategic assessment of abortion in 2005, HRP staff have been working with key members of the assessment team to finalize a proposal to fund development of national standards and guidelines for CAC, development of a national CAC training curriculum, and implementation of model CAC services in several pilot facilities.

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2 See section on “Policy and programme issues” in Chapter 7.
Many health issues related to sex and sexuality depend on the nature of the relationship between men and women, which is shaped by socially assigned gender roles. This is particularly marked during adolescence, when people start to mature and to explore aspects of their sexuality. Gender norms and inequalities, as well as laws and policies affecting access to information and services, can have an important impact on sexual and reproductive health and related human rights.

The Programme of Action adopted at the International Conference on Population and Development (ICPD) in 1994 gave particular prominence to the need to promote equity and equality between women and men in sexual and reproductive health policies and programmes, and to protect and promote human rights. It also emphasized the importance of meeting the special needs of adolescents and protecting and promoting their rights to sexual and reproductive health education, information and care. These aspects of the Programme of Action have been reinforced subsequently in various international agreements.

Countries are challenged to ensure that gender and rights issues are fully integrated in their health system, and that women and men of all ages have equal access to the services they need. RHR supports countries in their efforts, by coordinating and financing relevant research, developing tools and processes for use at national level, and increasing capacities within countries. At the international level, RHR works closely with human rights bodies to promote sexual and reproductive health.

Research

Female genital mutilation

Female genital mutilation (FGM) is internationally recognized as a violation of human rights, and many countries now have policies and legislation banning it. HRP’s work has contributed significantly to increasing knowledge of the adverse health effects of FGM. The results of the first-ever large-scale prospective study of the effects of female genital mutilation on maternal and neonatal outcomes were published in 2006. The six-country study involved over 28,000 women attending 28 obstetric centres for delivery. FGM was found to have a clear adverse impact on the health of both the women and their newborn babies. Women who had had FGM had higher rates of Caesarean section, postpartum haemorrhage, and prolonged hospitalization. There was a higher rate of perinatal death among their babies, and a greater need for resuscitation. The study, which was published in *The Lancet*, attracted intense international attention.

Despite widespread and growing condemnation of FGM at national and international levels, decline in the practice has been relatively slow. HRP is supporting a number of studies to explore the complex mechanisms that influence the decision-making process in relation to FGM, and how communities act to abandon it. One such study that is already yielding interesting results is under way in the Gambia and Senegal. The qualitative phase of the study, which was completed in 2006, found that decisions on FGM are generally taken by the extended family, and grandmothers and paternal aunts exercise considerable influence. Men are rarely involved. Unexpectedly, some
major social factors, such as urban or rural residence, level of education, and having family living abroad, did not seem to affect either the decision-making process or the decision itself. Pressure from the older generation and from peers was an important factor in the continuation of the practice, while fear – of prosecution, of HIV transmission or of adverse health outcomes – was a key motivator among those who decided against FGM.

**Gender, sexuality and vaginal practices**

Together with the Australia National University, Canberra, Australia, and Ghent University’s International Centre for Reproductive Health, Ghent, Belgium, HRP has coordinated a multicountry study on vaginal practices in Indonesia, Mozambique, South Africa and Thailand. Findings from the first phase suggested that vaginal practices – including use of herbal medicines, inserted into the vagina or swallowed – are more common than generally acknowledged, and are used both for hygienic purposes and to tighten the vagina during intercourse. The underlying motivation is to improve sexual relations and retain sexual partners.

The results from this first phase were used to develop a household questionnaire to estimate the prevalence of such practices in the four countries. In Indonesia and Thailand, a significant number of women were found to ingest products with the aim of affecting their vagina, particularly in relation to menstruation. In Mozambique and South Africa, women used more abrasive practices of vaginal cleansing and insertion of substances. Further analysis of these data is expected to produce findings that will help programme managers and policy-makers to better target health services and health education messages.

**Integrating responses to intimate partner violence into health systems**

Intimate partner violence is common throughout the world, yet many abused women are reluctant to seek help from formal services. Nevertheless, they are likely at some stage to come into contact with health services, in particular antenatal care, family planning or postabortion care. These services, therefore, are potential entry points to provide care, support and referral to specialized services for women who have suffered physical, psychological or sexual violence.

Together with the London School of Hygiene and Tropical Medicine, London, England, HRP is examining the approaches currently being used by health services in developing countries to respond to intimate partner violence. On the basis of a systematic review of the literature, an in-depth analysis has been carried out of the challenges and enabling factors that influence the provision of comprehensive and integrated services to abused women in Malaysia. A national programme there is addressing intimate-partner violence through one-stop crisis centres, which have been established in a number of cities. On the basis of findings from this study, the methodology will be adapted and used for other countries. Results of the analysis are expected to be available in 2008.

**Health and human rights tool**

HRP has developed a human rights framework for examining laws and policies related to maternal and neonatal health, entitled Using human rights for maternal and neonatal health: a tool for strengthening laws, policies and standards of care. Between 2005 and 2007, the tool was field-tested in Brazil, Indonesia and Mozambique. In all three countries, the tool identified a number of legal and policy barriers to maternal and neonatal care. These included, for example, inconsistencies between national laws and international, regional or national human rights standards, lack of data, lack of clear policies and standards, and inconsistency among policies. Key recommendations from the field tests have been implemented in all three countries.

Following an evaluation of the field tests in November 2006, the tool is currently being revised, in preparation for implementation in other countries.
Assessing best practices in sexuality counselling

A systematic review of the literature by the Royal Tropical Institute, Amsterdam, the Netherlands, examined the effects of integrating sexuality counselling into more general counselling on sexual and reproductive health issues or into HIV counselling interventions in developing countries. On the basis of the review, four projects, in Brazil, India, Kenya and Uganda, were selected for further assessment. In addition to defining the content and quality of sexuality counselling, these assessments aimed to identify the conditions that contribute to high-quality counselling and to its successful integration into sexual and reproductive health and HIV programmes. An initial comparative analysis suggests that key factors are: the existence of dedicated counsellors who have been trained by the organization, and an organizational culture that recognizes that discussions and counselling on sex and sexuality are an important dimension of quality sexual and reproductive health services.

Adolescents’ sexual and reproductive health

In many countries, young people are exposed to the health risks associated with unsafe sex. Adolescents are generally not well informed about sexual and reproductive matters, including contraception and STIs. Young women, in particular, are often ill-equipped to negotiate safe sex. Misinformation and misperceptions, combined with social and cultural barriers to services, expose adolescents to greater risks of STIs, including HIV infection, unintended pregnancy and unsafe abortion.

Many of HRP’s ongoing studies in this area form part of a broad social science research initiative, comprising a total so far of 50 projects in 28 countries. These projects are producing information that can be used directly to strengthen adolescent sexual and reproductive health programmes and policies, broaden the provision of services and increase access to services for those most in need.

• Data from the Demographic and Health Surveys for 18 sub-Saharan African countries were used to identify trends in use of contraceptives, in particular condoms, among 15–24-year-old women. A dramatic increase in condom use was found among single, sexually active young women: from 5.2% in 1993 to 18.8% in 2001. This increase was accompanied by a decrease in use of traditional contraceptive methods, from 12.2% to 7.3%. In contrast, there was little change in use of condoms or other family planning methods among the married women aged 15–24 years. Only in four countries did more than 5% of young married women use condoms.

• A study in Teheran, Islamic Republic of Iran, involving 1385 boys aged 15–18 years found that they had little knowledge of sexual and reproductive health matters, and had a number of misperceptions. Yet, 28% of them reported having experienced a “sexual act”. This discrepancy between poor knowledge and a relatively high rate of reporting of sexual contact points to a need for better information and skill-building for this group.
Support for national programmes

Training on gender and rights

If countries are to integrate the promotion of gender equity and reproductive rights into their sexual and reproductive health policies and programmes, managers and decision-makers need to be equipped with relevant tools and skills. In recent years, RHR’s training curriculum on gender and rights in reproductive health has made a major contribution in this regard. The course is now available in Chinese, English, French, Russian and Spanish, and an Arabic version is planned. The original curriculum, which was for a three-week course, has been adapted for both a two-week and a six-day course. Versions of the course are still being run, independently of RHR financial support, in Argentina, Australia, Burkina Faso, China, India, Kenya, Malaysia, Sudan and Tajikistan.

In 2006, RHR, together with WHO’s Department of Gender, Women and Health, organized a meeting of deans of medical schools, medical trainers and others on integrating gender considerations into health care curricula. Many of the participants referred to RHR’s curriculum as an essential resource for their work.

Eliminating female genital mutilation: an interagency statement

RHR has worked closely with UNFPA, UNICEF and other United Nations agencies to develop a new interagency statement on the elimination of female genital mutilation. The statement, which has been endorsed by 10 United Nations agencies and programmes, reflects the most up-to-date knowledge on the practice of FGM and ways of working towards its abandonment. The statement also provides the background for a report and a resolution on FGM to be considered by the World Health Assembly in May 2008.
Collaboration with United Nations treaty monitoring bodies

During 2006–2007, RHR continued to prepare reports on the sexual and reproductive health situation in selected countries that were reporting to the various United Nations human rights treaty monitoring bodies, with special focus on the Committee on the Elimination of all forms of Discrimination Against Women (CEDAW). To assist in this process, which involves extensive consultation with country and regional offices, a handbook has been developed in collaboration with the WHO Department of Gender, Women and Health. *Women’s health and human rights – monitoring the implementation of CEDAW*, which was published in 2007, provides practical information on the health-related rights enshrined in the CEDAW Convention.

Africa Regional Forum on Youth Reproductive Health and HIV

RHR collaborated with Family Health International/Youth-Net, Population Council/FRONTIERS, and WHO’s Department of Child and Adolescent Health and Development to organize an Africa Regional Forum on Youth Reproductive Health and HIV. The Forum brought together some 90 researchers, programme managers, policy-makers, donors and young people from nine countries, to share and discuss the latest research results, programme evidence, promising interventions and information about new programmes for young people.
RHR works closely with countries to strengthen their capacity to undertake research and programme activities in sexual and reproductive health, both to respond to national needs and to contribute to regional and global efforts.

In its research activities, HRP works with a network of over 120 institutions in 59 developing countries. In 2006–2007, three institutions (one in Japan and two in the United Kingdom) were officially designated as WHO Collaborating Centres, bringing the total number of such centres in HRP’s network to 46.

The WHO/UNFPA Strategic Partnership Programme (SPP)

The SPP is a collaborative programme of WHO and UNFPA, which aims to improve links between the development of evidence-based guidelines and tools and the implementation of recommendations in programmes and services. More specifically, the SPP aims to support the dissemination, adaptation and adoption by countries of selected practice guides in sexual and reproductive health. The SPP approach, which is illustrated in Fig. 7.1, is currently being applied in 30 countries of intensified focus. In these countries, baseline, pre-intervention information was collected in 2006, using a specially developed questionnaire. The countries were then given a checklist for use in monitoring progress in the implementation of the SPP. A post-intervention questionnaire has also been developed.

The actions to be taken in applying the SPP process have been described in detail in a guidance document, _Introducing WHO’s sexual and reproductive health guidelines and tools into national programmes: principles and processes of adaptation and implementation_. This document, which was published in 2007, emphasizes the need for a highly participatory process if the new guidance is to be accepted, promoted and used at national or subnational level.

SPP funds have been used to translate into French a full set of RHR’s guidelines, covering maternal and newborn health, family planning and STIs. To introduce these guidelines to policy-makers and programme managers in French-speaking African countries, a regional SPP workshop was held in December 2007. The 36 participants from five countries were informed about the process used in introducing, adapting and implementing guidelines in countries, and told about experiences and lessons learnt in introducing the guidelines in Benin and Cameroon.

**Evaluation of the SPP**

In the first quarter of 2007, an external evaluation of the SPP was carried out, focusing on the SPP concept, its implementation and the WHO–UNFPA partnership. The evaluation noted that the concept had met with almost universal approval, especially in the countries where it is being implemented. The SPP itself is viewed favourably also within both UNFPA and WHO. It had helped to foster much-needed links between sexual and reproductive health and STI control programmes in countries. The evaluation concluded that the SPP was a good model for collaboration, and that it should be continued, consolidated and replicated in other areas.

The third global implementation review workshop was held in Geneva in May 2007. The achievements of the SPP, lessons learnt and future needs were discussed, and recommendations made for future collaboration. It was noted that scaling up the SPP would present a double challenge: to consolidate and expand activities in the countries currently participating, and to respond to requests to initiate the process in additional countries.

Specific SPP activities in countries are described under the regional updates below.
Global meeting of regional advisers

A meeting of regional advisers in reproductive health and STIs was held in Geneva in April 2007, to review work-plans and progress at regional and country levels. The meeting focused on ensuring a common vision for accelerating progress towards universal access to sexual and reproductive health services, and on the new emphasis on linkages between sexual and reproductive health and HIV/AIDS programmes.

Technical specifications and guidelines

- Two technical review meetings in 2007 formulated draft guidelines for the prequalification of the TCu 380A IUD and male latex condoms, in conformity with the requirements of the WHO Prequalification of Medicines Programme. The guidelines were reviewed in October 2007 by the WHO Expert Committee on Specifications for Pharmaceutical Preparations.
- The specifications of the TCu 380A IUD, which were drawn up nearly 20 years ago, are in need of updating. Two meetings in 2007 identified issues on which research is needed before new specifications can be finalized.
Africa and the Eastern Mediterranean

In 2006–2007, RHR collaborated with 51 institutions in 39 countries in Africa and the Eastern Mediterranean. Technical collaboration was initiated with the Department of Obstetrics and Gynaecology at the Korle Bu Teaching Hospital in Accra, Ghana. During the biennium, 11 institutions received long-term institutional development grants or resource maintenance grants to strengthen their institutional capacities for research. The studies undertaken by these centres were mostly in the fields of maternal health and family planning, and the majority of the projects received financial support from national sources and international agencies other than WHO.

Strategy and policy development

A subregional meeting in June 2007 brought together directors of research institutions and sexual and reproductive health programme managers from 10 African countries. The participants discussed the WHO Global Reproductive Health Strategy and the framework for its implementation, as well as the African Health Ministers’ Plan of Action for achieving universal access to comprehensive sexual and reproductive health care in the region. The meeting also considered a framework for linking research and practice, as outlined in RHR’s 2006 document, *Turning research into practice: suggested actions from case-studies of sexual and reproductive health research*. Each country team then developed an action plan for accelerating progress towards universal access to reproductive health.

In the Eastern Mediterranean Region, an intercountry meeting in November 2007 considered the implementation of both the Global Reproductive Health Strategy and the Global Strategy for Prevention and Control of Sexually Transmitted Infections. Participants, from nine countries in the region, recommended that countries should identify priority areas for research in order to develop action-oriented and cost-effective interventions.

Capacity-building

Since 1998, HRP has provided support to an MSc course in biostatistics at the University of Ibadan, Ibadan, Nigeria. An in-depth evaluation in 2006 found that the course was attracting students from both Nigeria and other sub-Saharan countries, and concluded that the course was effective and sustainable. Other training activities supported by HRP included workshops and short courses on a range of topics, such as seminology, cervical cytology, research methods, research ethics, gender and reproductive rights, and health system reform.

A novel approach to training and dissemination of information was initiated in June 2006, in collaboration with the University Hospital in Geneva, Switzerland. RAFT – *Réseau en Afrique pour la Télémédecine* – is an eHealth network of 18 French-speaking African countries. Its core activity is the broadcasting over the Internet of interactive courses on health issues. Over 20 sessions on sexual and reproductive health have been given so far with WHO involvement. All the sessions are available on [http://raft.hcuge.ch](http://raft.hcuge.ch), as well as on a CD-ROM, which was distributed in 2007.

In 2006, HRP supported 30 researchers from seven institutions in Nigeria to present papers at the 7th International Conference of the Society of Gynaecology and Obstetrics of Nigeria. A number of the papers presented were based on HRP-supported projects.

Regional research activities

- A project is under way in six African countries to assess the acceptability and feasibility of implementing a cervical cancer prevention programme, based on a “single visit” approach using visual inspection with acetic acid and cryotherapy. By October 2007, more than 6000 women had been recruited into the project; preliminary results show that the procedure is well accepted by the women.
- A study in Cotonou, Benin, has compared the incidence of physical and psychiatric ill-health at 6 and 12
Regional networks

- The African Reproductive Health Research and Training Network – REPRONET-Africa – seeks to forge partnerships to develop, improve and support sexual and reproductive health research, training and capacity-building in the region.

- The Réseau de Recherche en Santé de la Reproduction en Afrique francophone (RESAR) brings together 12 French-speaking African countries to promote sexual and reproductive health activities, with an emphasis on research. In 2006, HRP approved support for a study to identify strategies to ensure sustainable funding for the network.

- With the support of HRP, WHO’s Regional Office for the Eastern Mediterranean has created a regional reproductive health research network (RHRN). A database is available, containing information on governmental, private, and nongovernmental institutes, scientific bodies, research agencies, advocacy groups, and organizations involved in sexual and reproductive health research in the region. (www.emro.who.int/rhm)

The WHO/UNFPA SPP

Eight African countries and seven countries in the WHO Eastern Mediterranean region are designated as countries of intensified focus for the SPP. In most of the African countries, adapted national guidelines on family planning and STIs have been produced, and the focus is now on disseminating these guidelines and promoting their use by service providers. In the Eastern Mediterranean, health personnel are being trained to use the adapted guidelines on family planning and maternal and neonatal health. Work on STI guidelines is still in its early stages in this region.

The Americas

In 2006, the six centres supported with research capacity strengthening grants were involved in some 109 projects addressing regional and national priorities, of which 23 were supported by HRP. More than 80% of the projects received financial support from national sources and international agencies other than WHO. Staff from the six supported centres published a total of 64 original research articles in 2006, as well as 46 books or book chapters.

Strategy and policy development

A number of activities in the biennium have brought together researchers, policy-makers and programme officers from the ministries of health in the region.

- A regional initiative is under way to assess the feasibility of using the indicators recommended by RHR for monitoring sexual and reproductive health in its document Accelerating progress towards the attainment of international reproductive health goals: a framework for implementing the WHO Global Reproductive Health Strategy. Collaborating institutions in Argentina, Brazil, Guatemala, Panama and Peru are working with local and national health authorities to determine to what extent the data for the various indicators are available. The results of the work, which should be available in mid-2008, are expected to lead to specific recommendations to RHR and to countries about important

months post partum among three groups of women: those with a “near-miss” obstetric complication and a live birth; those with a near-miss complication and a stillbirth or perinatal death; and those with a normal childbirth. Of 709 women in the study, 269 had a near-miss complication, which resulted in 64 perinatal deaths. The study found that, among women who had a near-miss complication and whose baby survived until discharge from hospital, the adjusted odds ratio for death of the baby after discharge from hospital was more than 17 times that among women who had a normal childbirth.
issues in monitoring progress in sexual and reproductive health.

- With financial support from HRP, the Centre for Epidemiological Research in Sexual and Reproductive Health in Guatemala organized a subregional workshop on the prevention of unsafe abortion and postabortion care. Policy-makers, health managers and staff of the ministries of health of all the Central American countries attended, and drew up an extensive list of recommendations for strengthening postabortion care.

- A five-day gender and rights workshop in Paraguay in 2007 brought together researchers, programme officers from the Ministry of Health and representatives of nongovernmental organizations. The participants drew up programmes of work for implementation after the workshop.

**Capacity-building**

Since 2004, HRP has been collaborating with Family Health International, both to train individuals in research ethics and to work with local ethics committees to upgrade their operation. Training workshops, involving over 200 participants, have been organized in Colombia, Guatemala, Panama and Peru. Each workshop was followed by a working session with the local ethics committee, to discuss its operation and identify areas where improvement was needed.

A follow-up visit in 2007 to the Gorgas Institute in Panama found that, since the initial training and visit, the research ethics committee had received much more support and improved administrative facilities. There was reported to be a more constructive climate between researchers and the committee, and members of the committee expressed interest in developing their skills and acquiring more knowledge on research ethics.

In 2007, HRP awarded 11 six-months grants to individual scientists for training in biomedical or social science aspects of sexual and reproductive health research. Nine of the 11 recipients were young women. A further four grants were awarded to sexual and reproductive health programme officers to attend courses on quality of care and use of research findings.

The Health InterNetwork Access to Research Initiative (HINARI) is an online library containing more than 2000 scientific publications. Since 2003, HRP has covered the subscription fees for 12 institutions in 12 countries in the region. The level of use of the service has increased steadily, with over 100 000 log-ins and over 250 000 downloaded pages in 2006.

**Regional research activities**

A subregional research initiative in Barbados and Jamaica has explored knowledge, attitudes and practices in relation to emergency contraceptive pills (ECPs) among 428 health care providers. The study, which was completed in 2006, found a number of misperceptions and lack of knowledge about ECPs. For instance, very few participants – 1% in Barbados and 6% in Jamaica – were aware that ECPs could be effective for up to 120 hours after unprotected sex. Many participants also wrongly believed that there were contraindications to ECP use, and a number had consequently refused to provide ECPs to women requesting them. There was generally little support for ECPs being made available over the counter, as it was thought that this would increase sexual risk-taking.

These findings have important implications for health programmes in the countries. Workshops were therefore organized to disseminate the findings, and policy briefs were prepared and distributed to a wide audience, including health care providers, ministry of health staff, representatives of nongovernmental organizations, and pharmacists.

**The WHO/UNFPA SPP**

Honduras, Paraguay and Peru, the countries of intensified focus in the region, have continued the process of introducing and implementing WHO guidelines and tools, as well as updating national norms. In 2007, Bolivia, Cuba and Guatemala were included in SPP activities for the first time.
South-East Asia and the Western Pacific

In 2006–2007, 11 centres in the South-East Asia region and 12 centres in the Western Pacific region received research capacity strengthening grants. The centres were involved in some 239 projects in the biennium, and staff published a total of 689 research articles, as well as 136 books or book chapters.

Strategy and policy development

A workshop to identify regional and national sexual and reproductive health priorities was held in March 2007 in Myanmar. Participants, which included representatives from 11 countries, the International Medical Centre of Japan, and RHR’s Asia and Western Pacific Regional Advisory Panel, placed emphasis on the need for research to improve quality of care and access to services, and to develop linkages between sexual and reproductive health, RTIs/STIs, and HIV.

National workshops on research priorities were also held in Mongolia, Myanmar and Sri Lanka. Myanmar recognized a need to focus on reducing maternal mortality and morbidity, while Sri Lanka placed emphasis on family planning and management of infertility. Mongolia is currently developing a research programme for the next ten years, and is giving particular attention to young migrants, RTIs/STIs, and HIV.

Capacity-building

- An inter-regional workshop on operations research in sexual and reproductive health, in Bangkok, Thailand, brought together 18 participants from nine countries in five regions. The participants were mostly senior staff from public health institutes and ministries of health or researchers from WHO Collaborating Centres.
- National workshops on research ethics in sexual and reproductive health were conducted in Indonesia, Mongolia and Sri Lanka. A second workshop in Sri Lanka explored ethical issues in assisted reproduction technology.
- Scientific writing workshops for mid-level researchers were held in Myanmar and Viet Nam. A “training of trainers” workshop in scientific writing was conducted in China.
- Workshops on research methodology took place in Cambodia, Indonesia, Mongolia and Myanmar.
- In 2006, a service guidance centre grant was awarded to the Research, Studies and Standards Division of the Department of Family Welfare, Ministry of Health and Family Welfare, India. The grant is intended (1) to allow the review and updating of national family planning guidelines and manuals, using practice guidelines and research recommendations promoted by WHO and its partners, and (2) to provide training on the updated guidelines.

Scientific writing workshops

HRP’s scientific writing workshops aim to teach the skills involved in writing research papers for publication in peer-reviewed journals, and to encourage researchers working in centres supported by the Programme to publish the results of their studies. Six such workshops for biomedical scientists were held in 2006–2007, including one training-of-trainers workshop. In addition, in collaboration with the Population Council’s FRONTIERS programme, a workshop for social science researchers was conducted in Bangladesh.

The WHO/UNFPA SPP

In the South-East Asia and Western Pacific regions, Bangladesh, China, Indonesia, Mongolia, Myanmar, Nepal, Solomon Islands, Tonga, Vanuatu and Viet Nam are the countries of intensified focus for the SPP. Considerable progress has been made in all these countries in systematically introducing and implementing guidelines produced by WHO and its partners.
Eastern Europe and Central Asian Republics

This region includes the countries of Central and Eastern Europe, the newly Independent States, and the Central Asian Republics. In this region, RHR works in collaboration with WHO’s Regional Office for Europe to strengthen country programme and operational research capacities, in support of evidence-based policy-making and programming.

The School of Public Health at Kaunas University, Kaunas, Lithuania, has been identified as suitable host institution for capacity-strengthening activities in Eastern Europe. A medium-term plan has been agreed with the School to establish a regional training course on operations research. Two faculty members have taken part in an inter-regional training-of-trainers workshop, and will organize orientation sessions for other staff members. The first intercountry workshop is expected to take place at the University in mid-2008.

The WHO/UNFPA SPP

The countries of intensified focus in this region are Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

- **Kyrgyzstan**: training sessions have been held for health care providers on the integration of sexual and reproductive health into primary health care.
- **Tajikistan**: stakeholders’ meetings and orientation workshops have been held to disseminate the Russian version of WHO’s guidelines on Medical eligibility criteria for contraceptive use and Selected practice recommendations for contraceptive use.
- **Turkmenistan**: family planning and STI guidelines were tested in one region in 2006, and have since been adopted by the Ministry of Health for country-wide dissemination.
- **Uzbekistan**: a series of workshops have been held in five regions to introduce the newly adapted national guidelines on integration of sexual and reproductive health, family planning and STI services to a wide range of health care workers and health managers.

Policy and programme issues

The Strategic Approach

One of RHR’s main objectives is to build capacity at national and subnational levels for strategic planning, development, implementation and evaluation of interventions aimed at ensuring the provision of high-quality sexual and reproductive health services. Central to this is the strategic planning method known as the Strategic Approach. This process has three stages:

- Stage I is a strategic assessment, based on a systems framework, of: (i) the needs and perspectives of current and potential users; (ii) the extent of coverage; and (iii) the mix of technologies and other sexual and reproductive health interventions.
- In Stage II, the recommendations coming from Stage I, for policy change or other interventions, are tested on a limited scale.
- In Stage III, the findings from Stage II are applied to policy-making and planning for wider application.

The Strategic Approach has been used by some 30 countries to address a variety of sexual and reproductive health issues (Table 7.1).

A core document, which gives an overview of the philosophy and framework of the Strategic Approach, as well as guidance on its implementation, was developed in 2007. A shorter advocacy and information document has also been produced and published, for use by policy-makers and programme managers who need a more succinct overview.

A new network, ExpandNet, has been formed with the aim of expanding knowledge on the determinants of successful scaling-up of pilot or demonstration projects to broader service delivery. The network brings together policy-makers, programme managers, researchers and technical experts, to share experiences and promote scaling-up, as well as to foster research on how to scale up sexual and reproductive health interventions. The ExpandNet Website was formally launched in 2006. A book containing a literature review and seven country case-studies has been
Table 7.1. Countries implementing the Strategic Approach

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<th>Major focus</th>
<th>Country/region (year)</th>
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published, and two guidance documents on scaling-up have been developed and field-tested in China, Kyrgyzstan, Peru and Sierra Leone.

Some country highlights

- Reprolatina, a Brazilian nongovernmental organization, has assisted a number of countries in implementing the Strategic Approach. In 2006, it conducted a training workshop on the Strategic Approach at the Cayetano Heredia University, Lima, Peru, and is currently helping to develop a module on the approach for incorporation into the University’s master’s course in global health. Reprolatina is also assisting the National Institute for Health Research in Lima to develop a proposal for a strategic assessment of the integration of family planning, STI care and HIV prevention and care in Iquitos Province.

- A Stage II operations research study in Yunnan, China, developed and evaluated interventions to increase access to good-quality family planning and related sexual and reproductive health services for urban migrants. The final report of the study was disseminated in 2007 at a meeting sponsored by the Yunnan provincial government. A strategy was developed to scale up the successful interventions to other areas of the Province.

- In the Copperbelt Province of Zambia, interventions to improve the method mix available at family planning clinics, train health care workers, and link district communities with the health sector have been successfully scaled up. In 2007, a national dissemination workshop was held, following which similar scaling-up activities were started in other provinces, with the technical support of health care staff from the Copperbelt.

Resource mobilization for sexual and reproductive health

In the Paris Declaration, in 2005, over 100 governments and international agencies committed themselves to harmonize and manage aid in line with a number of monitorable actions and indicators. HRP is working closely with UNFPA to strengthen the capacity of WHO and UNFPA country offices to work effectively in this new aid environment in support of sexual and reproductive health within national development and health sector planning processes. The activities include training, technical support, research, and development of internet-based communities of practice. Following fieldwork and case-studies in Ethiopia, Mongolia, Nicaragua, Senegal and Yemen in 2005–2006, a comprehensive workplan was developed in 2006–2007, covering the period 2008–2010. A key objective of this workplan is to strengthen country office capacity in four subregions and augment linkages with civil society organizations. As a first step in the workplan, a joint WHO/UNFPA capacity-building workshop on the new aid environment was held in Addis Ababa, Ethiopia, in December 2007.

Working with the private sector

In most developing countries, private providers commonly deliver a substantial proportion of health services, including sexual and reproductive health care. Governments are increasingly acknowledging that they need to engage with the private sector, and that doing so could help expand access to services among low-income households. However, they need to examine carefully the policy options open to them.

In December 2006, RHR, in collaboration with USAID PSP-One, convened a high-level international consultation on public policy and reproductive health franchising programmes in the private sector. The consultation examined gaps in the evidence base and public-policy options for building effective partnerships with the private sector. Critical issues discussed included ensuring quality of care in the private sector, promoting equitable access and ensuring sustainability. In 2007, work began on the development of research proposals to investigate priority topics identified during the consultation.
Strengthening management capacity at the subnational level to implement public-private partnerships is also a pressing challenge in most countries. A report summarizing three case-studies of how district-level officials in India have managed the contracting-out of reproductive and child health care services was published in 2007.

**External evaluation of health sector reforms in China**

Since 1997, the Chinese Ministry of Health, with support from the World Bank and the United Kingdom Department for International Development, has been implementing a coordinated series of programmes to improve health status and health services in 97 poor rural counties in 10 provinces. At the request of the sponsors, in 2006–2007 RHR led an external evaluation of the project, focusing on institutional capacity-building, access to health care services, and the quality and coverage of the rural maternal and child health programme. The evaluation concluded that the project had indeed contributed to – and in some areas greatly accelerated – improvements in system performance and maternal health.

**Impact of financing reforms on sexual and reproductive health in Egypt**

A case–control quasi-experimental study in Egypt has examined the effect of performance-based payment schemes on health care providers’ behaviour in relation to sexual and reproductive health. The study found statistically significant improvements in the quality of care provided in family planning, antenatal and child care services that can plausibly be attributed to the introduction of the new payment system. The Egyptian Ministry of Health is using the results as evidence of the need to scale up the use of performance-based payment schemes in other districts.

Department of Reproductive Health and Research (RHR)

RHR’s budget for 2006–2007 builds on the work undertaken by the Department in 2004–2005. RHR’s international mandate, which drives the work of WHO in the area of sexual and reproductive health, is based on the Global strategy to accelerate progress towards the achievement of international goals and targets in reproductive health, which was approved by the World Health Assembly in May 2004. The Strategy itself is based on agreements achieved at the International Conference on Population and Development (Cairo, 1994) and the Fourth World Conference on Women (Beijing, 1995) and their respective five-year and ten-year follow-ups, as well as on the Millennium Development Goals.

UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP)

In budgetary terms, HRP functions as a trust fund within RHR, providing support to the research portfolio of the Department. HRP has its own governing body called the Policy and Coordination Committee (PCC), which sets policy, assesses progress, and reviews and approves the Programme’s budget and programme of work. In addition, a Standing Committee, comprised of the four cosponsors of the Programme, meets three times a year to guide HRP’s work and set priorities. HRP also has other oversight committees, including the Scientific and Technical Advisory Group and the Gender and Rights Advisory Panel. Due diligence in financial management is ensured: HRP conducts its own financial oversight in reporting the Programme’s financial status to PCC. This oversight is in addition to the stringent accountability required by the World Health Organization.

Budget and implementation

Based on guidance received from HRP’s Standing Committee in December 2004, three budgetary priority levels were developed for the HRP budget and subsequently approved by PCC in 2005. For the non-research component of RHR, which makes up the remainder of the Department’s budget and is referred to as the Programme Development in Reproductive Health (PDRH), three priority budget levels were also developed. Table A1 below shows 2006–2007 approved budgets for HRP and PDRH according to priority levels.

Implementation of this budget, shown in Table A2, was strong during the biennium; both HRP and PDRH were able to implement most of their planned activities, with the overall financial implementation rate reaching 86%.

Income

At the end of the 2006–2007 biennium, RHR was in a strong financial position: HRP income for the biennium totalled US$ 44.4 million, while that for PDRH was US$ 24.6 million, as shown in Figures A1 and A2. RHR is grateful to all its donors for their generous contributions and for their trust and confidence in the Department’s work. The four largest Member-State contributors to RHR (and/or HRP) were the Netherlands, Norway, Sweden and the United Kingdom. The three largest contributions from foundation donors were from the David and Lucile Packard Foundation, the Ford Foundation, and the William and Flora Hewlett Foundation. Further details of RHR (HRP and PDRH) income are shown in Tables A3 and A4.
Table A1. HRP and PDRH 2006–2007 budgets by priority levels

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<tr>
<th>Priority level</th>
<th>HRP (US$ million)</th>
<th>PDRH (US$ million)</th>
<th>Total RHR (US$ million)</th>
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<td>1+2+3 Full budget level</td>
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<td>17.0</td>
<td>55.8</td>
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<tr>
<td>1+2 Medium level</td>
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<tr>
<td>1 Contingency plan</td>
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<td>42.4</td>
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Table A2. Overview of HRP and PDRH income and expenditure for 2006–2007 (US$ 1000)

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<th>PDRH</th>
<th>Total RHR</th>
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<td>46 934</td>
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<tr>
<td>Foundations and other income</td>
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<td>Total income</td>
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<td>24 574</td>
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<td>Closing balance on 31 December 2007</td>
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Figure A1. RHR income by programme area for 2006–2007

- Programme Development in Reproductive Health: 36% US$ 24.6 million
- UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction: 64% US$ 44.4 million

Figure A2. RHR income, 2000–2007 (US$ million)
Table A3. HRP income, 1970–2007 (US$ 1000)

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Table A3. (Cont'd) HRP income, 1970–2007 (US$ 1000)

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Annex 2. Centres collaborating with the Department in 2006–2007

WHO Africa Region

Burkina Faso
International Centre for Training in Research Action (CIFRA), Ouagadougou

Ethiopia
Addis Ababa University, Addis Ababa

Ghana
Africa Microbicides Advocacy Group, Accra

Kenya
Aga Khan University, Nairobi
Institute of Health Training and Research, Nairobi
Institute of Primate Research, Nairobi
International Centre for Reproductive Health, Mombasa
Ipas Kenya, Nairobi
University of Nairobi, Nairobi

Malawi
University of Malawi, Chichiri

Nigeria
Fereprod Medical Centre, Abuja
Olabisi Onabanjo University, Ago-Iwoye
University of Ibadan, Ibadan

Senegal
Cheikh Anta Diop University of Dakar, Dakar
Ministry of Health, Dakar

South Africa
Chris Hani Baragwanath Hospital, Johannesburg
Frere/Cecilia Makiwane Hospital, East London
Frere Maternity Hospital, East London
Nelson R Mandela School of Medicine, University of Natal, Durban
Southern Africa Technical Support Facility, Parkview
Tygerberg Hospital, Cape Town
University of Cape Town, Cape Town
University of Stellenbosch, Stellenbosch
University of Witwatersrand, Johannesburg

Uganda
Makerere University, Kampala

United Republic of Tanzania
Kilimanjaro Christian Medical Centre, Tumaini University, Moshi

Zimbabwe
University of Zimbabwe, Harare

WHO Americas Region

Argentina
Centre for Population Studies (CENEP), Buenos Aires
Institute of Clinical Effectiveness and Health Policy, Buenos Aires
Rosario Centre for Perinatal Studies (CREP), Rosario

Bolivia
Greater University of San Andres, La Paz

Brazil
Campinas Research Centre for the Control of Maternal and Childhood Diseases (CEMICAMP), Campinas
I Encontro da Sociedad Latino-Americana para Control las DST, Brasilia
Reprolatin, Campinas
SOS Corpo, Recife
SOS Corpo, Rio de Janeiro
Universidade Federal Fluminense, Rio de Janeiro

Chile
Chilean Institute of Reproductive Medicine (ICMER), Santiago

Colombia
University of Valle, Cali

Costa Rica
Central American Centre for Population, University of Costa Rica, San José

Cuba
America Arias Hospital, Havana

1 This list includes institutions with which the Department entered into a financial agreement for, inter alia, conduct of research and training activities.
Annex 2. Centres collaborating with the Department in 2006–2007

**Dominican Republic**
Dominican Association for Family Welfare Inc., Santo Domingo
Profamilia, Santo Domingo

**Guatemala**
Epidemiological Research Centre for Sexual and Reproductive Health, “San Juan de Dios” General Hospital, Guatemala City

**Mexico**
National Institute of Public Health, Mexico City

**Panama**
Centre for Research on Human Reproduction, Panama City
Conmemorative Gorgas Institute of Health Studies (ICGES), Panama City

**Paraguay**
Ministry of Public Health and Social Welfare, Asuncion
Paraguayan Centre for Postnatal Studies (CEPEP), Asuncion

**Peru**
National Institute of Research on Nutrition, Lima
Peruana Cayetano Heredia University, Lima

**United States of America**
Boston University Medical Centre, Boston, MA
Center for Demography and Ecology, University of Wisconsin, Madison, WI
Cincinnati Children’s Hospital Medical Centre, Cincinnati, OH
ETapestry, Greenfield, IN
Family Care International, New York, NY
Futures Institute Inc., Glastonbury, CT
International Partnership for Microbicides, Silver Spring, CA
International Society for STD Research, University of Washington, Seattle, WA
Joint Commission International (JCI), Oak Brook, IL
Macro International, Calverton, MD
Marine Biological Laboratory, Woods Hole, MA
Ohio State University Research Foundation, Columbus, OH
Population Council, New York, NY
Program for Appropriate Technology in Health, Seattle, WA
Save the Children, Westport, CT
School of Public Health, Johns Hopkins University, Baltimore, MD
University of Texas, Austin, TX

**WHO Eastern Mediterranean Region**

**Afghanistan**
Afghanistan Public Health Institute, Ministry of Public Health, Kabul

**Egypt**
Alexandria University, Alexandria
Cairo Family Planning Association, Cairo

**Jordan**
United Nations Relief and Works Agency for Palestine Refugees, Amman

**Lebanon**
American University of Beirut, Beirut

**Pakistan**
Population Council, Islamabad

**Sudan**
Afhad University for Women, Omdurman
University of Khartoum, Khartoum

**WHO European Region**

**Belgium**
International Centre for Reproductive Health, Ghent

**Finland**
Väestöliitto, Family Federation of Finland, Helsinki

**France**
Biomedic-Insure, Vannes
KIKA Medical, Nancy
Germany
German Foundation for World Population, Berlin

Hungary
University of Szeged, Szeged

Israel
Jerusalem AIDS Project (JAIP), Jerusalem

Italy
Centre for the Evaluation of Effectiveness of Health Care, Modena
Imagine Onlus, Rome

Latvia
Riga Stradiuna University, Riga

Netherlands
Global Network of People Living with HIV/AIDS, Amsterdam
Leiden University Medical Centre, Leiden
Royal Tropical Institute, Amsterdam

Sweden
Karolinska Institute, Stockholm
MedSciNet AB, Stockholm

Switzerland
Council for International Organizations of Medical Sciences (CIOMS), Geneva
Geneva Foundation for Medical Education and Research, Geneva
Labatec-Pharma SA, Geneva
University of Bern, Bern
University of Geneva, Geneva

United Kingdom
Cochrane Pregnancy and Childbirth Group, Liverpool
International Community of Women Living with HIV/AIDS (ICW), London
International Federation of Gynaecology and Obstetrics (FIGO), London
John Radcliffe Hospital, University of Oxford, Oxford
Liverpool School of Tropical Medicine, Liverpool
London School of Hygiene and Tropical Medicine, London
Reproductive Health Matters, London
University of Birmingham, Birmingham
University of Bristol, Bristol
University of Edinburgh, Edinburgh
University of Liverpool, Liverpool
University of Oxford, Oxford

WHO South-East Asia Region

Bangladesh
International Centre for Diarrhoeal Disease Research, Dhaka

India
Indian Institute of Health Management Research, Jaipur
Ministry of Health and Family Welfare, New Delhi
National Institute for Research and Training in Reproductive Health, Mumbai
Postgraduate Institute of Medical Education and Research, Chandigarh

Indonesia
Western Indonesian Reproductive Health Development Centre, University of North Sumatra, Medan

Myanmar
Department of Medical Research, Lower Myanmar, Yangon
Department of Medical Research, Mandalay Division, Pyin Oo Lwin
Myanmar Medical Association, Yangon

Sri Lanka
University of Colombo, Colombo
University of Kelaniya, Ragama
University of Sri Jayawardenapura, Nugegoda

Thailand
Institute for Population and Social Research, Mahidol University, Nakhon Pathom
Khon Kaen University, Khon Kaen
Prince of Songkla University, Hat Yai
Siriraj Hospital, Bangkok
Women’s Health and Reproductive Rights Foundation of Thailand and Ramathibodi Hospital, Bangkok
WHO Western Pacific Region

**Australia**

Key Centre for Women’s Health in Society, University of Melbourne, Carlton
University of New South Wales, Sydney

**Cambodia**

National Institute of Public Health, Phnom Penh

**China**

Chinese Centre for Disease Control and Prevention, Beijing
Ministry of Health, Beijing
Shanghai Centre for Research and Development, Shanghai
Shanghai Institute of Planned Parenthood Research, Shanghai

**Malaysia**

Institute for Health Systems Research, Ministry of Health Malaysia, Kuala Lumpur
Malaysian Medical Association, Kuala Lumpur

**Mongolia**

Maternal and Child Health Research Centre, Ulaanbaatar
Ministry of Health, Ulaanbaatar

**Philippines**

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**Viet Nam**

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