

 Department of Reproductive Health and Research

Better reproductive health—implementing the global agenda

Biennial Report 2000–2001

WHO/RHR/02.9



**World Health Organization
Geneva, 2002**

Department of Reproductive Health and Research

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Preface

The International Conference on Population and Development (ICPD) held in Cairo in 1994 marked a turning point for sexual and reproductive health. For the first time, the concept of reproductive health was comprehensively defined and consensus was reached on a global programme of action outlining the “who, what, and how” of achieving widely accessible reproductive health and rights over the following two decades. Because sexual and reproductive events concern all age-groups and can affect more than one generation and because there is a need to address cross-cutting issues, such as gender and men’s roles and responsibilities, governments decided that the proposed ICPD programme of action should take a broad view of reproductive health as it affects people of all ages throughout their lives and from one generation to the next. Five years after the Cairo meeting, at a special session (“ICPD+5”) of the UN General Assembly, governments reaffirmed their commitment to the principles, goals, and objectives of the programme of action, including its comprehensive approach and its central goal of achieving widely accessible reproductive health services by the year 2015.

Much has changed in the decade since the Cairo meeting. New policies and programmes designed specifically to improve reproductive health have been developed by many national governments as well as by intergovernmental agencies. New partnerships have been formed between governmental and nongovernmental organizations working to implement reproductive health and rights. Neglected groups, notably adolescents and men, have been targeted through new programmes. And evidence is being generated on hitherto “forgotten” issues, such as the sexual and reproductive health needs of young people, sexual coercion, violence against women, and optimal

postabortion care. As I hope will be evident to readers of this report (and of the companion report describing the work, during the 2000–2001 biennium, of the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction), in many of the areas covered by the ICPD programme of action, WHO's Department of Reproductive Health and Research (RHR) is playing a pivotal role through its research and its normative guidance, and through its support to country programmes in policy and technical issues.

Contents of the report

The first chapter, on promoting family planning, describes the guidelines and training materials that we provide for programme planners and practitioners committed to offering users a family planning service grounded in sound, up-to-date scientific evidence. The chapter also chronicles our efforts in promoting the use of condoms for “dual protection”, namely, against both unwanted pregnancy and sexually transmitted infections, notably HIV infection.

The second, and by far the largest, chapter of the report, on making pregnancy safer, describes the work of the newly created Making pregnancy safer initiative – a global endeavour coordinated by our department that involves all six WHO regions, ten “spotlight” countries, and some 15 WHO departments. The importance of this chapter underscores the priority given by WHO to the persistent tragedy of avoidable maternal and newborn deaths.

The third chapter, on preventing reproductive tract infections, outlines our efforts to hold in check reproductive tract and sexually transmitted infections. These efforts focus particularly on the production of guides and manuals for dealing with HIV infection in mothers and their offspring.

The fourth chapter, on technical support, describes our strategic approach for assisting countries in improving their reproductive health services. The chapter also gives an account of two departmental initiatives. One is the Programme to map best reproductive health practices, which gathers and disseminates the evidence on the best reproductive health practices. This programme oversees production of the electronic WHO Reproductive Health Library, and prepares and updates systematic reviews on reproductive health topics. The second initiative, Implementing best practices, assists service providers and

decision-makers in using the evidence on best practices in their daily reproductive health activities. The concluding sections of the chapter relate to the department's work during the biennium on gender issues and reproductive health rights, on the reproductive health needs of vulnerable groups, and on female genital mutilation.

The fifth chapter, on monitoring and evaluation, describes how we determine and keep track of the burden of reproductive health problems and of progress achieved in reducing it. The data generated by this activity serve, among other things, to help organizations, programmes, and national health officials set priorities for future research and design or modify reproductive health programmes. An essential part of this work involves continuous maintenance of databases on reproductive health indicators. This chapter also chronicles our efforts to ensure that reproductive health remains high on the international political and development agenda.

Complementarity and collaboration

The work described in this report has involved many partners at national, regional, and global levels. WHO's regional offices participate fully in the development and implementation of programme-related activities, as well as in the formulation of plans for the strengthening of the research capacities of developing countries. UN agencies, particularly the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Office of the United Nations High Commissioner for Refugees (UNHCR), and the Joint United Nations Programme on HIV/AIDS (UNAIDS), as well as the World Bank, are partners in many of our department's activities. An extensive network of institutions designated as collaborating centres adds a truly global dimension to our work. Finally, professional associations and nongovernmental organizations, such as the International Federation of Gynecology and Obstetrics, the International Confederation of Midwives, and the International Planned Parenthood Federation, bring their practical experience to bear on our activities.

Challenges

In spite of the sound arguments – based on public health concerns, human rights, equity, and social justice – calling for a strong focus on sexual and reproductive health, in many countries the concept of comprehensive reproductive health care is still insufficiently understood

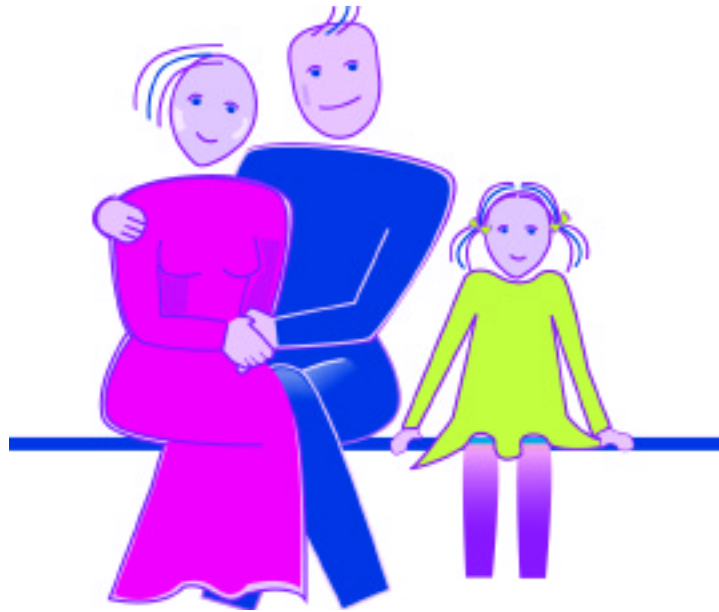
and applied. Also, debate continues in some countries, as well as in international forums, about some aspects of sexual and reproductive health, particularly the programme-related content of reproductive health services, the provision of information and services to adolescents, and issues surrounding unsafe abortion and its prevention.

As a result, the ICPD goal of universal access to reproductive health by 2015 was not included in the Millennium Declaration adopted by the UN Millennium Conference in 2000 and was not made part of the Millennium Development Goals. Furthermore, reform of the health sector has introduced new challenges for reproductive health, as suggested by anecdotal evidence of a reduction in the availability and accessibility of services resulting, among other things, from decentralization and changes in the financing of health systems.

Yet, good sexual and reproductive health is more crucial today than ever before. The devastating HIV/AIDS epidemic must be addressed using all the tools and resources available to us. HIV is spread primarily through sexual intercourse and its incidence is highest in men and women of reproductive age. Therefore, programmes aimed at sexually active people offer a powerful mechanism for preventing, and for identifying and managing, cases of HIV infection and thereby can help to prevent further spread of the epidemic. Our department stands ready to confront this challenge in the years ahead.

Paul F.A. Van Look, MD, PhD, FRCOG

Director



Chapter 1

Promoting family planning

Over the last three decades, use of contraceptives has increased worldwide, particularly in developing countries, where contraceptive prevalence among married women (or women in other forms of permanent union) has risen from less than 9% in the 1960s to over 60% today. However, in the developing world as a whole, over 120 million married couples have an unmet need for family planning, either for limiting or for spacing births. An additional 300 million couples were estimated in 1990 to be using family planning methods with which they were dissatisfied or which they considered unreliable, and anywhere from 8 million to 30 million unintended pregnancies occur each year among people practising contraception.

If programmes could meet all existing needs for acceptable family planning among sexually active people, irrespective of marital status, about half a billion more women and men would be able to plan the size of their families effectively and safely.

The causes of unmet need are multiple and include problems of technology (limited or inappropriate choice of methods and fear, or experience, of side-effects); lack of services or barriers to their access (because of cost, distance, and legal and regulatory issues); poor quality of services (primarily, inappropriate client-provider interactions, substandard technical competence of providers, inadequate information, poor design and poor management of service delivery); and broader social issues (lack of knowledge and sociocultural, religious and gender barriers). Furthermore, a number of driving forces are continuously reshaping the family planning scene and affecting the magnitude and type of needs to be met. These driving forces include the increasing incidence of sexually transmitted infections (STIs) and the spread of HIV infection worldwide, the changing patterns of fertility and of adolescent sexuality, and the growing number of people living in precarious conditions. All of these factors require further research in order to better understand and meet the needs of people who wish to regulate their fertility.

Quality of care clearly influences the use of family planning services. Many family planning programmes have substantial progress to make in improving quality of care. RHR addresses this problem by developing guidelines and training materials that focus explicitly on ensuring high-quality family planning services that are accessible, acceptable, and affordable and based on the latest available scientific evidence.

Guides and guidelines

Several RHR guides on family planning appeared during the 2000–2001 biennium:

- *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use*—This document was originally published in 1996, based on the conclusions of two scientific working group meetings held in 1994 and 1995. Publication of the document marked a critical first step in RHR’s efforts to improve access to quality family planning. National family planning and reproductive health programmes in some 55 countries have used it extensively in preparing or revising their national guidelines for medical and other services related to family planning. During the 1998–1999 biennium, translations of the document appeared in Arabic, Bahasa Indonesia, Chinese, French, Russian, Spanish, and Vietnamese. In 2000, RHR produced a revised version of the document, based on the recommendations of a scientific working group that in March of that

year brought to Geneva 32 experts from 17 countries. The revised document updates information on low-dose combined oral contraceptives, combined injectable contraceptives, progestogen-only pills, depot-medroxyprogesterone acetate (DMPA), norethisterone enantate, Norplant implants I and II, emergency contraceptive pills, copper intrauterine devices (IUDs), levonorgestrel-releasing IUDs, IUDs for emergency contraception, barrier methods, methods based on fertility awareness, coitus interruptus, lactational amenorrhoea, and female and male sterilization.

- *Selected practice recommendations for contraceptive use*—This document will be published in mid-2002 as a companion to the Medical eligibility criteria. It is intended to help national family planning and reproductive health programmes prepare guidelines on the use of contraceptive methods.
- *A decision-making tool for family planning clients and providers*—This document, which is currently in preparation, uses an algorithmic format to help clients and providers ensure that couples receive the contraceptive method best suited to their needs.
- *Handbook for family planning providers*—This companion guide to the decision-making tool is also in preparation and will provide in-depth information on clinical issues.

Box 1.1. A system for keeping guides and guidelines abreast of progress

RHR’s Medical eligibility criteria for contraceptive use and its *Selected practice recommendations for contraceptive use* (see text) and the recommendations they offer service providers are based on available evidence and expert consensus. RHR is devising a system for ensuring that these guidelines and their recommendations remain up to date as the evidence changes in the light of continuing research. The proposed system would comprise five steps:

1. Identifying new, relevant evidence through ongoing, comprehensive literature searches. (Example: A new study claims to show that women with migraine should not use the Pill.)
2. Determining the quality (i.e. validity) of the new evidence. (Example: Is the study well designed and are its conclusions justified?)
3. Determining the originality (i.e. “newness”) of the evidence. (Example: What do the study findings add to what is already known about the relationship between migraine and the Pill?)
4. Deciding whether the new evidence warrants a change in RHR guidelines and their recommendations.
5. Posting the new evidence on the RHR web site and deciding whether to convene an expert working group to formally alter the guidelines and their recommendations.

Condoms for preventing pregnancy and sexually transmitted infections

In 1999, RHR and UNAIDS jointly prepared and made available a package of materials titled *The male latex condom*, that collectively embodies the latest scientific evidence on the use of condoms. These materials include the following documents:

- *Specifications and guidelines for condom procurement*—This document deals with condom production, procurement, and quality assurance.
- *Condom programming fact sheets*—These ten fact sheets review the latest scientific evidence and best practices regarding condom use and delivery.
- *Monograph: The male latex condom—recent advances and future directions*—This document complements the information provided in the above fact sheets by reviewing the many published studies and articles concerning condom quality, performance in use, acceptability, and user behaviour.

During 2000, RHR presented the information package to 77 managers of family planning and reproductive health programmes in ten countries of WHO's South-East Asia region. The department conducted a similar exercise at a meeting held in Azerbaijan in November 2000 for 32 programme managers from Eastern Europe and Central Asia and also at a meeting in China, in December 2000, of 45 senior family planning managers from ten Chinese provinces. During the biennium, nearly 3000 copies of the document were sent on request to manufacturers, national standard boards, testing laboratories, and consumer groups. The document has also been posted on the web sites of the World Bank and UNAIDS.

The work of the department on the male latex condom is the first of a series of planned activities designed to support national family planning and reproductive health programmes in promoting dual protection and the use of high-quality condoms.

The department has worked with the US-based Program for Appropriate Technology in Health in introducing appropriate condom quality assurance procedures in Bangladesh. It has also collaborated with WHO's Western Pacific regional office in developing a strategy aimed at achieving 100% condom use in entertainment establishments in several Asian countries, notably, Cambodia, China, India, Indonesia, Myanmar, Papua New Guinea, and Viet Nam.

In March 2000, RHR provided support to the International Medical Students Association to organize an international student conference for 5000 medical students aimed at promoting healthy sexual behaviour and condom use in order to prevent unwanted pregnancy and STIs.

Social marketing

The department is collaborating with UNAIDS and UNFPA in developing a strategy to support programmes promoting the use of condoms for the prevention of STIs/HIV and unwanted pregnancy. Social marketing of products, services, and communication will be part of a package of strategies designed to improve reproductive health. UNAIDS, RHR and UNFPA worked with eight partner agencies, including the United Kingdom's Department of International Development and the United States Agency for International Development, to develop a framework for a "Social marketing forum", which was held on 22–24 January 2001. It brought together a wide range of participants from all over the world and all sectors of society. At the meeting, representatives of donor agencies, collaborating partners, and country representatives explored the potential of social marketing to improve access to reproductive health services, technologies, and products for the prevention of STIs/HIV and unwanted pregnancies.

The female condom

RHR has worked in collaboration with UNAIDS on two publications relating to the female condom:

- *The female condom: a guide for planning and programming*—Published in 2000, this document is intended to assist programme managers in the design, implementation, monitoring, and evaluation of activities undertaken to introduce, or expand access to, the female condom for the prevention of pregnancy and STIs. It provides an overview of the female condom and summarizes current knowledge and experience of its use in a variety of settings. The document also includes guidance for the development of training materials for providers, as well as detailed practical advice and materials for communicating information about the female condom to potential users. A French version of this document is being prepared.
- *The female condom: an information pack*—This document was initially published in 1997 by WHO and UNAIDS, in English, French, and Spanish. It is currently being updated and a revised version will be available in 2002.

Box 1.2. WHO, UNAIDS, and UNFPA speak out on dual protection

On World AIDS Day, 1 December 2000, UNAIDS, UNFPA, and WHO jointly issued the following statement on dual protection against unwanted pregnancy and sexually transmitted infections, including HIV:

Family planning programmes have made significant progress in the provision of contraception to reduce unwanted pregnancies. However, sexually transmitted infections (STIs), including HIV, continue to spread rapidly throughout the world, especially in developing countries. This includes the transmission of HIV from mother to child in pre- and post-natal settings. Given this reality, prevention of these infections must be reinforced in the context of the provision of information and services for reproductive health, including family planning and sexual health, and the concept of dual protection, i.e. protection against both unplanned pregnancy and STIs/HIV, must be greatly expanded.

Reproductive health programmes should include, where necessary, and should strengthen, where already available, components regarding the prevention of HIV and other STIs, while continuing to provide services to reduce unwanted pregnancy and maternal mortality. In this regard, informed choice on contraception must include the understanding that many methods (e.g. hormonal methods of contraception, intrauterine devices, and sterilization), that are all highly effective against pregnancy, offer no protection against STIs or HIV. Informed choice must also include the acknowledgement that the condom, when used correctly and consistently, not only prevents HIV and STIs but can also be a highly effective contraceptive.

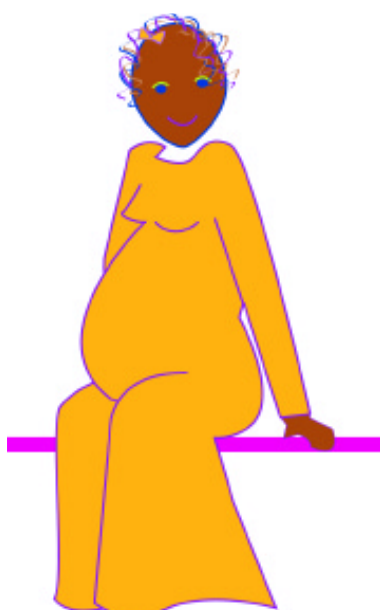
Making sex safer is a concern of all communities, including the global community. For those working in the sexual and reproductive health field, the question is how best to promote safer sex. Governments and both public and private reproductive health programmes must ensure that service providers and users understand condom effectiveness. They must provide appropriate information about dual protection and take action to enable those who are sexually active and at risk to use one or more methods that will give them this dual protection.

Dual protection is particularly important for:

- *sexually active young people between the ages of 15 and 24, who constitute over half of newly acquired HIV infections*
- *men and women who put themselves and their partners at risk because of their own high-risk sexual behaviour*
- *sexually active people in settings where the prevalence of STIs and/or HIV is high*
- *sex workers and their clients*
- *women or men who are at risk because of the high-risk sexual behaviour of their partners*
- *those who have an STI and/or HIV and their partners (preventing transmission to others or preventing reinfection is a high priority).*

The International Conference on Population and Development (ICPD), and the recent review of progress following that conference (ICPD + 5), clearly identified family planning and HIV/AIDS prevention as two major priorities, setting clear quantitative goals and benchmarks for their achievement. The further operationalization of dual protection will require a number of actions by governments, international agencies, and reproductive health programmes, including:

- *maximizing the integration of family planning and STI/HIV prevention services*
- *training and retraining of service providers and counsellors on dual protection so that clients can make free and informed decisions*
- *ensuring availability of condoms at service delivery points and other outlets*
- *a focus on young people, both boys and girls*
- *a focus on men as the users of condoms*
- *the appropriate introduction of female condoms into reproductive health programmes*
- *incorporation of dual protection into prevention of mother-to-child transmission of HIV programmes*
- *the continuing support of research to bring a female-controlled microbicide to the market.*



Chapter 2

Making pregnancy safer

Reducing pregnancy-related deaths

For over 15 years, the international health community has wrestled with the fact that more than half a million women die each year in pregnancy or childbirth. In other words, on average, somewhere in the world, a woman dies every minute because she is pregnant and because she has not received the care she needs.

In 2001, RHR published new estimates of maternal mortality for 1995, developed through a long-term effort involving discussions at regional workshops and a thorough peer-review process, and the collaboration of several partners, including UNICEF, UNFPA, Johns Hopkins University, and WHO's cluster on evidence and information for policy. The new estimates put the global number of maternal deaths for 1995 at 515 000 (Table 2.1). Over 50% of these deaths occurred in Africa and 42% in Asia, leaving 4% in Latin America and the Caribbean, and less than 1% in the more developed parts of the world. The global maternal mortality ratio is estimated to be 400 per 100 000 live births, with Africa topping the list at 1000 per 100 000 live births, followed by Asia (280), Oceania (260), Latin

America and the Caribbean (190), Europe (28), and North America (11). Regional differences are also seen in lifetime risk of dying due to pregnancy-related causes: in Eastern Africa, which has the highest risk, one woman in every 11 risks death in her lifetime vs one in 4000 in Western Europe.

And that is only the tip of the iceberg. RHR estimates that more than 20 million women fall ill or become permanently disabled during pregnancy. Suffering from incontinence, chronic infection, or infertility, many are unable ever again to enjoy a full, healthy family and social life. As a result of neglected prolonged labour, some women develop obstetric fistulas, which can cause continuous leakage into the vagina of urine from the bladder or faeces from the rectum or both, and often result in these women being cast out of their communities.

Further compounding the tragedy of maternal mortality is the equally tragic toll on the newborn. Every year, three million babies are stillborn and a further four million die in the first week of life. During the bienium, concern over neonatal mortality has certainly

Table 2.1. WHO/UNICEF/UNFPA estimates of maternal mortality by United Nations regions (1995)

UN region	Maternal mortality ratio (maternal deaths per 100 000 live births)	Number of maternal deaths	Lifetime risk of maternal death 1 in :
World Total	400	515 000	75
More developed countries	21	2 800	2 500
Less developed countries	440	512 000	60
Least developed countries	1 000	230 000	16
Africa	1 000	273 000	16
Eastern Africa	1 300	122 000	11
Middle Africa	1 000	39 000	13
Northern Africa	450	20 000	49
Southern Africa	360	4 500	65
Western Africa	1 100	87 000	13
Asia*	280	217 000	110
Eastern Asia	55	13 000	840
South-central Asia	410	158 000	55
South-eastern Asia	300	35 000	95
Western Asia	230	11 000	95
Europe	28	2 200	2 000
Eastern Europe	50	1 600	1 100
Northern Europe	12	140	3 900
Southern Europe	12	170	5 000
Western Europe	14	280	4 000
Latin America and the Caribbean	190	22 000	160
Caribbean	400	3 100	85
Central America	110	3 800	240
South America	200	15 000	150
Northern America	11	490	3 500
Oceania*	260	560	260
Australia/New Zealand	8	25	5 500
Melanesia	310	560	60
Micronesia	-	-	-
Polynesia	33	5	700

* Japan and Australia/New Zealand have been excluded from the regional averages and totals but are included in the average and total for more developed countries.
Figures may not add to totals due to rounding.

increased. The topic featured in preparatory meetings for the UN General Assembly special session on children held in May 2002 and a UN Millennium Development Goal called for a reduction in infant mortality.

RHR has consistently taken the position that mother and baby form a dyad. This means, first and foremost,

that in dispensing care to one member of the dyad, attention should at the same time be given to the other. It also means that the two should not be separated unless absolutely necessary as, together, they negotiate the hazards of pregnancy, labour, birth, and the early hours and days after birth. This dyad perspective is an integral part of all the tools that RHR develops.

Making pregnancy safer—a priority initiative for a priority task

In September 2000, concerned by the slow pace of improvement in maternal and newborn health care, representatives from 189 countries endorsed the United Nations Millennium Declaration, which included a pledge “to have reduced maternal mortality by three quarters... of [its] current rates [by 2015]”. Already, in 1999, the ICPD+5 session of the UN General Assembly had urged WHO, “to put in place standards for the care and treatment for women and girls...and to advise on functions that health facilities should perform to help guide the development of health systems to reduce the risks associated with pregnancy”. In response, WHO created an initiative to “make pregnancy safer” by strengthening countries’ health systems at all levels in order to increase the availability and quality of their maternal and neonatal health care services.

The initiative, which is implemented by RHR, involves many partners. UNICEF, UNFPA, the World Bank, and several bilateral donors participate in the work done in countries. The *Maternal and neonatal health project* of the Johns Hopkins Program for Education on Gynecology and Obstetrics contributes to the development and dissemination of materials on managing the complications of pregnancy. Save the Children, the International Federation of Gynecology and Obstetrics, the International Confederation of Midwives, and the Safe Motherhood Inter-Agency Group contribute, among other things, to the development of teaching and other materials used in the training of skilled attendants.

The *Making pregnancy safer* initiative is based on the premise that saving the lives and improving the health of women and their newborn babies cannot be achieved simply by changing clinical practice. Without a health system offering a continuum of care from the community to the district hospital, and further if needed, the complications of pregnancy and childbirth will continue to claim unnecessary victims. The woman who is transported in labour over rough terrain and long distances for a life-saving caesarean section only to find that the surgeon is not there or the equipment is not functioning risks paying with her life for the broken continuum of care.

The initiative uses a systematic planning approach to identify the interventions needed to reduce maternal and newborn mortality and morbidity. The three pivotal elements of the strategy are promoting the presence of skilled attendants at birth; promoting the need for a continuum of effective care; and the prevention and management of unsafe abortion. The priority activities of the initiative focus on six areas (Figure 2.1 and Box 2.1).

The *Making pregnancy safer* initiative aims to help bring about a significant reduction in unwanted pregnancies and unsafe abortions, wider application of best practices to the care of pregnant women, an increase in the number of women benefiting from the services of a skilled attendant at childbirth, and a fall in maternal and neonatal mortality.

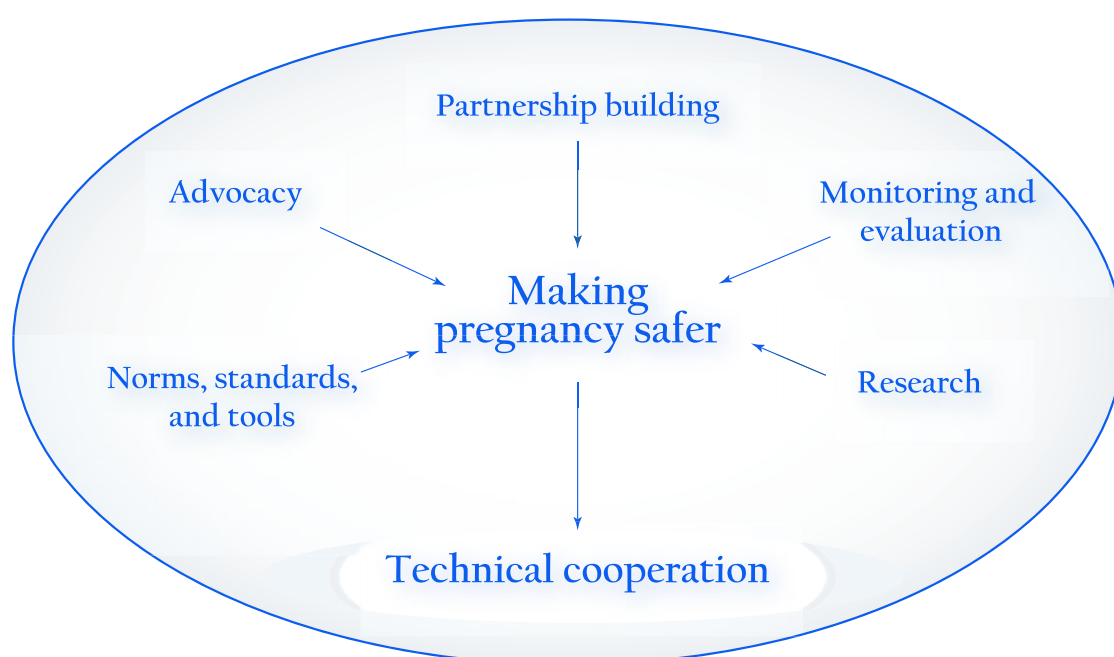


Figure 2.1. Making pregnancy safer activities

Box 2.1. Priority areas for action to make pregnancy safer

- Supporting countries' efforts to strengthen their capacity to deliver quality services to individuals, families, and communities
- Advocacy to ensure that safe motherhood is kept high on the international development agenda
- Building partnerships to increase funding and provide coordination
- Setting norms and standards, and developing tools for maternal and newborn care that are adaptable for local use, particularly for vulnerable populations
- Promoting and coordinating research and disseminating the findings of research on interventions with the potential to improve maternal and newborn health
- Monitoring and evaluating the impact of the *Making pregnancy safer* initiative on practice, maternal health, and progress towards universally agreed goals relating to maternal morbidity and mortality

Skilled attendants—ideally ever-present

In 1999, the WHO/UNICEF/UNFPA/World Bank joint statement on the reduction of maternal mortality recommended that a skilled attendant should assist every birth. The statement notes that “providing skilled attendants able to prevent, detect, and manage major obstetric complications, together with the equipment, drugs and other supplies essential for their effective management, is the single most important factor in preventing maternal death”. The statement defines a skilled attendant as a person (for example, a doctor, nurse or midwife) with midwifery skills who has been trained to a level of proficiency in the management of normal deliveries and can diagnose obstetric complications and manage or refer patients with complications to a qualified practitioner. The statement also notes that midwifery skills include the capacity to initiate management of complications and obstetric emergencies, including life-saving measures, where needed.

Skilled attendants, when supported by a functioning referral system, can ensure that all births are conducted hygienically and according to accepted medical practice, thereby preventing complications that are caused or exacerbated by poor care. They can also ensure proper follow-up and linkage with other services, including services for antenatal and postpartum care, family planning, postabortion care, and treatment of sexually transmitted infections. Overall, they can provide high-quality, culturally appropriate, and considerate care.

Data on the proportion of deliveries assisted by skilled attendants are more widely available and more consist-

ently reliable than data on maternal mortality. For this reason, in an attempt to identify global, regional, and national trends in maternal mortality, RHR, together with UNICEF, conducted an analysis using the proportion of deliveries assisted by skilled attendants as a “proxy” indicator of maternal mortality. The analysis, published in 2001, showed trends for the 53 countries for which data on skilled attendance were available over the decade 1989–1999. During the 1990s, these countries on the whole significantly increased the proportion of deliveries assisted by skilled attendants—up by 26% during the decade and now reaching 53% of deliveries. There were marked differences, however, from region to region. Sub-Saharan Africa, for example, stagnated at around 40% coverage throughout the decade, but northern Africa made a record 52% leap, bringing it over the 60% mark. Latin America and the Caribbean were topping 80% by the end of the decade, up by 12% since 1990 (Table 2.2).

In most countries, the level and availability of attendants' skills also vary widely, as do the quality and duration of training that attendants receive. Making midwifery skills universally available presents a challenge to many countries, and during the biennium RHR has devoted considerable effort to enhancing awareness in countries of the need for skilled attendants. Part of that effort was the organization of a technical consultation at WHO's headquarters in 2000. This was followed by an inter-country meeting in Tunisia convened by the Safe Motherhood Inter-Agency Group and attended by teams from seven countries in sub-Saharan Africa and South Asia: the meeting aimed to develop national strategies and define interventions to promote skilled care during childbirth.

Table 2.2. Trends in percentage of deliveries assisted by skilled attendants for 53 countries, 1989–99

Region	No. of countries with trend data ^a	% of births in the region covered by the data	% of deliveries assisted by skilled attendants		Average annual rate of change ^b 1989–99
			1989	1999	
Sub-Saharan Africa	17	59	44	44	0.1
Middle East and North Africa	9	56	49	63	2.5
Asia	7	89	39	48	2.2
Latin America and the Caribbean	18	74	74	81	0.9
Total	53 ^c	76 ^d	45 ^c	52 ^c	1.7 ^c

^a Data as of April 2001.

^b Weighted average of individual country data. Regional averages were weighted by the numbers of live births.

^c Includes two countries from Central and Eastern Europe and the Commonwealth of Independent States, respectively.

^d Data for developing countries only.

Source: Bulletin of the World Health Organization, 2001, 79 (6) 561

Strengthening midwifery

During the biennium RHR developed a set of guidelines to help countries strengthen professional care for pregnant women and their newborn babies (Box 2.2) and organized a technical meeting on strengthening midwifery services. Future activities will focus on developing strategies whereby countries can assess their needs and develop plans to strengthen midwifery, with special attention to factors which prevent health care practitioners, including midwives, from functioning effectively.

Research to make pregnancy safer

RHR is preparing several tools based on research findings on the effectiveness of interventions aimed at improving maternal health and making pregnancy safer.

- A new antenatal care model was studied in a trial in Argentina, Cuba, Saudi Arabia, and Thailand. It has been adopted by these four countries and is starting to be used in parts of South Africa and Zambia. The new model limits tests, clinical procedures, and follow-up actions to those that have been scientifically demonstrated to improve

Box 2.2. RHR guidelines for strengthening midwifery

- *A background paper*—outlines the arguments for universal skilled attendants at birth, using historical examples.
- *Legislation and regulation: making safe motherhood possible*—describes the legal and regulatory environment essential to effective midwifery services.
- *Competencies for midwifery practice*—describes the essential skills needed by midwives.
- *Developing standards to assist practitioners to provide quality midwifery care*—aims to help countries set standards for midwifery, based on preparatory work carried out in a number of South-East Asian countries.
- *Guidelines for the development of midwifery education programmes*—outlines guidelines for education programmes tailored to local needs.
- *Guidelines for the development of programmes for the education of midwife teachers*—responds to the need for a cadre of experienced teachers to meet the demand for skilled attendants.

outcomes for women and their newborn infants. RHR published a manual for the implementation and monitoring of the new model.

- A study compared the orally administered prostaglandin misoprostol with the injectable hormone oxytocin during the third stage of labour. The administration of oxytocin was found to be more effective in the active management of the third stage of labour. Haemorrhage is the main cause of maternal deaths in most countries. There is an urgent need for an effective, affordable, easily administered intervention for the prevention and management of blood loss, either in institutions or in the home, and this study is part of an effort to meet that need.
- Results of a multicentre trial published in May 2002 showed that magnesium sulfate can halve the frequency of convulsions of eclampsia in women with pre-eclampsia.
- A multicentre trial is under way on the administration of calcium supplements in preventing pre-eclampsia.
- How to reverse the escalating recourse to caesarean section was addressed by a study involving 34 hospitals and 149 206 deliveries in five Latin American countries. The study explored the hypothesis that instituting a mandatory second opinion before every non-emergency caesarean section could reduce the number of caesarean sections in a country. The study did not bear out the hypothesis, largely because second opinions tended to confirm first opinions. RHR remains concerned about the large number of seemingly unnecessary caesarean sections and, following this study, is exploring alternative ways of reducing unnecessary caesarean sections. It is also looking to determine the optimum range—namely, the minimum and maximum number of caesarean sections—it could recommend to obstetric facilities in different settings.
- The *Initiative for maternal mortality programme assessment* (IMMPACT) is a project developed by the Dugald Baird Centre for Research on Women's Health based in the University of Aberdeen, in the United Kingdom, with funding from the Bill & Melinda Gates Foundation, UNFPA, and RHR. The aim of the initiative is, among other things, to evaluate strategies implemented by programmes for making pregnancy safer and to develop tools to facilitate assessment and monitoring of these programmes. RHR is considering an IMMPACT proposal to conduct field research on the work of the *Making pregnancy safer* initiative in Ethi-

opia, Indonesia, and a third, as yet unidentified, country.

- RHR is also participating in a study coordinated by the Dugald Baird Centre on a field manual, or “strategy development tool”, for use by policy-makers and programme managers striving to increase the proportion of deliveries assisted by skilled attendants. This so-called *Safe attendance for everyone* (S.A.F.E.) study is field-testing the manual in five developing countries—Bangladesh, Ghana, Jamaica, Malawi, and Mexico.

Working with countries and regions

During the biennium, the *Making pregnancy safer* initiative began work in the ten countries it has designated as “spotlight” countries: Bolivia, Ethiopia, Indonesia, the Lao People's Democratic Republic, Mauritania, Moldova, Mozambique, Nigeria, Sudan, and Uganda (Figure 2.2). WHO's six regional offices selected the countries for their high maternal mortality ratios and large number of maternal deaths (in relation to the averages for the respective regions), strong political support for safe motherhood, and firm commitment to reforming their health systems. The technical support RHR provides to these countries aims to increase their capacity to improve the quality, equitable accessibility, and utilization of their maternal and newborn health services, as well as to enhance maternal and newborn health care at the community level.

Summary profiles of five of the ten spotlight countries and the work they are undertaking in the context of the *Making pregnancy safer* initiative follow:

Nigeria

Of the five spotlight countries in WHO's Africa region, Nigeria, with a total population of more than 105 million and 27 million women of reproductive age, is by far the largest. The national maternal mortality ratio was estimated to be 1100 per 100 000 live births in 1995. As in many other countries, the main causes of maternal mortality are haemorrhage, sepsis, obstructed labour, and complications from unsafe abortion. However, there are wide disparities in reported maternal mortality ratios between different parts of the country, with figures in rural areas twice as high as in the cities. About 15% of married women use contraception, according to a 1999 national Demographic and Health Survey, but few of them use modern methods. In the north of the country, a quarter of women give birth at home with no assistance. Nonetheless, nationally, 42% of women receive skilled care at birth and 60% attend for antenatal care. The HIV/AIDS epidemic, together with the rising incidence of reproduc-

tive tract infections, poses an overwhelming challenge to health services. The increase in high-risk behaviour among adolescents, resulting in unintended pregnancies, transmission of sexually transmitted infections, unsafe abortion, and unfinished schooling, is also a major cause for concern.

Altogether 70% of the population lives on less than US\$ 1 per day and only 36% of Nigerian women are in the adult work force. As in most of the ten spotlight countries, women's chances of equitable access to good reproductive health are limited by inequalities in status, literacy, and economic resources. Health care facilities are generally in poor condition and lack drugs, equipment, and personnel. Health workers frequently find private sector work more remunerative, so there is a chronic drain on human resources in the public sector.

In 2000, the health ministry developed a national reproductive health policy which gave greater priority to maternal health. Targets to be achieved by 2005 call for reductions in maternal and newborn mortality and morbidity, in unwanted pregnancies, in unsafe abortions, and in sexually transmitted infections, including HIV infection.

Activities in the context of the *Making pregnancy safer* initiative include advocacy to keep safe motherhood high on the national agenda, the creation of an advisory committee to increase the impact of existing maternal health programmes, and efforts to strengthen the government's capacity to carry out health-related interventions based on sound evidence.

Bolivia

In WHO's Americas region, Bolivia was the first country to implement the *Making pregnancy safer* initiative. The country has a maternal mortality ratio ranging from 260 per 100 000 live births in urban areas to 560 per 100 000 in rural areas and even to 980 per 100 000 in the Altiplano, where villages are remote and isolated. The main causes of maternal death are haemorrhage, induced abortion, and hypertension. Only 59% of women benefit from skilled attendants at birth and only 52% receive antenatal care. Some 48% use contraception. By 19 years of age, 40% of women are either mothers or have been pregnant: they live in extreme poverty and lack basic health care and sanitation. Women generally have low status and a poor educational level.



Figure 2.2. *Making pregnancy safer* "spotlight" countries 2000–2001

In an attempt to improve the quality of reproductive health care dispensed and ensure that services are culturally appropriate, the health ministry has initiated a number of activities, including the following:

- Strengthening surveillance of maternal and newborn mortality and morbidity;
- Introducing a single death certificate with a specific entry for women of childbearing age and their pregnancy status;
- Updating national standards of health care and family planning, and maternal and newborn care in institutions at all levels of the health system;
- Developing guidelines on supervision in order to raise clinical standards;
- Training community health advocates to enlist community participation in monitoring quality of care, providing information, and making better use of health services.

A large number of agencies support the ministry's initiatives and the *Making pregnancy safer* goals are high on the national agenda. The government has issued a directive making RHR's manual, *Managing complications in pregnancy and childbirth: a guide for doctors and midwives*, the national reference for management of pregnancy complications by public and private services. A national task force is being formed to provide technical support for the government's goals and to develop a national action plan for coping with maternal and neonatal emergencies at the primary level of care. The task force should also help the country meet the needs of its indigenous population through a "child-birth as in the home" initiative: health facilities are encouraged to create conditions in which people feel as comfortable in the facility as they would at home.

Moldova

In WHO's European region, Moldova is a country with a population of 4.4 million, of which 80% lives below the poverty line. The maternal mortality ratio (at 65 maternal deaths per 100 000 live births) is more than four times higher than the average ratio for WHO's European region. Almost all births take place in hospital. The main obstacle to reducing maternal and newborn mortality is the lack of quality care, in particular the limited capacity of primary health care workers to diagnose and rapidly refer women with complications, and the lack of transportation for referral of such women to secondary care facilities.

The government of Moldova has made reproductive health a priority and has worked since the early 1990s

with a number of agencies to improve access to family planning services and perinatal care. With the support of WHO's country and regional offices, the *Making pregnancy safer* initiative has undertaken a review of maternal and perinatal services and developed an action plan. A needs assessment for safe motherhood is taking place in all health facilities offering reproductive health services. This assessment will lay the foundation for future plans for:

- Revising educational materials and producing them in Moldovan and Russian;
- Improving the availability of contraceptives;
- Training in how to improve the quality of post-abortion care;
- Strengthening the capacity for antenatal and perinatal care;
- Reviewing current antenatal care practices in the light of the results of the WHO multicentre trial on antenatal care (see above, page 15);
- Adapting WHO's "essential health technology package" to Moldova's maternal and newborn services.

Sudan

Sudan, in WHO's Eastern Mediterranean region, is a vast country which has suffered decades of civil strife. Continuing conflict between northern and southern provinces dissuades donors from investing in efforts to improve maternal and newborn services. In such circumstances, a vigorous network of nongovernmental agencies and the involvement of civil society are essential.

National statistics are out of date, but the maternal mortality ratio for 1995 was estimated to be about 1500 per 100 000 live births and the perinatal mortality rate 65 per 1000 live births. About 10% of women use some form of contraception and 86% have a skilled attendant at birth. Just 43% of women are literate and poverty is widespread.

The government is working on a national plan for improving reproductive health, controlling poverty, preventing HIV/AIDS, and promoting female education. The principles of the *Making pregnancy safer* initiative tie in well with the government's plans. Political support for the initiative will be sought at ministerial level and a professional committee will provide technical support. The initiative should contribute to achieving the national goals of improving the accessibility, availability, and quality of maternal and neonatal care.

The country hopes to attain these goals by increasing coverage of the population with antenatal care, tetanus toxoid immunization, essential midwifery services, and referral services able to handle obstetric emergencies.

In the first instance, training will be conducted in standard obstetric case management in the community and at primary care facilities; in emergency obstetric case management at the district level; in obstetric case management for illnesses contributing indirectly to maternal mortality (malaria, anaemia, tuberculosis, and sexually transmitted infections); and in the development of information systems and progress indicators for reproductive health and family planning.

Health systems will be strengthened through the rehabilitation of rural hospitals and health centres, the provision of supplies and equipment, the establishment of blood banks, and the creation of an emergency transport system. Nongovernmental organizations, civil society, volunteers, community leaders, village health committees, and journalists will work together to raise awareness in communities. After pilot testing in two states, the strategy will be implemented in 16 states by the end of 2004.

Indonesia

Indonesia, in WHO's South-East Asia region, with 206 million people scattered over 7000 islands, has the largest population of the *Making pregnancy safer* spotlight countries. More than a quarter of the population lives on less than US \$1 a day, but literacy levels are high. The infant mortality rate dropped from 143 per 1000 live births in 1968 to 50 per 1000 in 1998. The maternal mortality ratio was estimated to be 334 per 100 000 in 1997, according to Demographic and Health Survey data. Some 42% of maternal deaths are due to haemorrhage, with eclampsia, complications of abortion, infection, and prolonged labour each accounting for 9–13% of maternal deaths. Only 18% of births take place in health facilities and some 57% of women use contraception.

The government has invested heavily in the maternal and newborn health initiative it launched in the 1990s. This initiative trained two community midwives in each of 54 000 villages. One outcome was a rise in the rate of skilled attendance at birth from 25% in 1992 to 56% by 1999.

In October 2000, the President of Indonesia and WHO's Director-General launched Indonesia's *Making pregnancy safer* initiative. A national *Making pregnancy safer* working group, comprising national and international partners, was formed. A technical team meets every week to work on a policy that should provide high-

quality, affordable maternal health services based on *Making pregnancy safer* principles. Work is also under way on a national *Making pregnancy safer* strategic plan. Progress made during the biennium includes the following:

- Training in the management of complications of pregnancy and childbirth was provided to midwives and obstetricians in three districts by the Johns Hopkins Program for Education on Gynecology and Obstetrics using the WHO manual for doctors and midwives, *Managing complications in pregnancy and childbirth*.
- Work has started, in collaboration with the Indonesian Society of Obstetricians and Gynaecologists, on the updating and disseminating of Indonesia's maternal health care standards based on the *Integrated management of pregnancy and childbirth* (see below).
- A module on post-abortion care has been developed with the collaboration of the Indonesian Society of Obstetricians and Gynaecologists and the Johns Hopkins Program for Education on Gynecology and Obstetrics.

Integrated management of pregnancy and childbirth

As the *Making pregnancy safer* concept evolved, it became essential for WHO to provide guidance on best practices. *Integrated management of pregnancy and childbirth* (IMPAC), a comprehensive package of evidence-based norms, standards, and tools, is an essential element of the *Making pregnancy safer* initiative. The package can be used by countries to reduce maternal and perinatal mortality and morbidity. It is designed for use by governments working in collaboration with UN and bilateral agencies, as well as professional bodies, nongovernmental organizations, and national institutions and organizations.

Using locally adaptable, scientifically validated tools for the management of pregnancy and childbirth, IMPAC provides countries with the means to improve health workers' skills, the health system's responsiveness to people's needs and expectations, and family and community practices relating to pregnancy, childbirth, and postpartum care.

During the reporting biennium, several IMPAC tools were completed or were nearing completion:

- *Essential care practice guide for pregnancy, childbirth and newborn care*—This is a comprehensive, evidence-based, action-oriented guide for

clinical decision-making. It is written for health care personnel at all levels of the health care system, but particularly for those working in primary care settings. The guide provides a logical decision-making tree for applying WHO recommendations on care during normal pregnancy, birth, and the postpartum period, as well as on emergency and post-abortion care.

The guide addresses direct obstetric complications—haemorrhage, puerperal sepsis, eclampsia, obstructed labour, and the complications of abortion—and routine and emergency neonatal care. It also addresses early management of other conditions the first-line practitioner may face, including HIV, malaria, violence, and adolescent pregnancy. There are sections for health workers, as well as a booklet designed for use in communities to help women and their families prepare for birth, provide care at home for women and their babies, and detect, and respond to, early signs of an emergency. The guide has undergone expert review and field testing in Indonesia and the Philippines. A revised draft is being finalized for use in selected *Making pregnancy safer* spotlight countries. RHR is also developing a referral manual for sick and preterm newborn babies to complement this guide.

- *Managing complications in pregnancy and childbirth: a guide for doctors and midwives*—This is a companion guide to the *Essential care practice guide*. It provides health workers with scientifically sound information on managing complications in pregnancy and childbirth and is designed to be used at the bedside in life-threatening emergencies. The manual was prepared in collaboration with the Johns Hopkins Program for Education on Gynecology and Obstetrics and has been endorsed by UNFPA, UNICEF, the World Bank, the International Federation of Gynecology and Obstetrics, and the International Confederation of Midwives. It has been translated into Bahasa Indonesia, French, Lao, Portuguese, Russian, and Spanish and will soon be available in Chinese. Some 20 000 copies of the manual are being distributed through WHO's regional and country offices and through the Johns Hopkins Program for Education on Gynecology and Obstetrics. A reprint of the English version is planned for 2002.
- *Managing newborn problems: a guide for doctors and midwives*—This guide is intended for doctors and midwives working in district hospitals and dealing with life-threatening conditions in newborn babies, including preterm babies. It is expected to become available in 2003.

- *Clinical guidelines for the management of pregnant women with HIV*—This guide, which RHR has field-tested during the biennium, aims to facilitate the integration into national health systems of efforts at preventing mother-to-child transmission of HIV.
- *Strategic framework for malaria control in pregnancy in the African region*—This tool, which was prepared by the *Making pregnancy safer* team together with the WHO-spearheaded *Roll back malaria* initiative and WHO's Africa regional office, is designed to assist countries in incorporating the latest available information on malaria in pregnancy into their national strategies and guidelines.
- *Midwifery modules for students and teachers of midwifery*—These five modules for training midwives, originally published in 1996, have been revised to bring them into line with the other documents now available from the *Making pregnancy safer* initiative. One of the five modules is a *Foundation module: the midwife in the community*. The other four modules deal, respectively, with *Postpartum haemorrhage*, *Obstructed labour*, *Puerperal sepsis*, and *Eclampsia*. Two additional modules will appear in the next biennium on *Managing incomplete abortion* and *Vacuum extraction delivery*.

Management and programme planning

During 2001, the *Making pregnancy safer* team, in collaboration with several WHO departments, identified the management tools that could help countries implement clinical interventions known to be effective and thus make their health systems more responsive to the needs of women and the newborn, and more able to reduce maternal and neonatal morbidity and mortality.

- *Safe motherhood needs assessment*—Already well-known in English-speaking countries, this manual has been revised and translated into French. It is designed to assist health managers and policy-makers in making rapid assessments of the responsiveness of their health systems and health services to the needs of mothers and their newborn babies. The manual offers a step-by-step guide through the assessment process, including a preparatory process of adaptation to local conditions. In addition, a diskette containing survey forms, a surveyor's manual, Epi-Info templates, and dummy tables facilitates the collection and analysis of data.

Box 2.3. Preventing unsafe abortion

Ninety-nine per cent of the world's 20 million unsafe abortions are performed in developing countries. About 78 000 women die each year as a consequence of such abortions. Of those who survive, at least one in five develops an ascending reproductive tract infection, which exposes her to the risk of infertility. Although well-off women may be able to buy competent services from the private sector, poor women, adolescents, refugees, and women living in isolated rural areas are particularly exposed to the health risks associated with unsafe abortion (Table 2.3).

In August 2000, RHR held a meeting of experts on priorities and needs relating to unsafe abortion. With increasing use of medical abortion, the experts believed that existing methodology for estimating abortion and abortion-related mortality and morbidity may not be picking up a significant proportion of cases and may therefore need to be revised. The meeting noted the disparity between laws on abortion and their implementation: in several African countries, for example, the law permits abortion to save a woman's life but in practice this legal exception is rarely applied. The experts believed that advocacy to draw attention to the magnitude of the problem of unsafe abortion should target the highest decision-making level, such as the World Health Assembly. Data on unsafe abortion, for example, could, the experts recommended, be presented to human rights treaty bodies, in order to raise their awareness of the problem.

In September 2000, RHR, in collaboration with IPAS, the Reproductive Health Alliance Europe, and the International Women's Health Coalition, held a second meeting of experts on abortion. The experts noted that providing safe abortion services does not raise the number of abortions but that obstacles to safe abortion do increase morbidity and mortality. The background paper from this meeting is being used to produce a document titled *Safe abortion: technical and policy guidance for health systems*, which will be translated into Arabic, Chinese, French, Russian, and Spanish. The document covers clinical care, including management of pain, and methods of abortion. It describes the infrastructure needed to deliver safe abortion and such essential functions as monitoring, evaluation, and financing, as well as setting norms and standards, training, and legal issues.

RHR is also preparing systematic reviews on surgical methods for evacuation of incomplete abortion; surgical methods for terminating first-trimester pregnancy; and surgical vs medical methods for terminating first-trimester pregnancy.

Table 2.3. *Unsafe abortion: regional estimates of mortality and risk of death*

Risk of dying after unsafe abortion	
Africa	1 in 150
Asia ¹	1 in 250
Latin America	1 in 900
Europe ²	1 in 1900

¹ Excludes Japan, Australia and New Zealand
² Primarily in Eastern Europe

Source: *Unsafe abortion: global and regional estimates of incidence of and mortality due to unsafe abortion with a listing of available country data*. Third edition. WHO/RHT/MSM/97.16

- *Mother-baby package costing spreadsheet*—This widely used tool enables planners to estimate the cost of implementing essential interventions in districts. A Spanish version was prepared during the biennium and an electronic version has been posted on the *Making pregnancy safer* web site (www.who.int/reproductive-health/mps/index.html).
- *Making pregnancy safer planning guide*—This guide, currently in preparation, will specify what is required of a health system in terms, among other things, of logistics and supplies, to enable it to carry out maternal and newborn health interventions. It also covers budgeting, monitoring, and evaluation procedures and should enable managers to plan and implement interventions more efficiently.
- *Making pregnancy safer planning workshop manual*—This tool is designed to assist district managers and planners in preparing and conducting workshops on the development of a maternal and newborn health plan.
- *Essential health technology package for making pregnancy safer*—This tool has been developed

in collaboration with WHO's department of health service provision and the WHO collaborating centre for essential technologies in health in Tygerberg, South Africa. It is in the form of a CD-ROM software package that covers a set of selected interventions. The software simulates such procedures as assessment analysis, procurement, technology management, and cross-departmental planning. The package provides a bridge between strategic and operational planning but does not prescribe clinical practice or set health priorities. The software is currently being adapted for use in two *Making pregnancy safer* spotlight countries, Moldova and Mozambique.

Human rights and safe motherhood

Failure to respect the human rights of women is increasingly recognized as a determinant of maternal ill-health and death. Three not uncommon examples: preference for male infants, still prevalent in some societies, can lead to neglect, including malnutrition, of female children and expose them to a subsequent high risk of maternal morbidity and mortality. Women in some countries are still required by law to obtain their fathers' or husbands' permission before seeking

Box 2.4. Paying for maternal health services

Few today would dispute that ensuring better maternal health care, in particular through wider availability of skilled birth attendants, is a key to reducing maternal mortality. The problem is finding and properly allocating funds for good-quality maternal health care, particularly in developing countries.

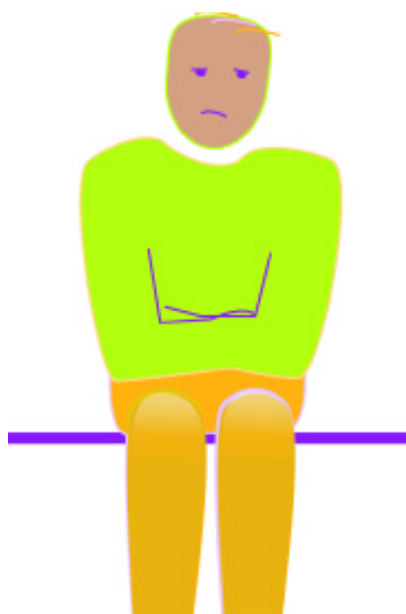
To clarify the issue, RHR has conducted a wide-ranging systematic review of how countries around the world finance—or fail to finance—their maternal health care services. The review has entailed a search of five databases covering the past six years. RHR plans to publish a report on the review before the end of 2002. Among enlightening facts this search uncovered are the following:

- Globally, ministries of health are the main sources of up to three quarters of the funds used for maternal health care.
- In many developing countries there is an urgent need to increase government funding to train more obstetricians and midwives, and to improve existing, or construct new, obstetric health facilities.
- Governments need to improve access to maternal health services by ensuring an adequate transport system, particularly in remote rural areas.
- Social security organizations can provide alternative sources of funds where they are operational, i.e. in largely urban societies capable of handling the administrative requirements of such organizations.
- Community-based schemes that spread or “pool” health costs, can be alternative sources of funding in rural settings but call for strong community leadership and organizational capability.

health care and many women may be too afraid or embarrassed to do so. Culture or custom in some societies still condones violence against women—research has shown that such women are less likely to seek and receive the health care they need during pregnancy and childbirth.

RHR is developing tools and strategies to help countries fulfil their obligations to protect the rights of women to sexual and reproductive health and to equitable access to sexual and reproductive health care. During the biennium, work progressed on two tools:

- *Advancing safe motherhood through human rights*—Published in 2001, this document describes treaties and conventions relating to human and reproductive rights and explores how laws on human rights can bolster efforts to make pregnancy safer. Among such laws are those relating to life, survival, and security; maternity and health; discrimination and respect for difference; and information and education relevant to women’s health during pregnancy and childbirth.
- The document examines how performance standards can be set to monitor compliance with reproductive health rights and the availability of obstetric services.
- The department is developing what it tentatively calls a *Human rights-based assessment tool for the Making pregnancy safer initiative*. The tool can be used to assess the extent to which a country’s laws, policies, and practices respect human rights as they relate to maternal and neonatal health. Use of the tool calls for the participation of a local team representing a wide range of interests and expertise. Such involvement of local stakeholders should enhance the acceptability of any interventions that the tool identifies as being necessary, such as changing a national law or a policy, or working with communities or with reproductive health programmes to foster greater respect of women’s rights to health. The department plans to field-test the tool during the coming biennium.



Chapter 3

Preventing reproductive tract infections

Reproductive tract infections (RTIs), including sexually transmitted infections (STIs), are responsible for a heavy burden of reproductive ill-health, both directly and because they can increase the risk of HIV infection. Apart from the often serious long-term consequences of untreated reproductive tract infections, the stigma that is frequently attached to them makes them a source of misery for both women and men. The dimensions of the problem are vast: WHO estimates that 340 million new cases of curable sexually transmitted infections occur annually, the majority in developing countries.

RHR's *Programme guidance tool on improved RTI management* assists programme managers in selecting the best methods for detecting and treating reproductive tract infections in relation to local epidemiological patterns and availability of resources. It also provides reproductive health care workers and other caregivers with examples of services set up to prevent and manage these infections. This guide was developed in collaboration with the Population Council's HORIZONS project and was field-tested in Brazil, Cambodia, Ghana, and Latvia.

Guidelines for the management of sexually transmitted infections, published in January 2001 jointly by RHR and WHO's HIV/AIDS department, gives recommendations on the management of sexually transmitted infections, including HIV infection, to programmes set up to prevent and manage these infections. Because of the limited availability of laboratory diagnostic facilities in many places, the guidelines call for a syndromic management approach (with diagnosis and treatment based on clinical signs and symptoms instead of their supposed causes) in addition to a case-management approach (that takes all the aspects of an individual case into account, including diagnosis, treatment, and follow-up). In November 2001, the WHO HIV/AIDS department convened a meeting of experts, who made recommendations concerning the shortcomings of syndromic management in women with vaginal discharge and genital ulcer disease. These recommendations will be incorporated in a revised edition of the guidelines to be published by RHR before the end of 2002.

Syphilis is continuing to cause widespread concern, particularly in pregnant women, not only because of its impact on mothers but also because of its potentially

devastating effects on their offspring. Syphilis is preventable and easily cured if diagnosis is established and treatment begun in time: diagnostic tests are available and affordable and treatment is both affordable and effective. However, case management requires a systematic approach within a correctly-functioning health system. In cooperation with the Population Council's FRONTIERS project, RHR and UNAIDS jointly launched six case studies on integrating, within reproductive health services, programmes for preventing and treating sexually transmitted infections. Three of these case studies—in Bolivia, Kenya, and South Africa—have focused on efforts by antenatal care programmes to control congenital syphilis. They demonstrate how the shortcomings of a health system can severely restrict the integration into reproductive health services of new, evidence-based interventions against sexually transmitted infections.

RHR has also completed work on a manual, provisionally titled *Essential care practice guide for the management of reproductive tract and sexually transmitted infections*, as a companion volume to its *Essential care practice guide for pregnancy, childbirth and newborn care* and its *Decision-making tool for family planning clients and providers*. The new guide caters for clients who seek advice but have no symptoms, as well as for those with symptoms who seek treatment.

Dual protection against pregnancy and infection

On World AIDS Day 2000, UNAIDS, UNFPA, and WHO issued a joint statement on the importance of dual protection against sexually transmitted infections and unwanted pregnancy (see Chapter 1, Box 1.2, page 10). In an effort to expand the accessibility and use of the female condom, in 2000, RHR published a guide on the female condom in collaboration with UNAIDS, UNFPA, and the Female Health Company, which manufactures the only brand of female condom currently available (See Chapter 1, page 9).

Mother-to-child transmission of HIV

The appallingly high prevalence of HIV infection in pregnant women in many parts of the world, particularly in southern Africa, compounded by the associated high prevalence of HIV infection in their offspring, underscores the urgent need for clinical and managerial guidelines on preventing mother-to-child transmission of HIV (MTCT).

In the absence of breastfeeding, the rate of HIV transmission from mother to child ranges from 15% to 30%. Breastfeeding up to 18–24 months is common in developing countries but raises the rate to 30–45%. In high-income countries, it can fall to less than 1% thanks to the use of antiretroviral prophylaxis, elective caesarean section, and replacement feeding. In 2000, UNAIDS estimated that 600 000 children had been infected with HIV and that 90% of them had acquired the infection during pregnancy, delivery, or breastfeeding.

A report of a technical consultation convened by RHR on mother-to-child transmission of HIV (titled *New data on the prevention of mother-to-child-transmission of HIV and their policy implications*) spells out WHO's recommendations on breastfeeding and replacement feeding, and on priority topics for further research in this area.

The department has developed a tool to help researchers assess infant feeding practices in the context of the HIV epidemic. The tool will facilitate the collection of standardized data on infant feeding and allow comparisons to be made more easily between data from different studies. It is being field-tested in six African countries, Brazil, and India (see the *Biennial Report 2000–2001* of the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction).

RHR and WHO's HIV/AIDS department are finalizing four clinical guidelines on the management of pregnancy in HIV-infected women: *Voluntary counselling and testing for HIV in pregnant women*; *Antenatal care for HIV-infected women*; *Labour and delivery care for HIV-infected women*; *Post-pregnancy care for HIV-infected mothers and their infants*. Field-testing of these guidelines is under way in Ethiopia and Thailand with the collaboration of WHO's Africa regional office and experts from the Chris Hani Baragwanath Hospital in Soweto, South Africa.

Two new documents on mother-to-child transmission of HIV are also being prepared by RHR and WHO's HIV/AIDS department: *A Guide on care and social support in the context of MTCT*, which is based on a global review of the management of mother-to-child transmission of HIV, and an *MTCT training package for health care providers*, derived from an inventory of national training documents on mother-to-child transmission of HIV.



Chapter 4

Technical support

One of RHR's main activities is providing countries with information and tools to facilitate their policy-making and improve their reproductive health programmes. The department's technical support to countries is carried out in collaboration with national research and service institutions, with WHO's regional and country offices, and with governments, nongovernmental organizations, and other partners. Field visits are undertaken to support projects and programmes in countries, often in the context of the UNFPA-funded *Technical advisory programme*.

A strategic approach to reproductive health in countries

The RHR *strategic approach* to improving quality of care in reproductive health services grew out of the realization that new is not necessarily better. Based on a systems framework, the strategic approach assists countries in developing national policies and programmes through the introduction of reproductive health technologies, including diagnostic tools, clinical protocols, contraceptive methods, and treatment pro-

cedures. The *strategic approach* can improve existing services or the use of existing technologies, promote the use of under-used services or technologies, and introduce new services or technologies. It can also promote appropriate health-seeking behaviour among clients and potential clients of reproductive health services.

Since 1993, 18 countries have used the *strategic approach*, which involves three stages. In Stage I, a strategic assessment is carried out on the interactions between users, technologies, and services, with a view to recommending ways of improving quality of service. Stage II involves action research, which tests the Stage I recommendations. Stages I and II relate primarily to research (see the *Biennial Report 2000–2001* of the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction).

Work under Stage III, which is primarily within the purview of RHR, focuses on scaling-up. It applies the lessons learned from Stage II to policy-making and to planning for wider implementation. For example, in

Viet Nam, depot-medroxyprogesterone acetate (DMPA) has been introduced together with other measures to improve the quality of services in 21 provinces (Box 4.1). In South Africa, emergency contraception has been included in the national reproductive health programme. In Brazil, during Stage II, municipal authorities in one state worked together with women's organizations to initiate a series of interventions. Following the successful testing of these interventions, RHR gave technical support to replicate the interventions in a number of additional states and municipalities (Box 4.2).

Best practices—acquiring the information

Managing information about reproductive health services, health-seeking behaviour, and the impact of policy decisions on reproductive health in such a way that it can be used to best practical advantage presents a challenge. RHR's *Programme to map best reproductive health practices* aims to generate evidence through rigorously conducted research and through systematic reviews, and to distil from this evidence what could serve to improve countries' reproductive health services.

During the biennium, systematic reviews, either new or updated, were prepared on such topics as antihyper-

tensive drug therapy in pregnant women, urinary tract infections, supplementation for iron deficiency anaemia, vitamin A supplementation, unsafe abortion, and sexually transmitted infections, including HIV/AIDS.

The WHO Reproductive Health Library

Health personnel at every level can now readily access up-to-date information about many issues in reproductive health thanks to *The WHO Reproductive Health Library*, the electronic review journal prepared by RHR. The CD-ROM discs containing the library are distributed free of charge to subscribers in developing countries. The third and fourth issues of the library were published during the biennium (in English and Spanish). They contain Cochrane reviews on such issues as antenatal care, treatment of hypertension and iron-deficiency anaemia in pregnancy, and use of microbicides to prevent HIV and other sexually transmitted infections. Authors with extensive knowledge of medical practice in developing countries write commentaries and practical recommendations on each topic. Reviews are updated as new evidence becomes available.

There are currently more than 9000 subscribers to the library, which is increasingly used in training programmes in developing countries. Altogether 24 000

Box 4.1. Viet Nam improves its family planning services

Research conducted between 1996 and 1998 in two Vietnamese provinces in the context of the RHR's *strategic approach* had shown that adding the three-monthly injectable progestogen-only contraceptive depot-medroxyprogesterone acetate (DMPA) could not only expand contraceptive options for women in the area but could at the same time provide an opportunity for improving the overall quality of services delivering all methods of contraception. The research also pointed to the need for good counselling and follow-up care as a prerequisite to successful introduction of DMPA.

A "scaling-up" project was therefore undertaken during the reporting biennium to introduce DMPA in nearly half of the country's provinces. The project also aimed to strengthen Viet Nam's health system and thereby improve the overall quality of services delivering contraceptives. Interventions planned under the project were packaged into a "tool kit", which included, among other things, training modules emphasizing quality of service for delivery of contraceptives, information-education-communication (IEC) materials based on feedback from members of the communities that had participated in the initial research, and suggestions for adapting Viet Nam's management and information system to the addition of DMPA. Managers and family planning providers received training in the use of the tool kit and local researchers in conducting research on users' perspectives and on service delivery of contraceptives. The Vietnamese government subsequently implemented the project in nearly all the provinces in the country.

The project enjoyed the collaboration of the Vietnamese health ministry, the National Committee for Population and Family Planning, and the Viet Nam Women's Union. It was jointly funded by the German Gesellschaft für Technische Zusammenarbeit (GTZ) and UNFPA, with RHR providing technical support through the International Council on Management of Population Programmes (ICOMP).

Box 4.2. Strategic approach initiatives in Brazil

- Training reproductive health care providers in gender perspectives
- Restructuring the roles of providers and services
- Expanding the range of contraceptive options
- Creating a reproductive health referral centre
- Instituting a new management system and a system of supportive supervision
- Introducing vasectomy and related reproductive health services for men
- Establishing an adolescent centre offering a full range of reproductive health services
- Training and supporting youth peer educators for the adolescent centre and for schools

CD-ROM discs of the third and fourth issues of the library were distributed during the biennium. In an effort to make this resource more widely known, presentations of the library were made in Argentina, Bolivia, Denmark, India, Nepal, Philippines, South Africa, United Republic of Tanzania, and Turkey. A training initiative was planned jointly with WHO's Africa regional office. Due to be launched in the whole of WHO's Africa region, the initiative uses a five-day training package developed by the South African Cochrane Centre. A randomized controlled trial is under way in hospitals in Mexico and Thailand to evaluate a programme which promotes evidence-based medicine and uses the library: the results of the trial are expected at the end of 2002.

Best practices—using the information

Traditionally, it can take many years for research findings to find their way into daily medical practice. An example: women in many parts of the world continue to endure the indignity and discomfort of an enema when they are in labour, some 30 years after research showed clearly that the practice serves no useful purpose. Another example: the most effective management of eclampsia is the administration of magnesium sulfate, an inexpensive natural compound; in many places, though, the compound cannot be found or health practitioners are unfamiliar with it.

Resistance to change can be deeply rooted. Changes in practice require personal conviction, engagement, and, where possible, peer support. With this in mind, during the biennium, RHR together with a dozen part-

ners launched an *Implementing best practices* initiative, which enables service providers, programme managers, and policy-makers to become familiar with reproductive health practices based on up-to-date scientific evidence. It helps them work systematically through steps that will lead them to incorporate this “best evidence” in their practice—in their reproductive health programmes and services—so that their practice becomes the “best practice” possible. The *Implementing best practices* process can be used at any level of the health system to improve reproductive health services. It focuses on six areas of action, each taking the process forward to the next action. The six areas are:

- Creating awareness through advocacy: change is unlikely to occur until managers become advocates for best practices within their own services.
- Problem analysis, which allows underlying problems to come to the surface.
- Selection of practices—now possible, with the air cleared of hidden problems.
- Adaptation of practices—a vital step in the process, involving tailoring interventions to fit economic, social, cultural, demographic, technical, political, and geographical circumstances.
- Implementation of practices—with careful monitoring facilitated by experienced mentors or tutors.
- Assessing the impact of practices.

Box 4.3. Strategic approach initiatives to improve quality of care in Zambia

- Introduction of depot-medroxyprogesterone acetate (DMPA) and emergency contraception
- Reduction in the range of oral contraceptives available, so as to reduce client and provider confusion
- Enactment of a policy allowing trained nurse-midwives to insert and remove intrauterine devices
- Training of providers in the syndromic management of reproductive tract infections
- Development of self-learning training manuals for providers in reproductive health care
- Management innovations, including newsletters for participating health centres, that foster sharing of experiences
- “Reintroduction” and clarification of the termination of pregnancy act
- Creating awareness of barriers preventing adolescents from accessing reproductive health services

Regional, inter-country, and intra-country meetings have taken place on the *Implementing best practices* approach in China, Egypt, and Nepal, with participants coming from 18 countries in all. The initiative is being strengthened through the creation of a consortium of health organizations committed to promoting the approach globally and supporting its application locally in countries. The *Implementing best practices* initiative has put together an advocacy pack outlining its work, complete with management exercises, a facilitators’ guide, and an annotated bibliography of technical and managerial guidelines.

Gender issues and reproductive rights

Throughout the biennium, RHR has reported on key reproductive health indicators to UN treaty-based bodies which monitor the extent to which countries fulfil their human rights obligations. The aim of this collaboration is to ensure that sexual and reproductive health issues are integrated into UN mechanisms for monitoring human rights.

Three RHR publications appeared during the biennium in support of a human rights approach to reproductive health (see also Chapter 2, pages 22 and 23, for tools on human rights in the context of Safe motherhood):

- *Considerations for formulating reproductive health laws*—This is a discussion paper which examines how laws can enhance the availability of reproductive health services, particularly laws governing

informed decision-making, privacy, confidentiality, competent delivery of services, and conscientious objection. The paper explores how human rights can serve to promote and protect reproductive health and how they can be enforced through national and international instruments.

- *Transforming health systems: gender and rights in reproductive health*—This is a six-module manual, published in 2001, intended to help health managers organize training courses (on designing or changing health policies, programmes and services) that emphasize gender equity and human rights. The manual was developed in partnership with the François Xavier Bagnoud Center for Health and Human Rights of the Harvard School of Public Health in the USA and the Women’s Health Project at the University of the Witwatersrand in South Africa during a four-year period of testing and adaptation in Argentina, Australia, China, Kenya, and South Africa. Use of the manual should increase the number of programme managers, planners, policy-makers, and trainers who take into account gender perspectives in designing or working with reproductive health programmes.

Vulnerable groups—adolescents and refugees

According to the UN there are some 22 million refugees in the world. The disruption caused to people’s lives by regional and local conflicts creates special needs with

Box 4.4. The impact of armed conflict on reproductive health

- Pregnant women become vulnerable to ill-health from poor food, water, and sanitation.
- Vaccination programmes for women and children break down.
- Complications of pregnancy may be more frequent.
- Pregnant women are often unable to travel to referral facilities for emergency obstetric care.
- Harmful birth practices may be more frequent with the breakdown in health services.
- Breastfeeding problems may arise due to stress, malnutrition, and breakdown of support systems.
- Previously safe bottle-feeding practices become unsafe as water supply and sanitation deteriorate.
- Hypothermia of newborn babies can occur in cold climates.
- Abandonment of babies and infanticide are common consequences of rape. Traumatized mothers often neglect their children.

regard to reproductive health. Moreover, certain population groups, such as adolescents and refugees, are particularly vulnerable to discrimination that hinders their access to reproductive health services. As part of its commitment to human and reproductive rights for such groups, RHR has provided support for the production of several field tools:

- *Reproductive health during conflict and displacement: a guide for programme managers*—This manual, produced by RHR in collaboration with UNHCR and other WHO departments, is intended to assist programme managers in assessing and responding to reproductive health needs at each stage of a conflict or during displacement of populations (Box 4.4). It highlights, among other things, the sexual violence that women living through conflict often experience.
- Based on this manual and the earlier *Reproductive health in refugee situations: an inter-agency field manual*, RHR, in collaboration with UNHCR, UNFPA, and the International Federation of Red Cross and Red Crescent Societies, has developed a ten-day training programme for reproductive health coordinators. The programme aims to help coordinators assess needs and develop, manage, and monitor reproductive health programmes both in emergency and in stable situations and also in post-conflict settings. Training programmes have been held in Azerbaijan, Kenya, and French-speaking Africa.

- *Sexual relations among young people in developing countries: evidence from WHO case studies*—This review provides insights from 34 studies carried out in 20 countries of Africa, Asia, and Latin America. The insights inform recommendations for building negotiating skills, dispelling misconceptions, countering sexual violence, and involving young people in the design of programmes and services that meet their specific reproductive and sexual health needs, including their need for dual protection against pregnancy and sexually transmitted infections.
- *Review of maternal health of immigrants and migrant populations in Europe*—This document is in preparation and will be published in 2002.

Female genital mutilation

In recent years female genital mutilation, a practice traditionally shrouded in secrecy, has edged higher on the political agenda and in public awareness. The extent of female genital mutilation differs between and within countries; it ranges from excision of the prepuce to excision of almost the entire external genitalia and stitching up of the vulva to leave only a tiny opening. Although most women who are submitted to the practice live in Africa and the Middle East, it also affects immigrant population groups in a good number of industrialized countries in Europe. It is thought that between 100 million and 140 million girls and women

Table 4.1. Estimated prevalence of female genital mutilation

Country	Prevalence rate (%)	Period
Burkina Faso	72	1998/99
Central African Republic	43	1994/95
Côte d'Ivoire	43	1994
Egypt	97	1995
Eritrea	95	1995
Guinea	99	1999
Kenya	38	1998
Mali	94	1995/96
Niger	5	1998
Nigeria	25	1999
Somalia	96–100	1982–1993
Sudan	89	1989/90
United Republic of Tanzania	18	1996
Togo	12	1996
Yemen	23	1997

Source: Female genital mutilation: a student's manual. Geneva, World Health Organization, 2001 (WHO/RHR/01.17)

have undergone some form of female genital mutilation. The practice is deep-rooted in certain cultures and repeated international calls for its global eradication, on the grounds of the suffering it causes or the human rights it denies, have met with mixed success.

Female genital mutilation has been the subject of an in-depth study by the department. In 2001, together with WHO's department of gender and women's health, RHR published updated prevalence rates for 29 African countries. They range from 5% to 100%, although the sources for the data are of variable reliability and the rates often vary widely even within a single country. Estimates from the most reliable national surveys are shown in Table 4.1. RHR is also gathering evidence on the obstetric complications and sociocultural underpinnings of female genital mutilation. The results of this work should provide a basis for advocacy, policy-making, and effective interventions.

Women who have been subjected to genital mutilation need special care during pregnancy and childbirth in order to reduce the risk of damage to themselves or their newborn babies. Responding to this need, however, can pose serious technical and ethical problems for practitioners. In 2001, again in collaboration with WHO's department of gender and women's health,

RHR published a document titled *Management of pregnancy, childbirth and the postpartum period in the presence of female genital mutilation*. This document describes essential care for women who have experienced genital mutilation and outlines barriers to its application. It also makes recommendations for future research and training on the topic.

In 2001, RHR also co-published with WHO's department of gender and women's health a two-volume guide: *Training package for midwives and teachers—integrating the prevention and management of the health complications of female genital mutilation into the curricula of nursing and midwifery*.

Information, education, and communications

During the biennium, RHR produced an "occasional paper" that examines how information–education–communications (IEC) interventions have been used over the past 25 years to support public health goals, particularly those related to reproductive health. The paper is based on a literature search, a field survey, and in-depth interviews with IEC programme managers, field workers, donors, and evaluators.



Chapter 5

Monitoring and evaluation

A core objective of RHR is to develop mechanisms to obtain and summarize reliable information on the major causes and overall burden of reproductive ill-health and mortality. A core activity to meet this objective is the monitoring of reproductive ill-health. Over the past decade, the department has compiled global data on maternal mortality and other indicators of reproductive health, such as coverage of the population with antenatal and delivery care, perinatal mortality, and unsafe abortion.

In 1996, the department initiated a process of inter-agency consultation, involving WHO, UNICEF, and UNFPA, that led to the selection of 15 global indicators for monitoring progress in meeting the reproductive health goals set by various international conferences, in particular the Cairo ICPD.

In July 2000, an inter-agency meeting added two new indicators to the list, bringing the total to 17 indicators

(Box 5.1 and Box 5.2). The first new indicator is the percentage of pregnant women aged 15–24 years attending antenatal clinics who are HIV-positive. Since HIV infections in these young women are generally recent, HIV prevalence in this age-group gives a good estimate of recent trends in the incidence of new HIV infection in countries where spread of the epidemic is mainly through heterosexual contact. The second new indicator is the percentage of men and women aged 15–49 who respond correctly to a series of questions designed to measure their knowledge about HIV transmission and its prevention.

In 2001, RHR finalized a toolkit for collecting data on these 17 indicators. The department is also compiling a list of indicators collected and maintained by different organizations and will be assessing new or existing parameters for their potential as indicators of the quality of reproductive health services in countries.

Box 5.1. Indicators for monitoring progress in achieving reproductive health goals

In 2000, WHO, UNICEF, and UNFPA added two new global indicators to the original 15 used since 1996 to monitor progress in meeting the reproductive health goals set by various international conferences. Here are the 17 indicators:

1. Total fertility rate
2. Contraceptive prevalence rate
3. Maternal mortality ratio
4. Percentage of women attended, at least once during pregnancy, by skilled health personnel for reasons related to pregnancy
5. Percentage of births attended by skilled health personnel
6. Number of facilities with functioning basic essential obstetric care per 500 000 population
7. Number of facilities with comprehensive obstetric care per 500 000 population
8. Perinatal mortality rate
9. Percentage of live births of low birth weight
10. Prevalence of syphilis seropositivity in pregnant women attending for prenatal care
11. Percentage of women of reproductive age screened for haemoglobin levels and found to be anaemic
12. Percentage of obstetric and gynaecological admissions for abortion
13. Reported prevalence of women who have undergone genital mutilation
14. Percentage of women of reproductive age who report having tried to become pregnant over two years or more
15. Reported incidence of urethritis in men
16. HIV prevalence in pregnant women aged 15–24 years
17. Percentage of people knowledgeable about practices related to the prevention of HIV infection

Millennium Development Goals

RHR staff have made every effort to keep reproductive health high on the list of priorities of the international development and health community. Part of this effort has involved their participation in the preparation of the UN Millennium Development Goals formulated in response to the Millennium Declaration, which was signed in September 2000 by representatives of 189 countries. One outcome of this participation was

the inclusion in the Millennium Development Goals of a major reproductive health goal—the reduction of maternal mortality—together with two of its main indicators, the maternal mortality ratio and the proportion of births attended by skilled health personnel. The goal on reduction of maternal mortality and its two indicators feature in the UN Secretary-General's annual reports on progress towards the Millennium Development Goals. The department continues its advocacy efforts to raise political awareness of the need

Box 5.2. Checking out countries' progress the easy way

How is Mozambique doing on improving its reproductive health profile? Or Mexico? Or Sweden? Or any one of the 191 countries that are members of WHO? Just insert RHR's country profile CD-ROM, click on the country of your choice, and you'll see a table giving you the latest data for that country on the official 17 reproductive health indicators used to monitor progress in improving reproductive health (see Box 5.1). At no extra charge, you'll also get some standard population data on the country. Want to prepare a few graphs or tables for a presentation? Just use the software on the CD-ROM. These are some of the possibilities offered by a project RHR is working on to provide the reproductive health community with ready access to the data the department monitors and keeps up to date. The country profiles and the software needed to manipulate them will also be posted on the RHR web site.

to expand access to reproductive health services, since this objective was not included in the Millennium Development Goals and progress in achieving it is not included in the Secretary-General's annual progress reports.

Reproductive health databases

RHR maintains global databases on reproductive health indicators. These databases permit the monitoring of progress towards internationally agreed goals and the calculation of estimates of the global burden of reproductive ill-health. However, global indicators are of limited value at the national level, since they can obscure differences in health status within countries—differences, for example, between rural and urban populations, and between population groups of differing age structures or with differing economic or cultural profiles.

During the biennium, several of these databases have been reviewed by RHR:

- *Maternal mortality*—Accurate, complete information on maternal deaths remains elusive. The reasons include the diversity of methods used to estimate pregnancy-related deaths, under-reporting, misclassification, and weak systems for registration of vital statistics. In 2001, RHR, together with UNICEF and UNFPA, produced global, regional, and national maternal mortality estimates for 1995. These estimates cover the number of deaths, maternal mortality ratio, and lifetime risk of death due to pregnancy. However, because the margins of uncertainty are very wide and the methods used to derive estimates for different countries differ greatly, comparisons with earlier estimates that suggest a drop in maternal mortality since 1990 cannot be taken at their face value. RHR is developing an alternative method, based on systematic reviews, that should provide a more structured, systematic way of

recording information on maternal mortality. The data extraction form used in applying this method has been pilot-tested and data extracted for the period 1995–2001 should enable new estimates to be made available in 2002.

During the biennium, WHO's working group on the International Classification of Diseases (ICD) accepted a proposal by RHR to make a clear distinction between two terms that have tended to be used interchangeably or incorrectly: *maternal mortality rate* and *maternal mortality ratio*. RHR proposed that the current revision of the tenth edition of the classification (ICD-10) should use *maternal mortality rate* to denote the number of maternal deaths per 10 000 deaths among women aged 15–49 years over a given period of time and *maternal mortality ratio* to denote the number of maternal deaths per 100 000 live births over a given period. By these definitions, the *maternal mortality ratio* reflects *obstetric risk*—the risk of death faced by a pregnant woman—and is thus a measure of the quality of care she receives. *Maternal mortality rate*, on the other hand, reflects not only the obstetric risk of being pregnant but also the risk faced by a non-pregnant woman when she becomes pregnant: since pregnancy itself represents a far greater risk of dying for women in developing countries, the *maternal mortality rate* is a more realistic measure of maternal mortality risk in these countries than the *maternal mortality ratio*.

During the reporting biennium RHR, together with the MEASURE Evaluation programme of the Carolina Population Center of the University of North Carolina at Chapel Hill, USA, issued a document examining to what extent a national population census could be used to collect data on maternal mortality. The document provides guidelines designed to help statistical offices of developing countries adapt their census methodologies

accordingly and also to evaluate the maternal mortality data collected by this means.

- *Skilled attendants at birth*—This indicator is used as a proxy for maternal mortality, because data for skilled attendants at birth are more readily obtainable and generally more complete and reliable than those for maternal mortality. One drawback is that the skill and qualifications of a skilled attendant differ widely between countries and regions. RHR and UNICEF have developed global, regional, and sub-regional estimates for skilled attendants at birth and will post these on the department's web site in 2002.
- *Anaemia in women of childbearing age*—The global database was updated during the biennium to include data from studies published up to 2002. (The updated data are available on request from RHR.)
- *Incidence of unsafe abortion and resulting mortality*—The global database was updated during the biennium: it shows that about 19 million of the 40–50 million induced abortions each year are unsafe.
- *Low birth weight*—Global and regional estimates for 1995–2000 were prepared during the biennium. It is difficult to estimate the magnitude of this problem, since few infants are weighed at birth, the weights are not always recorded, and the scales are not always accurate. However, 20.6 million infants each year are estimated to be born with a low birth weight. In industrialized countries, 6.5% of all newborn babies have a low birth weight vs 17% in less developed countries.
- *Perinatal and neonatal mortality*—Global and regional estimates for 1999 were calculated during the biennium. They show a slow decline in perinatal deaths. The global perinatal mortality rate was 52 per 1000 total births (76 per 1000 in Africa). This indicator suffers from much the same shortcomings as maternal mortality.
- *Guidelines on investigating maternal deaths and severe complications of pregnancy*—This tool describes techniques for investigating maternal deaths, such as audits, maternal death reviews, confidential enquiries, etc., and for disseminating and using the information generated by such investigations.

Annex I

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