RHR Department of Reproductive Health and Research

Reproductive Health Programme Development: Implementing Cairo

Biennial Report 1998 - 1999

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Reproductive Health Programme Development: Implementing Cairo

Biennial Report 1998-1999

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EXECUTIVE SUMMARY

WHO's former Division of Reproductive Health (Technical Support), RHT, was a partner within WHO's Family and Reproductive Health programme (FRH) which was formed in late 1995. Among others divisions and units, FRH also included the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP). In November 1998, RHT and HRP were joined to create a new Department of Reproductive Health and Research.

MEASURING GLOBAL REPRODUCTIVE HEALTH AND DISSEMINATING BEST PRACTICE

Reproductive health indicators

The Department maintains seven databases covering the following key indicators: (i) maternal mortality, (ii) coverage of maternal care, (iii) anaemia in women of reproductive age, (iv) the incidence of unsafe abortion and resulting mortality, (v) infertility, (vi) low birth weight and preterm birth, and (vii) perinatal mortality. These databases, with the exception of the database on infertility, are regularly updated to ensure they can contribute fully to ongoing work on the Global Burden of Disease.

During 1999, new estimates on maternal mortality, the presence of skilled attendants at delivery, and perinatal and neonatal mortality were produced. The latest estimates made in 1999 suggest that over 500 000 maternal

deaths occurred in 1995. The database on unsafe abortion contains a range of different indicators on incidence and mortality. In 1998, a review of data on the incidence of unsafe abortion and related deaths found that some 20 million unsafe abortions take place worldwide, contributing to 13% of maternal deaths.

To assist countries in generating the required data for some of the indicators, work is under way on a number of guidelines. One guideline, entitled *The sisterhood method for estimating maternal mortality: guidance notes for potential users*, was published in 1998. It followed the publication of two documents resulting from an interagency consultation convened to review, identify and agree on a short list of reproductive health indicators. These documents were: *Selecting reproductive health indicators: a guide for district managers* and *Monitoring reproductive health: selecting a short list of national and global indicators.*

The WHO reproductive health library

The Department's electronic journal *The WHO reproductive health library* (RHL) provides up-to-date systematic reviews and commentaries on reproductive health interventions. It is distributed free of charge to health workers, managers and scientific researchers in developing countries. The first issue was published in 1998 and the second in 1999. Issue No. 2 was published in English and Spanish and discussions are under way to produce RHL in Chinese also.

Gender and human rights issues

In collaboration with the South African Women's Health Project and Harvard University, Boston, MA, USA, an international training initiative in gender and reproductive health for programme managers and policy-makers was created in WHO in 1996. In 1997, the initiative developed and launched a three-week course in Gender and Reproductive Health in South Africa. In 1998, the pilot course was reviewed and adapted for regional use. The initiative currently collaborates with regional partners in Argentina, Australia, China and Kenya to offer regional versions of the Core Course in Gender and Reproductive Health.

IMPROVING MATERNAL AND PERINATAL HEALTH

Today, much is known about effective ways to reduce maternal mortality, and the essential interventions have been well defined. The challenge is to bring these actions to reduce maternal and newborn mortality and morbidity together in a focused and effective way at country and community levels. Following the creation of the Department of Reproductive Health and Research, the former RHT has continued to use its specific expertise, in the development of norms and tools, advocacy, monitoring and evaluation, and the provision of technical support, to help countries meet this challenge.

Maternal mortality - magnitude and determinants

To strengthen the identification of maternal deaths in vital registration systems, a report was prepared entitled *Vital registration systems: improving the identification of maternal deaths*. The report was used as a background paper for the Expert Committee on Vital Registration convened by the United Nations Statistics Division in late 1998.

In 1999, WHO, UNICEF and UNFPA initiated the process of developing a new set of maternal mortality estimates pertaining to the year 1995. Provisional calculations became available towards the end of the year and suggested, for 1995, a total number of maternal deaths of about 510 000. The complete set of estimates, including the figures for individual countries, are expected to be released by the three agencies in 2000.

Neither outcome indicators such as the number of maternal deaths or maternal mortality rates nor process indicators such as the proportion of births at which a skilled attendant was present can, by themselves, furnish all the information needed by health planners and managers for programme planning. In-depth reviews of maternal deaths can provide a better understanding of the many interacting factors influencing health-seeking behaviour and the barriers to good-quality health care. In-depth investigative methods include, for example, confidential enquiry, criterion-based clinical audits, verbal autopsies, maternal death case reviews and investigations of severe maternal morbidity. The Department is currently preparing for field-testing a guide on the various investigative methods.

Integrated Management of Pregnancy and Childbirth (IMPAC)

IMPAC is the Department's new innovative strategy for reducing maternal and perinatal mortality and morbidity and improving maternal and newborn health. IMPAC focuses on: (i) improving the skills of health workers; (ii) improving the overall response of health systems and the management of health services; and (iii) implementing health education and health promotion activities to improve family and community practices and responses in relation to pregnancy and childbirth.

A central element of the IMPAC strategy is to develop standards and norms for improving the skills of health workers. To achieve this, several practice guides are being prepared. These guides have their origins in the *Mother-baby package: implementing safe motherhood in countries* launched by WHO in 1994. They aim to provide a set of tools that will facilitate the implementation of the *Mother-baby package* from peripheral health units upwards.

The *Essential care practice guide for pregnancy, childbirth and the newborn* is designed to enable health care providers to make the most appropriate decisions with regard to the care of women during pregnancy, delivery and the postpartum period. A second

document, *Managing complications in pregnancy and childbirth. A guide for midwives and doctors*, focuses on the emergency care of women and neonates suffering complications during pregnancy or delivery or in the immediate postpartum period. New midwifery documents addressing vacuum extraction and abortion care have been drafted and will complement the already existing modules for the teaching of life-saving skills.

Improving the quality of care during pregnancy and the postpartum period

RHT contributed to a large HRP trial (in Argentina, Cuba, Saudi Arabia and Thailand) that evaluated the effects of a new antenatal care programme on the health of mothers and neonates. Data obtained during the study were analysed in the Department during 1999 and several papers are being prepared for publication in 2000. The Department was also analysing data from a second study (coordinated by HRP), which is investigating the relative effectiveness of oral doses of misoprostol compared to systemic oxytocin for the prevention of postpartum haemorrhage. The first report from the study will be available in 2000. The results will influence recommendations on which drug to use for the active management of the third stage of labour.

During the biennium several key guidelines concerned with the improvement of quality of care during delivery and the neonatal period were issued by the Department. They include: *Postpartum care of the mother and newborn: a practical guide*, *Basic newborn resuscitation: a practical guide*, and *Care of the umbilical cord: a review of the evidence*.

In response to a growing demand for data on Caesarean section and guidance on appropriate levels of this intervention, RHT has assembled national data for an initial review and developed a structure for a potential database on Caesarean section. Concurrently, HRP has been supporting a large multinational trial in Latin America to test the effectiveness of mandatory second opinion prior to performing a Caesarean section in lowering the (mis)use of this surgical intervention. Data from this trial and from other large studies coordinated by HRP will allow new estimates to be made of the ranges of Caesarean section rates among different populations.

New tools for improving management

As a follow-up to the 1994 WHO document entitled *Mother-baby package: implementing safe motherhood in countries*, the Department has developed a new document entitled *Mother-baby package costing spreadsheet* to assist in estimating the cost of implementing at district level the interventions described in the *Mother-baby package*. Field-tests conducted in Bolivia and Uganda confirmed that the model yields useful information for safe motherhood planners and managers within a short period of time. It is expected to be published in 2000.

Interventions to reduce mother-to-child transmission of HIV

Reported rates of transmission of HIV from mother to child range from 15% to over 40% in the absence of antiretroviral treatment and vary across

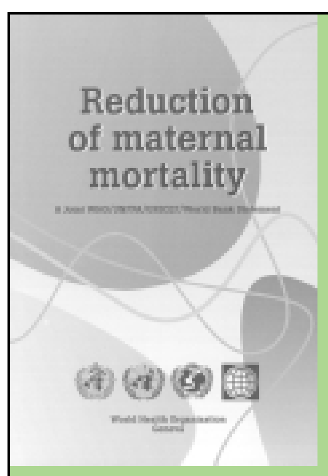
countries. Transmission can occur in utero, during labour and delivery, or postpartum through breast milk. Most of the transmission is thought to occur in late pregnancy and during labour.

Throughout the biennium, the Department participated in, or organized, a number of meetings at WHO on different aspects of the various antiretroviral regimens. A comprehensive review of HIV and maternal care entitled *HIV in pregnancy: a review* was completed and issued in 1999.

Together with UNICEF, UNFPA and UNAIDS, WHO also launched, in 1998, a public health initiative to reduce MTCT of HIV with initial funding to UNICEF by the United Nations Foundation, Inc. The initiative comprises a series of pilot projects in 10 sub-Saharan African countries to demonstrate the technical feasibility of interventions to prevent MTCT in resource-constrained settings.

Safe motherhood advocacy

In 1999, WHO published a booklet entitled *Reduction of maternal mortality: a joint WHO/UNFPA/UNICEF/World Bank statement*. The statement was launched at a press conference in New York attended by the Director-General of WHO, the Executive Director of UNICEF, the Executive Director of UNFPA and a senior representative of the World Bank.



The newsletter *Safe motherhood: a newsletter of worldwide activity* provides news update on maternal health issues and offers an opportunity to exchange information on activities and programmes and to describe results and developments in research. It is issued in Arabic, Chinese, English and French. During 1998-1999, three issues of the newsletter were published.

The World Health Day on 7 April 1998 had the theme of safe motherhood. To mark the occasion, special events were organized at WHO Headquarters, the Regional Offices and in countries around the world. An information pack with the message "Pregnancy is special – let's make it safe" was prepared and widely disseminated. Three video clips were prepared and distributed to television networks worldwide and staff gave a number of radio, newspaper and magazine interviews.

Making pregnancy safer initiative

This new initiative was launched by WHO to highlight the Organization's commitment to reducing maternal mortality and morbidity. Making Pregnancy Safer describes the contribution WHO intends to make during the next few years to the worldwide Safe Motherhood Initiative movement. The Initiative proposes to contribute to the efforts countries are making to achieve the global goals in maternal and infant mortality reduction.

Some 15 Departments at WHO Headquarters together with their counterparts in WHO Regional Offices collaborated in developing the initiative. Consultations with relevant United Nations agencies and other key

partners were also held to review the initiative's proposed orientation and *modus operandi*. Together with the WHO Regional Offices a selected number of countries were approached about their potential interest in participation and ten were selected for the first phase of the initiative due to start in the biennium 2000-2001.

FERTILITY REGULATION - IMPROVING STANDARDS, CHOICES AND CARE

Family planning programmes face the increasing challenge of finding better ways to deliver services to the millions of people who would use family planning if they had access to it. In the developing world as a whole, even today at least 100 million married couples have an unmet family planning need. In 1990, it was considered that about 300 million couples, not included in the estimate of unmet need, were using methods with which they were dissatisfied or which they considered unreliable.

Addressing myths and misconceptions

Misconceptions contribute to the cultural, behavioural and information barriers that prevent family planning services from providing accurate information and appropriate levels of quality care. They also prohibit users from seeking care when it is most needed. To address this issue, the Department, in collaboration with the International Planned Parenthood Federation (IPPF), London (United Kingdom) has approached 70 family planning associations, WHO Country Representatives, institutes and NGOs to complete an international survey to determine the common myths and misconceptions prevalent in each country. The response rate has been very high and the data are currently being analysed.

Evidence-based norms and guidelines

During the biennium, the work carried out by the Department on the development of norms and guidelines relevant to fertility regulation has focused on: (i) increasing information about contraceptive options;
(ii) developing and updating technical guidelines and training materials on family planning methods; (iii) developing and updating technical guidelines and training materials on family planning services; and (iv) developing a collaborative process to support effective dissemination, adaptation and utilization of the norms, standards and guidelines generated by the Department.

In 1996, WHO published and widely distributed the document, *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use.* The document aims at providing guidance to national family planning/ reproductive health programmes in the preparation and revision of national medical and service provision guidelines based on new recommendations for initiating and continuing the use of each contraceptive method. Chinese, French, Indonesian, Russian, Spanish, and Vietnamese versions of the report were printed in the 1998-1999 biennium.

In an effort to strengthen further the interagency collaborative work undertaken for developing the medical

eligibility criteria for contraceptive use, active support has been given to follow-up work on programme guidelines that a number of agencies initiated in 1998-1999. This support has resulted in four joint documents. Preparations were also initiated for an expert committee meeting to be convened in 2000 to revise the document *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use* in the light of new scientific evidence.

To ensure that family planning programmes have access to the latest information, the Department issues technical and managerial guidelines which translate the results of clinical and operational research in family planning into practical guidance. Work to finalize the document provisionally entitled *Technical and managerial guidelines on oral contraceptives* was completed during 1999 and the document now incorporates the latest data on oral contraceptive use and the risk of myocardial infarction. It will be published during 2000.

Simplified companion volumes to each of the technical and managerial guidelines have also been developed, addressing the needs of various levels of providers in a user-friendly format and presentation. Text for a brochure entitled *Oral contraceptives: what health workers need to know* was prepared in 1999. This brochure will be issued in 2000. In addition, French and Spanish translations of four previous brochures were completed in 1998-1999.

The experience gained in the development of the *Essential care practice guide for pregnancy, childbirth and the newborn* (mentioned above) is being used to develop a comparable document entitled *Essential care practice guide for family planning*. The process of compiling this guide was initiated during the biennium. An informal meeting of potential collaborating agencies took place in 1999 and publication of the guide is expected in 2001.

The male latex condom

As part of the joint programme of work, UNAIDS and WHO, in collaboration with the private sector and with scientific, technical and programmatic experts, published and disseminated a package of materials designed to summarize the latest scientific evidence and principles of best practice in the key areas of condom programming. This compendium of materials, entitled *The male latex condom* contains *Specification and guidelines for condom procurement* and ten *Condom programming fact sheets*. A comprehensive review *The latex condom: recent advances, future directions* is also included in the compendium.

The work undertaken by the Department in relation to the male latex condom is the first phase in a series of activities designed to support national family planning and STI/HIV/AIDS prevention programmes. So far, these activities have generated evidence-based technical guidance materials. The next phase, due to start in the year 2000, will focus on providing technical assistance to countries to help disseminate, adapt and put into operation the technical guidelines to improve the quality of condom programming activities.

The Department is also collaborating with UNAIDS in developing a comprehensive strategy to support condom programming activities for the prevention of STI/HIV/AIDS and

unwanted pregnancy. As part of this strategy, UNAIDS, WHO and UNFPA are planning to hold, in 2000, a "Social Marketing Forum", which will be designed to bring together donor agencies, collaborating partners and country representatives in order to explore the comparative advantages and potential of social marketing in improving access to reproductive health services and technologies.

The female condom

Under the guidance of the Department's Condom Working Group, a joint undertaking with UNAIDS, several activities are under way. These include, among others: (i) development and wide dissemination of an information package entitled *The female condom: an information pack*; (ii) expansion of the female condom briefing package to include components that address promotion strategies, social marketing, and introduction of the device into national programmes; and collaborative work with a national project in South Africa to introduce the female condom into the public sector and conduct research on the feasibility, acceptability and safety of reuse of the female condom.

In addition, the Department collaborated with UNAIDS and the Female Health Company to develop a document entitled *The female condom: a guide for planning and programming* which will be published in 2000.

COMBATING RTI/STIS AND CERVICAL CANCER

Reproductive tract infections (RTIs), including STIs, have been a neglected area in public health in most countries. In most parts of the globe, it is now accepted that control of RTIs and STIs is an urgent health need. It is estimated that more than 340 million curable STIs occur worldwide every year, most of them in developing countries.

Since the 1994 International Conference on Population and Development (ICPD), reproductive health programmes have been encouraged to take a more active role in controlling RTIs. The Department is continuing to assist reproductive health programmes in confronting this extra challenge.

Guidelines for research on reproductive tract infections or gynaecological morbidity

Over the last decade, several studies in developing countries have highlighted the widespread prevalence of RTIs or gynaecological morbidities in community settings. To facilitate the conduct of such studies the Department is developing a set of guidelines or research approaches on how to plan and implement rigorous studies on the prevalence of RTIs, and such gynaecological morbidities as genital prolapse, vesico-vaginal fistula and menstrual disorders. To prepare these guidelines, an international multidisciplinary consultative group has been formed. Finalization of chapters is under way and the document will be completed in 2000.

Improving quality of care in STI services

The role of RTIs in adverse pregnancy outcomes or in post-surgical procedures has been a longstanding concern. More recently, the role of RTI/STI in the transmission of HIV has

also been receiving attention. Guidelines and training materials on the prevention and care of STIs are urgently needed by reproductive health programmes.

Determining the most appropriate set of interventions for a public health programme to meet the needs of both men and women with established RTIs, including STIs, has been problematic. A comprehensive mix of interventions should focus on enhanced symptom recognition and health care seeking behaviour, effective outreach programmes to identify symptomatic individuals and their sexual partners, and improved quality of clinical services for women and men. The Department and The Population Council's Horizons project are evaluating a process for making decisions about programme goals and directions and the key steps in implementing those decisions to address the problem of established RTIs. The *Programme guidance tool* has been designed to enable programme managers to assess the nature of the particular RTI problem they face and to design interventions that address it. The tool is being field-tested in the state of Ceara in north-east Brazil, Cambodia, and Latvia.

WHO also plays a key role in the development and distribution of guidelines for the treatment of STIs. In 1999, the Department participated with WHO's Initiative on HIV/AIDS and Sexually Transmitted Infections (HSI) and UNAIDS, in convening a consultation to review the existing guidelines and to redraft as necessary. In addition to some modifications in the recommended drugs for STIs, this revision also altered the way in which vaginal discharge as a symptom is interpreted and treated. These guidelines will be published in 2000.

Case studies on integrating STI prevention and care into other reproductive health services

In 1998, the Department commissioned a review of available information on integration of STI management into family planning services. This review concluded that more needs to be known and understood about this subject before guidance on the topic can be developed. Following the completion of the review a partnership was formed with UNAIDS and the The Population Council's FRONTIERS Project with a view to developing additional case studies on integration to broaden the available information base about the topic. Proposals for case studies were developed and three were funded through the UNAIDS partnership. All three focus on antenatal syphilis screening.

Dual protection

Dual protection is the prevention of two undesired and undesirable outcomes, namely unintended pregnancy and HIV/STI. In 1999, the Department hosted a five-day consultation on the topic of dual protection. The consultation was cofunded and coorganized by WHO, UNFPA and UNAIDS. In the first three days, the issue of dual protection was addressed at a global level, with representatives of family planning organizations and STI/HIV prevention efforts from countries in all the regions present. A joint statement of the sponsoring agencies was developed. In the next two days, representatives from eastern European countries and the Newly Independent States addressed dual protection from their particular regional perspective, resulting in pleas

for assistance from international agencies to help stop the rapid spread of STIs including HIV.

SUPPORTING COUNTRIES AND COLLABORATING AGENCIES

The establishment of appropriate mechanisms for responding to country needs was a prime consideration in the process of reorganization that took place following the creation of the Department of Reproductive Health and Research. Specifically, a Team for Technical Support to Countries was organized to facilitate the provision of comprehensive technical support to countries in the area of reproductive health. It is expected that the linking of research, at national and regional levels, with technical support, will facilitate a more effective response to country needs in reproductive health.

Initiating, formulating and reviewing national health plans

During the biennium the Department has been providing support to research and for programmatic activities in close to 80 countries. This support has ranged from small grants to developing country institutes (e.g. to translate one of the Department's new publications into their own language) to assistance with updating national policies on reproductive health. Two illustrative examples of such broader technical assistance work are given below.

Since 1998, the Department has been involved in a major technical assistance project in Uganda. Other stakeholders in this project include the Ministry of Health, various United Nations organizations, The World Bank, and several NGOs. The Department has contributed by training nurses and midwives from district teams in life-saving midwifery skills and by carrying out community mobilization activities. In association with WHO's Department of Child and Adolescent Health and Development, a strategy and plan have been developed for adolescent reproductive health activities in Uganda. Also, 15 district medical officers have been trained in the Safe Motherhood District Planning process. The *Mother-baby package costing spreadsheet*, developed by the Department, has been applied in two districts. The activities undertaken in this project will be reviewed in 2000.

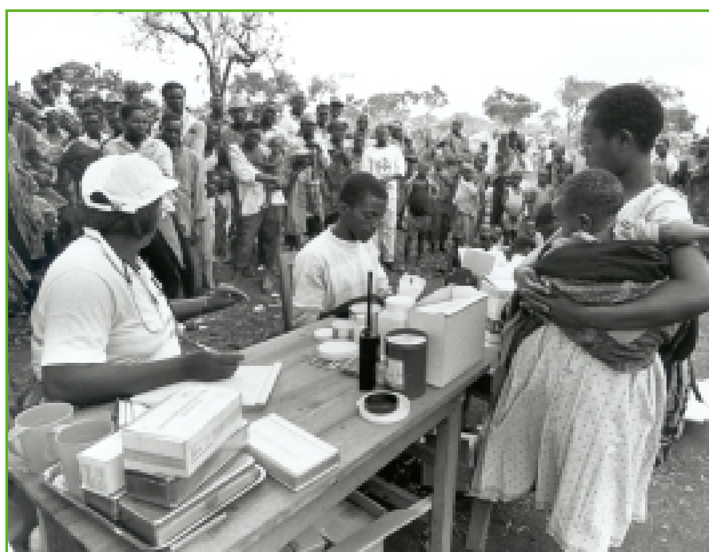
After initial discussions with the Ministry of Health of the Lao People's Democratic Republic (Lao PDR) on conducting an assessment of the contraceptive method mix, assistance was provided to the Maternal and Child Health Institute in Vientiane to implement a comprehensive assessment of reproductive health needs.

The assessment focused on issues related to contraception, maternal health, RTIs including HIV, and adolescent reproductive health needs. It documented a general reproductive health situation characterized by a high level of need of individuals and communities, in part reflecting a lack of availability of adequate reproductive health services. The assessment also found that most community members and even frontline health providers lacked critical information concerning RTIs. Also, adolescents were found to have little access to information or services.

The assessment report made a variety of specific recommendations concerning policy, programme and research needs to assist in developing comprehensive reproductive health policies, strengthening existing reproductive health programmes and moving towards integrated quality reproductive health services to address the problems and needs identified. A proposal is currently being developed for a research project addressing some of the recommendations of the assessment.

Reproductive health in refugee settings

The United Nations High Commissioner for Refugees estimates that there are presently over 22 million refugees (internally displaced persons, asylum seekers, returnees and stateless persons) all over the world. About half of these would be female, with the majority in their reproductive years.



The Department is a member of the Inter-Agency Working Group on Reproductive Health in Refugee Situations which has supported the development and publication of the *Inter-agency field manual on reproductive health in refugee situations*. This manual is based on WHO norms and standards and it has been tested by some 50 agencies working in refugee situations in 17 countries over a period of two years before being finalized and published in 1999.

In collaboration with nogovernmental organizations and other WHO programmes, the Department has built on the technical norms outlined in this field manual to develop a complementary guide for programme managers. *Reproductive health in conflict and displacement: a guide for programme managers* is a tool that defines how to develop practical and appropriately-focused reproductive health programmes during each phase of conflict and displacement – pre-conflict, conflict, stabilization and post-conflict. The manual will be printed in 2000.

A framework for action planning in health promotion and education

The methodology known as A Framework for Action Planning in Health Promotion and Education (FAPHPE) is designed to focus health promotion and information, education and communication (IEC) efforts on achievable objectives. The methodology promotes an innovative planning process that can be used in different settings to integrate health promotion and IEC in existing reproductive health initiatives with no extra programme costs.

Countries where people have been trained to apply the methodology include Argentina, Bolivia, Canada, Chile, Estonia, Kenya, Nepal, Nicaragua, Nigeria, Romania and the USA, including Puerto Rico. Through this field experience, the FAPHPE has

been refined, expanded and revised, taking into account lessons learned from its application. It has now also been translated into Spanish.

Support to the dissemination, adaptation and use of technical guidance documents

To build on lessons learnt from the successful dissemination of the document *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use*, the Department convened a two-day meeting in 1999, with representatives from Family Health International, JHPIEGO, and Johns Hopkins University/Center for Communication Programs (JHU/CCP). The aim was to identify how the agencies could collaborate to develop a strategic approach which will ensure effective dissemination, adaptation and use of technical guidelines at the policy and programmatic levels. A second meeting, involving the same groups and additional potential collaborators (UNFPA, AVSC International, The Population Council, and IPPF) was held in August 1999 and country level workshops are planned to commence in 2000.

Technical support to United Nations agencies

During the biennium, priority was given to strengthening links between WHO's normative and technical capacity and the operational capacity of its partners. The Department provided technical support to UNFPA country programmes through participation of WHO in UNFPA's Technical Advisory Programme, including the Country Support Teams (CSTs). Department staff also gave technical advice to UNFPA country programmes directly as and when requested. In addition, the Department assisted sister agencies such as UNICEF and The World Bank in their work in various areas of reproductive health.

INTRODUCTION

WHO's former Division of Reproductive Health (Technical Support), RHT, was a partner within WHO's Family and Reproductive Health programme (FRH) which was formed in late 1995. FRH also included the UNDP/ UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP), the former WHO Divisions of Child Health and Development and of Nutrition, and the former WHO Units of Women's Health (WHD) and Adolescent Health and Development (ADH).

From its inception in 1995, RHT's overall aims have been to strengthen the capacity of countries, including governments, non-governmental organizations (NGOs) and other partners in civil society, to promote and protect people's health and that of their partners in relation to sexuality and reproduction, and to ensure that people have access to and use quality health care when needed. In seeking to fulfil these aims, RHT has collaborated closely not only with the other divisions and units in FRH, but also with a wide range of other international and national partners, to create an enabling environment that fosters and supports reproductive health and quality care services.

In November 1998, RHT was brought together with the UNDP/ UNFPA/ WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP) to form the WHO Department of Reproductive Health and Research (RHR). The rationale behind the joining of these two divisions was to integrate research

and action in reproductive health within a single Department. By bringing together the two complementary arms in this way, WHO has never been better equipped to take on the complex issues surrounding sexual and reproductive health and to provide countries with an integrated programme of both research and action tailored to their needs.

Following the creation of RHR, work initiated by the former RHT has continued to make crucial contributions to the new Department's mission of improving reproductive health throughout the world. RHT's specific areas of expertise, particularly in the development of norms and tools and the provision of technical support, are helping countries to plan, design, implement and monitor quality reproductive health programmes.

Together with HRP, RHT is working towards the new Department's four programme goals. These goals guide the Department's work and aim to ensure that people can exercise their sexual and reproductive rights in order to:

1. experience healthy sexual development and maturation and have the capacity for equitable and responsible relationships and sexual fulfilment;
2. achieve their desired number of children safely and healthily, when, and if, they decide to have them;
3. avoid illness, disease and disability related to sexuality and reproduction and receive appropriate care when needed;
4. be free from violence and other harmful practices related to sexuality and reproduction.

These programme goals can be reached only through collaboration with many partners at local, national and international levels. The importance of these partnerships in bringing about positive change is reflected throughout this report.

The report is divided into five chapters which describe the Department's work in the following key areas:

1. Measuring global reproductive health and disseminating best practice
2. Improving maternal and perinatal health
3. Fertility regulation – improving standards, choices and care
4. Combating RTI/STIs and cervical cancer
5. Supporting countries and collaborating agencies.

Note:

In making reference to the work of RHT during this transitional period, this report generally uses the term “the Department” or “RHR”. The term RHT is used in instances where activities were completed prior to the establishment of the Department, in November 1998, and no follow-up work is under way or envisaged. The research and research capacity building work carried out by HRP, which is a part of RHR but which is funded separately, is the subject of a separate biennial report. In instances where it was felt necessary to refer to HRP-supported activities, these activities are identified as such

CHAPTER 1

Measuring global reproductive health and disseminating best practice

Up to 40% of all pregnancies – estimated at 210 million per year – are unplanned and about 45 million abortions are carried out each year. Some 20 million of these abortions take place under unsafe conditions and result in the deaths of approximately 80 000 women. Globally over 500 000 women die each year due to complications arising during pregnancy, delivery or the postpartum period. Almost all of these maternal deaths occur in developing countries and most are preventable.

In 1999, WHO estimated that there are 340 million new cases of curable sexually transmitted infections (STIs) each year; this figure does not include the large numbers of STIs for which there are no cures, such as infection with the human immunodeficiency virus (HIV) and other viral agents. During 1999, 5.6 million people are estimated to have been infected with HIV and the total number of persons living with HIV/AIDS at the end of 1999 is thought to have been about 33.6 million. Again, it is the developing countries that are bearing the brunt of this epidemic.

As the entity within WHO with particular responsibility for monitoring and evaluating reproductive health globally, the Department has continued to collect information about several key indicators.

DATABASES COVERING MATERNAL AND PERINATAL MORTALITY AND OTHER KEY INDICATORS

In order to monitor the global state of key indicators of reproductive health, the Department maintains seven databases, linked to one central reference database. The indicators are: (i) maternal mortality, (ii) coverage of maternal care, (iii) anaemia in women of reproductive age, (iv) the incidence of unsafe abortion and resulting mortality, (v) infertility, (vi) low birth weight and preterm birth, and (vii) perinatal mortality.

This unique body of information gives the Department a clear leadership role in generating and synthesizing information on reproductive health problems that are relevant to developing countries. As few such countries are equipped to provide data on key process and outcome indicators, the databases bring together whatever information is available from vital registration, community and hospital studies in the published and unpublished ("grey") literature, both nationally and subnationally. These databases, with the exception of the database on infertility, are regularly updated to ensure they can contribute fully to ongoing work on the Global Burden of Disease.

Box 1

In order to monitor progress towards the achievement of the Conference's[1] goals for maternal mortality, countries should use the proportion of births assisted by skilled attendants as benchmark indicator. By 2005, where the maternal mortality rate is very high, at least 40 per cent of all births should be assisted by skilled attendants; by 2010 this figure should be at least 50 per cent and by 2015, at least 60 per cent. All countries should continue their efforts so that globally, by 2005, 80 per cent of all births should be assisted by skilled attendants, by 2010, 85 per cent, and by 2015, 90 per cent.

Report of the Ad Hoc Committee of the Whole of the Twenty-first Special Session of the General Assembly. New York, United Nations (A/s-21/5/Add.1) (paragraph 64).

The methodologies used to make estimates depend on the indicator as well as the type and quality of available data. Estimates are normally generated intermittently as meaningful information becomes available. The reproductive health estimates are calculated within the global framework of United Nations demographic estimates to increase comparability. It should be kept in mind that estimates are only what their name implies, and are imprecise substitutes for good health reporting.

During 1999, new estimates on maternal mortality, the presence of skilled attendants at delivery, and perinatal and neonatal mortality were produced.

Although it is considered a key gauge of global reproductive health and, increasingly also, a measure of the effective functioning of the health system, **maternal mortality** has proved virtually impossible to measure accurately. The latest estimates calculated in December 1999 suggest that over 500 000 maternal deaths occurred in 1995. Statistical analyses show a strong association between high maternal mortality and the non-presence of a

1 The International Conference on Population and Development, Cairo, Egypt, 1994.

skilled attendant at delivery. In view of this association, the proportion of births at which a skilled attendant is present has been chosen as the preferred process indicator to monitor progress towards the global goal of reducing, by the year 2015, maternal mortality ratios by 75% from their 1990 levels (Box 1).

The database on **unsafe abortion** covers a sensitive area in which reliable data are rare. To make best use of available information, the database contains a range of different indicators on incidence and mortality. These are used to prepare estimates, last issued in 1998, of incidence of unsafe abortion and deaths as a result of this practice at global and regional levels. The review showed that some 20 million unsafe abortions take place worldwide, contributing to 13% of maternal deaths.

The database on **low birth weight and preterm birth** includes birth weight distributions, and percentage of preterm births and preterm low-birth-weight infants. The **anaemia database** lists haemoglobin data for pregnant and non-pregnant women of reproductive age. In addition, information on haemoglobin distributions is collected to allow evaluation of the severity of the condition. This database also contains a section on serum levels of some essential micronutrients.

The **reference database** contains the source materials, but also serves as a source of information for in-depth analysis covering the epidemiology, etiology, determinants and risk factors for reproductive ill-health conditions.

During 1999, an evaluation of the current method of operation and the future of the Department's reproductive health databases was initiated. The extent of their use, the feasibility of continuing to maintain all of them, and the desirability of adding new ones in the light of changing requirements, are being explored. An important review and enhancement of the database software also took place. One aim of the software development has been to create a generic tool for indicator databases. The objective has been successful since its structure has already been used outside the Department, and plans are under way by others to follow its model. The possibility of introducing a systematic search and quality assessment procedure to a small number of high-priority databases is currently being considered.

MATERIALS AND GUIDELINES ON NATIONAL REPRODUCTIVE HEALTH INDICATORS

Since the International Conference on Population and Development (ICPD), held in Cairo (Egypt) in 1994, much attention has been paid to the development of indicators for the global monitoring and evaluation of reproductive health. A short list of 15 indicators was generated through an interagency consultation, organized by WHO in 1997. These indicators were selected to monitor the progress in achieving goals for reproductive health set in the ICPD *Programme of Action.*

During 1998, the Department published two documents resulting from this consultation, *Selecting reproductive health indicators: a guide for district managers* and *Monitoring reproductive health: selecting a short list of national and global indicators.* The first document is de-

signed to assist district managers in both selecting indicators and generating the information and data needed for their estimation. The short list of indicators for global monitoring aims to avert unnecessary proliferation of reproductive health indicators on which countries are asked to report. The indicators were chosen on the basis of a series of criteria described in the guidelines. Feasibility and usefulness for programme management were considered particularly important. A direct outcome of the work has been the compilation of country profiles which assemble available data on each of the reproductive health indicators identified on the short list on a country-by-country basis.

To assist countries in generating the required data for some of the indicators, the Department is currently working on a number of guidelines. One of these guidelines was published in 1998 and provides information on the sisterhood method of estimating maternal mortality (*The sisterhood method for estimating maternal mortality: guidance notes for potential users*). The sisterhood method is an indirect measurement technique of the kind also used to measure other health parameters such as infant mortality. The method was designed to overcome the problem of large sample sizes required in traditional approaches to estimating maternal mortality and so lower costs. It reduces sample size requirements since it obtains information by interviewing respondents about the survival of all their adult sisters. Many countries have used the method in recent years. As experience has built up, it has become apparent that a number of issues need to be taken into account before opting to use the methodology to measure maternal mortality, particularly for those wishing to evaluate progress towards its reduction.

Guidelines for monitoring the availability and use of obstetric services have been developed jointly by UNICEF, UNFPA and WHO and published in 1997. These guidelines present a list of process indicators that assess the availability, use and quality of obstetric services

Box 2

Increased efforts are needed by the United Nations System, with support from the international community, to develop and agree on common key indicators on reproductive health programmes, including, inter alia, family planning, maternal health, sexual health, sexually transmitted diseases, HIV/AIDS, and information, education, and communication for appropriate consideration in the relevant intergovernmental process. Bearing in mind the efforts made by national governments, the World Health Organization (WHO) is invited to take the lead role in this area, in coordination with the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the United Nations Development Programme, the Joint and Co-sponsored United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (UNAIDS), the Department of Economic and Social Affairs of the United Nations Secretariat (DESA), and other relevant United Nations entities, drawing on other expertise and knowledge as appropriate. Indicators on maternal and neonatal mortality, maternal morbidity, and maternal health programmes should be given a prominent place, in order to effectively monitor progress and ensure that priority is given to reproductive health care in the provision of general health services. The international community is encouraged to provide financial and technical assistance to developing countries to improve their capacity-building on indicators, data collection, monitoring, and evaluation in this field.

Report of the Ad Hoc Committee of the Whole of the Twenty-first Special Session of the General Assembly. New York, United Nations (A/s-21/5/Add.1) (paragraph 55).

and provide guidance on data collection and interpretation. The indicators are currently being field-tested in several settings. Results from Bangladesh, for instance, found that only 4% of all births took place in facilities able to provide life-saving obstetrics care. More critically, only 7% of the total anticipated complications took place in such facilities, and only 3% of deliveries were done by Caesarean section. These results led health planners to give high priority to the strengthening and decentralization of emergency obstetrics care services. Other measures accorded higher priority include increasing coverage of targeted antenatal and postnatal care services, designing a national campaign for creating awareness about high rates of maternal deaths, and community mobiliziation for safe motherhood.

At the special session of the United Nations General Assembly in July 1999, which marked the end of the five-year review of the implementation of the ICPD *Programme of Action*, the governments re-emphasized the importance of reliable indicators for monitoring progress towards the achievement of globally agreed reproductive health goals and invited WHO to take a lead role in this area (Box 2). Accordingly, work was initiated in 1999 to prepare for a technical consultation in mid-2000 to review and modify, as needed, the existing list of 15 indicators and to consider ways in which countries can be assisted to collect them.

GLOBAL AND REGIONAL ESTIMATES OF THE GLOBAL BURDEN OF DISEASE

The World Bank's *World development report 1993* highlighted the need to set priorities in allocating public health resources. A central feature of the report was the development of internally consistent global and regional estimates of the Global Burden of Disease (GBD) resulting from deaths and disabilities due to more than 140 diseases and conditions. The GBD study was designed to promote greater consistency and attempted to provide more realistic figures for use by disease-based programmes, each of which tended until then to "inflate" its share of total mortality, morbidity and disability.

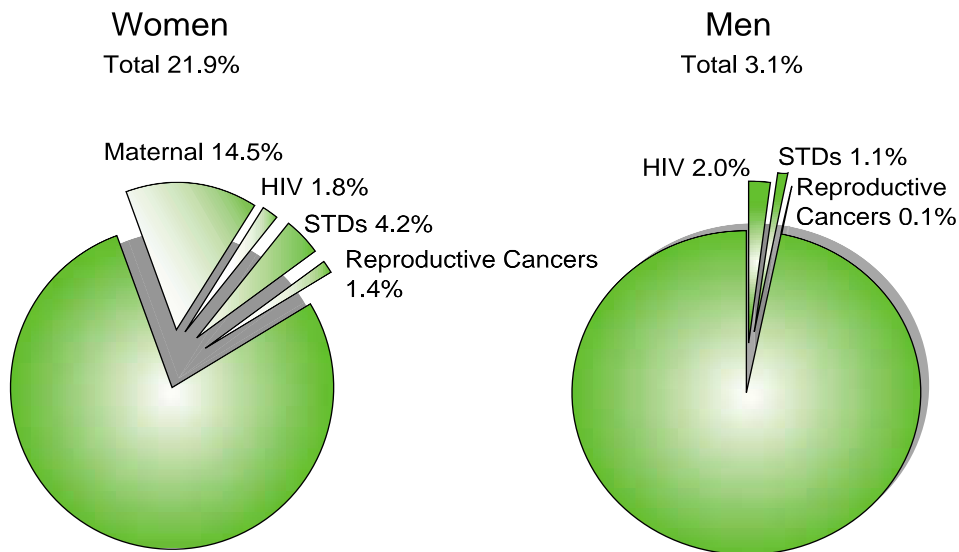
The measure used for these calculations was a time-based indicator of health outcomes known as the DALY (Disability-Adjusted Life Year). The DALY is a composite measure of the overall burden of disease due to losses from premature death and non-fatal disability. The DALY permitted, for the first time, an assessment of the burden resulting from both these categories. Yet, given that the data on the incidence and prevalence of many health conditions are incomplete, strong reservations have been expressed about using the DALY as a basis for public health policy and resource allocation.

To address these concerns in the area of reproductive health, the Department began an international consultative process of information sharing and review of the DALY methodology and its use in the forthcoming GBD exercise for the year 2000. During a first consultation on the DALY and reproductive health held in Geneva in April 1998, the DALY approach was critically evaluated and ways of improving the calculations proposed. Many issues were identified as needing further research and evaluation. The report, *DALYs and reproductive health: report of an informal consultation,* was issued in 1999.

The report describes the rationale for and objectives of the meeting, and includes a short introduction to the DALY, notably its development and use within the GBD study. The report also describes the various definitions of reproductive health, how much of the burden of reproductive ill-health the DALY approach actually captures, and the difficulties of quantifying many aspects of reproductive ill-health encountered in the 1990 GBD study.

It also considers how the DALY can better measure the burden of reproductive ill-health, concentrating on the following areas: strengthening the epidemiological database, quantifying the various health states, and capturing the gender dimension of burden. The conclusions and recommendations of the report summarize the main problems, research needs and next steps identified at the consulation.

FIGURE 1. TOTAL DALYS LOST DUE TO REPRODUCTIVE ILL-HEALTH IN WOMEN AND MEN OF REPRODUCTIVE AGE, 15-44 YEARS (AS % TOTAL DALYS LOST IN THAT AGE GROUP, 1990)



DISSEMINATING BEST PRACTICE

The WHO reproductive health library (RHL)

Strategies which will bring about real improvements in global reproductive health must be made particularly relevant and available to resource-poor settings where the needs, including information needs, are the greatest.

Developed by RHT and HRP, the electronic journal *The WHO reproductive health library* (RHL) is a uniquely comprehensive tool for reproductive health practitioners and policy-makers. It provides up-to-date systematic reviews and commentaries on reproductive health interventions. RHL is distributed free of charge to health workers, managers and scientific researchers in developing countries.

The first issue was published in 1998 and the second in 1999. Close to 15 000 copies of each issue were distributed to an ever-growing list of subscribers. Additionally, it is distributed to libraries and departments of obstetrics and gynaecology in medical schools, and to schools of nursing and midwifery in developing countries. Issue No. 1 was published in English only, No. 2 was published in English and Spanish and discussions are under

way to produce a Chinese translation in the year 2001.

Web site

As part of its activities to disseminate information widely, the Department continued to develop its web site. The site describes the overall aim and goals of the Department and gives an overview of the dimensions of reproductive ill-health and the Department's main activities in the areas of maternal and newborn health, family planning and reproductive tract infections (RTIs). The site is designed to be user-friendly for even the most basic hardware and software. A comprehensive listing of resources is available through this site, along with details of how to obtain them. Work is continuing to make the Department's documents available in "html" format for easy downloading and adaptation.

Communications audit

As an aid to future policy-setting in the area of information dissemination, RHT has carried out a "market research study" on existing needs. The objective was to assess current activities and policies so as to strengthen future work in advocacy and dissemination of information.

The assessment concentrated primarily on the production and dissemination of RHT documents. The focus was on assessing where documents are being sent, how they are targeted and how they are perceived. The work was carried out by an outside consultant who had in-depth discussions with staff from the Department and related programmes. Reviews of existing mailing lists, distribution systems and the role of the Department document centre in responding to requests also took place. A questionnaire on a selection of documents was prepared and sent to countries via the WHO Regional Offices. A report of this assessment and recommendations for afuture dissemination strategy and communications priorities, was submitted in 1999 and is assisting with the formulation of new strategies in this area.

GENDER AND HUMAN RIGHTS ISSUES

A key priority for the Department's advocacy remains the monitoring of gender and human rights issues. Tools and training initiatives are developed specifically to assess the gender dimension in reproductive health research, policy and programmes. To help with the interpretation of sexual and reproductive rights, information on discriminatory laws, policies and practices is collected and reviewed. The Department's advocacy staff also play a key role in forging links with sister United Nations bodies and the many government agencies, academic institutions, women's groups and non-governmental organizations (NGOs) with a vested interest in reproductive health. Close collaboration with these agencies and institutions is essential if the work of the Department is to have real impact.

GENDER TRAINING INITIATIVE

An international training initiative in gender and reproductive health for programme managers and policy-makers was created by the former WHO Unit of Women's Health (WHD) in 1996, and was implemented in 1997-1998 by RHT, WHD and

HRP. It involved collaboration between WHO, the South African Women's Health Project and Harvard University. The initiative represents a direct effort to put into practice priorities set at the ICPD in 1994 and the 1995 Fourth World Conference on Women (FWCW), held in Beijing.

In 1997, the initiative developed and launched a three-week course in Gender and Reproductive Health in South Africa, which now continues on an annual basis. The initiative currently collaborates with regional partners in Argentina, Australia, China and Kenya to offer regional versions of the *Core Course in Gender and Reproductive Health.*

In November 1998, representatives of each of the five regional collaborating institutions participated in an 11-day regional adaptation workshop in Geneva. During the workshop, the pilot course was reviewed and adapted for regional use and regional teams demonstrated model sessions for teaching gender and reproductive health. By the end of the workshop, new region-specific adaptations of the curriculum were drafted. A second outcome was the development of common evaluation tools for the 1999 regional courses which were held in four of the regional centres (Argentina, Australia, China, Kenya).

CHAPTER 2

Improving maternal and perinatal health

Every year, about 210 million women become pregnant and some 130 million give birth. Although most of these pregnancies are uneventful, an estimated 15% develop complications, around one-third of which are life-threatening. These complications result in the deaths of over half a million women each year. In some developing countries, the lifetime risk of maternal death may be as high as one in seven, compared to 1 in more than 5000 in many developed countries. Few other health indicators so starkly reflect the large disparities that exist between developed and developing countries.

Pregnancy-related complications represent a major contribution to the burden of disease among women aged 15-49 years in developing countries. The causes that result in maternal deaths and disabilities also affect the survival and health of their infants. More than three million neonates die and millions more are disabled because of inadequately managed pregnancies and deliveries and because of women's poor health and nutritional status.

The social and economic costs of deaths and disabilities among mothers and neonates are important barriers to development. The situation is all the more disturbing because the knowledge needed to avert such problems is available and the interventions known to be cost-effective in resource-limited settings have been identified. Despite increased advocacy and expressions of commitment by national authorities and international assistance agencies, globally, overall progress over the past decade has been disappointing.

The medical causes of death represent only the end-point in a longer chain of causation that includes poverty, lack of education, early childbearing, malnutrition, and women's low status and restricted choices in their lives. These combine to hinder women's access to care at a time of their lives when they need it most.

Maternal mortality is an indicator not only of women's health but also of the integrity and effectiveness of the health care system as a whole. Today, much is known about effective ways to reduce maternal mortality and the essential interventions have been well defined. A key intervention for reducing maternal mortality, for example, is timely access to quality care for the management of obstetric complications. Alongside health care interventions, it is essential to mobilize and involve communities so as to encourage women to seek appropriate care when they most need it. The challenge for the Department is to bring these actions to reduce maternal and newborn mortality and morbidity together in a focused and effective way at country and community levels.

MATERNAL MORTALITY - MAGNITUDE AND DETERMINANTS

Revised maternal and perinatal death definitions for the International Classification of Diseases

In the process of setting indicators, there is considerable debate on the definition of maternal death and ways of simplifying it. A first step towards resolution of this debate was to incorporate an additional definition into the International Classification of Diseases, Tenth Revision (ICD-10), namely "pregnancy-related death". This approach has the advantage of not requiring information on the specific cause of death; instead, it defines as pregnancy-related, all deaths among women of reproductive age who were pregnant at death or who had been pregnant within the previous 42 days. However, in many settings, even those with relatively good vital registration coverage, pregnancy state is not routinely recorded on death certificates. Several suggestions have been made as to how records might be improved. One is the inclusion in death certificates of a check box indicating whether the woman was pregnant at the time of death. Further research on the feasibility and effectiveness of including such a check box is needed.

To initiate this process, RHT brought together what is known of country experiences to strengthen the identification of maternal deaths in vital registration systems. The report (*Vital registration systems: improving the identification of maternal deaths*) concludes that, although these systems are active and reliable only in some areas of the world, they are recognised as providing the foundations for surveillance of mortality, including maternal mortality. Investing in vital registration systems brings several benefits: in addition to improved information, it also builds capacity in data management and educates data collectors and communities about the relevance of measuring mortality. The Department's report was used as a background paper for the Expert Committee on Vital Registration convened by the United Nations Statistics Division in late 1998.

Maternal mortality estimates and projections

In 1996, WHO and UNICEF published revised maternal mortality estimates for the year 1990. These estimates were widely disseminated and used by international agencies and others. The estimates generated considerable comment from national governments, most of which focused on the differences between these figures and those officially reported by governments themselves.

Following further discussions among countries, agencies and WHO Regional Advisers in Reproductive Health, it was agreed that a number of inter-country workshops should be organized during 1998 to ensure full regional and national participation in the development of new estimates for 1995. The first such consultation, coorganized by WHO, UNICEF and UNFPA, was hosted by WHO's Regional Office for the Americas/Pan American Health Organization in Washington DC (USA) in April 1998 (*WHO/UNICEF/UNFPA Americas region consultation on maternal mortality estimates*). The second consultation took place in Bangkok, (Thailand) in June 1998 and involved countries of the WHO Regions of Eastern Mediterranean, South-East Asia and Western Pacific (*WHO/UNICEF/UNFPA Asia region consultation on maternal mortality estimates*).

The aims of the consultations were to exchange experiences of maternal mortality measurement and estimation and to increase understanding of the methodological and interpretation issues involved. The consultations were also intended to add to participants' knowledge of different measurement approaches, as well as their limitations, and to identify the best ways of addressing the concerns of individual countries. The participants also discussed the approach proposed for developing 1995 estimates of maternal mortality which would use information provided by countries and model-based estimation.

In 1999, WHO, UNICEF and UNFPA initiated the process of developing a new set of maternal mortality estimates pertaining to the year 1995. Provisional calculations became available towards the end of the year and suggested, for 1995, a total number of maternal deaths of about 510 000. Checking of the data is in progress and the complete set of estimates, including the figures for individual countries, are expected to be released by the three agencies in 2000.

Process indicators for monitoring progress in maternal mortality reduction

Given the difficulty inherent in accurately measuring maternal mortality, intermediary or process or proxy indicators are needed for regular monitoring of progress. A good process indicator is one that is closely correlated with the outcome of interest, in this case, maternal mortality, but that is simpler to measure on a regular basis. Process indicators have a number of advantages over outcome indicators. They are generally easier and cheaper to collect and are more sensitive to change, and are thus very useful for regular and short-term monitoring of progress.

A number of process indicators have been proposed for monitoring progress towards the reduction of maternal mortality. Some of these are

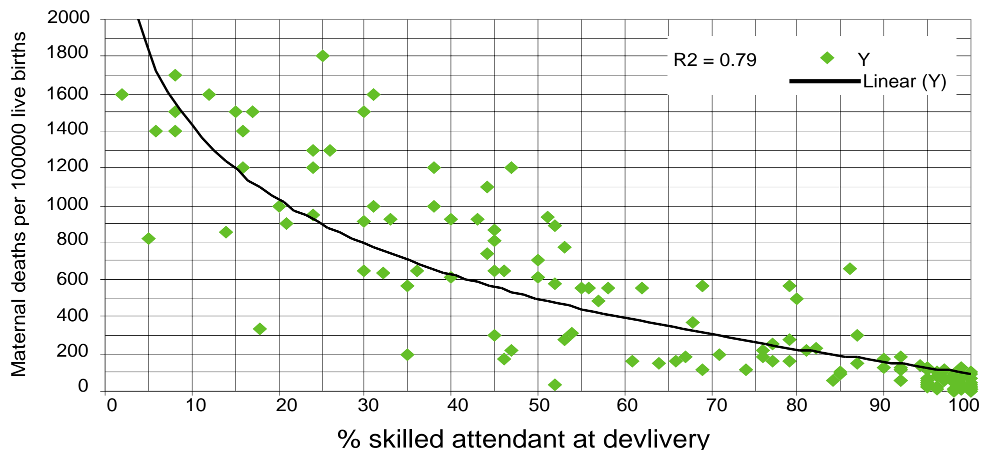
relatively new and the experience in using them for regular monitoring remains fragmentary. By contrast, there is already available a good deal of experience with one process indicator, namely, the percentage of all births attended by skilled health personnel. This indicator has a number of advantages:

- it is highly correlated with reduced maternal mortality;
- it is readily measurable using survey techniques;
- data are widely available up to, and including, 1998;
- it meets the criteria agreed at interagency meetings of being ethical, useful, scientifically robust, representative, understandable and accessible.

While it is not possible to demonstrate a clear causative link between the use of skilled birth attendants and reduced maternal mortality, there is compelling ecological evidence in favour of a strong association between the two. Historical evidence from countries such as Japan and Sweden has shown that falls in maternal mortality were achieved even before the advent of modern obstetrics and the associated surgical techniques and therapies such as safe blood transfusion and antibiotics. The most significant factor appears to have been the appropriate management of labour by professional midwives. There is also good clinical evidence that such an intervention is likely to be effective both in reducing the incidence of complications and in reducing case-fatality if and when complications occur. The mere presence of a skilled health care worker is not by itself sufficient, however. Rather, what matters is that she or he has the back-up and support of a functioning referral system able to take charge of obstetric emergencies and serious complications.

WHO and UNICEF have monitored several indicators of coverage of maternity care (use of prenatal care, institutional deliveries, and skilled attendant at delivery) for many years in the context of monitoring progress towards Health For All and the World Summit for Children. In recent years, national estimates have generally been derived from household surveys such as the Demographic and Health Surveys (DHS) and equivalents (PAPCHILD). Surveys such as these have the advantage of providing a standardized methodology and sam-

FIGURE 2. THE RELATIONSHIP BETWEEN SKILLED ATTENDANT AT DELIVERY AND MATERNAL MORTALITY IN DEVELOPING COUNTRIES



pling framework along with strict criteria regarding the maintenance of data quality. Currently, globally, only around 57% of all births are assisted by a skilled birth attendant.

IN-DEPTH INVESTIGATION OF MATERNAL DEATHS

Neither process nor outcome indicators can, by themselves, furnish all the information needed by health planners and managers for programme planning. In-depth reviews of maternal deaths can provide a better understanding of the many interacting factors influencing health-seeking behaviour and the barriers to good-quality health care. An important advantage of in-depth investigation of maternal deaths is that it can be used in an action-oriented way to diagnose the nature of the problems, identify feasible interventions, and assess the extent to which they are having the desired impact.

TABLE 1. NUMBER AND PERCENTAGE OF PREGNANT WOMEN ATTENDED BY SKILLED ATTENDANTS AT DELIVERY IN DIFFERENT REGIONS OF THE WORLD

	Estimated % and number of pregnant women with skilled attendant at delivery	
	%	1000s
World total	**57**	**80 690**
More developed regions	**99**	**14 160**
Less developed regions	**53**	**66 540**
Africa	**42**	**12 790**
Eastern Africa	34	3 570
Middle Africa	42	1 630
Northern Africa	63	3 080
Southern Africa	79	1 200
Western Africa	34	3 310
Asia*	**53**	**44 600**
Eastern Asia*	86	19 830
South-central Asia	34	14 320
South-east Asia	53	6 810
Western Asia	68	3 630
Europe	**98**	**8 170**
Latin America and the Caribbean	**75**	**9 030**
Caribbean	71	570
Central America	65	2 330
South America	80	6 130
North America	**99**	**4 350**
Oceania*	**52**	**120**

*Japan, Australia and New Zealand have been excluded from the regional estimates, but are included in the total for more developed regions.

In-depth investigative methods include, for example, confidential enquiry, criterion-based clinical audits, verbal autopsies, maternal death case reviews and investigations of severe maternal morbidity. These have in common the use of in-depth investigation of a number of maternal deaths (or other adverse outcomes of pregnancy such as perinatal deaths or severe maternal morbidities) but differ in terms of the level of the health care system at which they take place. The different approaches (see Table 2 below) to gathering in-depth information on maternal deaths vary according to the frequency of data collection (routinely or on an ad hoc basis) and the source of the data (health facility or in the community).

The confidential enquiry is undertaken at national level and involves the investigation of all maternal deaths and the identification of avoidable factors or substandard care. The criterion-based clinical audit, on the other hand, is an ongoing process that generally takes place at the level of an individual health care facility. Its defining characteristic is that it involves comparing care actually provided at the facility with a locally defined standard with a view to improving quality of care. The maternal death case review also starts at the facility level but additionally includes investigating community factors associated with the case under review. The case review does not involve comparing the care given with some ideal standard. Verbal autopsies are used at the community level to determine causes of death and avoidable factors. Investigations of severe maternal morbidity are used in facilities where deaths are infrequent.

TABLE 2. TYPES OF INVESTIGATIVE METHODS OF MATERNAL DEATHS OR SEVERE MATERNAL MORBIDITY

		Audit	**Verbal autopsy**	**Case review**	**Confidential enquiry**
Data source	Interviews		X	X	
	Medical records	X		X	X
Place of death	Community		X		X
	Facility	X		X	X
Type of information	Medical	X	*	X	X
	Non medical		X	X	
Level of activity	National				X
	Facility	X		X	
	Community		X	X	
Ascertainment	Vital registration		X		X
	Facility registers	X		X	X
	Key informants		X		

* Medical certification of cause of death is not available although some medical records may be available if the woman visited a health care facility prior to her death.

In collaboration with experts from a variety of developing and developed countries, the Department is currently preparing for field-testing a guide on the various investigative methods described above. The aim of the guide is to provide health planners and managers and other health professionals with guidance on how to investigate maternal deaths and use the information to improve the quality of maternal health care and reduce maternal mortality and morbidity. The guide is meant to direct efforts towards finding out why the deaths happen. Understanding why maternal deaths are happening is the first step towards preventing such tragedies.

A NEW STRATEGY FOR REDUCING MATERNAL AND PERINATAL MORTALITY AND MORBIDITY: INTEGRATED MANAGEMENT OF PREGNANCY AND CHILDBIRTH

The Department's *Integrated Management of Pregnancy and Childbirth* (IMPAC) is an innovative and far-reaching strategy for reducing maternal and perinatal mortality and morbidity, and improving maternal and newborn health. IMPAC's approach is designed to apply evidence to support technical and clinical interventions. The overall aim of the strategy is to provide countries with a cohesive management plan to help local health systems, families and communities improve their practices and responses. It does so by: (i) setting norms and standards of care, (ii) helping countries evaluate health systems requirements and community practice, and (iii) providing an implementation strategy. Thus, IMPAC represents a key component of the Department's response to the call issued by the Special Session of the United Nations General Assembly at the ICPD+5 review, for WHO to take a leadership role in this area (Box 3).

Box 3

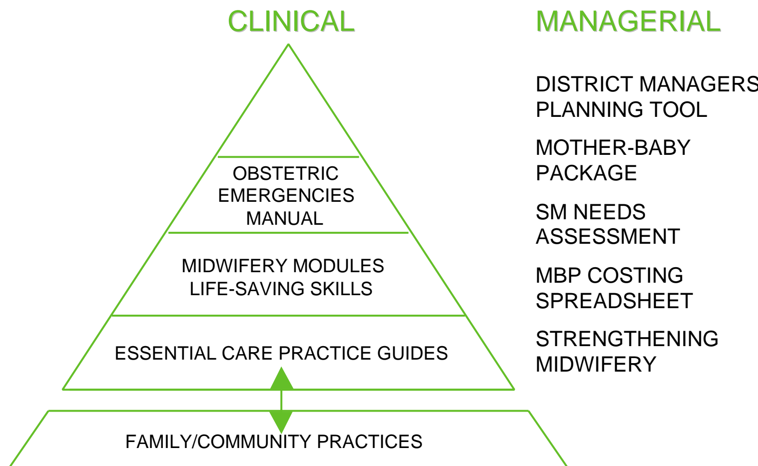
The World Health Organization in cooperation with other relevant United Nations bodies is urged to fulfil its leadership role within the United Nations system in assisting countries, in particular developing countries, to put in place standards for the care and treatment for women and girls that incorporate gender sensitive approaches and promote gender equality and equity in health-care delivery and to advise on functions that health facilities should perform to help guide the development of systems to reduce the risks associated with pregnancy, taking into consideration the level of development and the economic and social conditions of countries. At the same time, United Nations agencies, including the United Nations Population Fund and the United Nations Children's Fund, and multilateral development banks, such as the World Bank, should intensify their role in promoting, supporting, advocating and investing in action to improve maternal health.

Report of the Ad Hoc Committee of the Whole of the Twenty-first Special Session of the General Assembly. New York, United Nations (A/s-21/5/Add.1) (paragraph 66)

The IMPAC strategy focuses on three areas: (i) improving the skills of health workers through locally adapted guidelines and standards for the management of pregnancy and childbirth at different levels of the health system, and activities to promote their use; (ii) interventions to improve the overall response of health systems and the management of health services at the district level, including the provision of adequate staffing, logistics,

supplies and equipment; and
(iii) health education and health promotion activities to improve family and community practices and responses in relation to pregnancy and childbirth.

FIGURE 3. THE INTEGRATED MANAGEMENT OF PREGNANCY AND CHILDBIRTH



A central element of the IMPAC strategy is to develop standards and norms which will improve the skills of health workers. To achieve this objective, a series of practice guides are being prepared.

These guides have their origins in the *Mother-baby package: implementing safe motherhood in countries* launched by WHO in 1994 as one of the first attempts to bring together in one conceptual framework the necessary interventions to improve the quality of maternal and neonatal health care. The guides are a synthesis of the latest information on essential interventions that appear to have the greatest impact on reducing maternal and neonatal mortality and morbidity. They aim to provide a set of tools that will facilitate the implementation of the *Mother-baby package* from peripheral health units upwards, and are targeted at an audience with at least one year of pre-service training.

Essential care practice guide for pregnancy, childbirth and the newborn. This guide is a comprehensive manual defining optimum clinical practice. As a cornerstone of the Department's work on raising standards, it enables health care providers to make the most appropriate decisions for women during pregnancy, delivery and the postpartum period. It also covers counselling and advice, and linkages to other interventions at the first level of health care. Work on the *Essential care practice guide for pregnancy, childbirth and the newborn* has been progressing steadily since 1997. Task lists for essential care in health posts and health centres were developed in late 1997 and, throughout 1998-1999, the scientific evidence was reviewed in order to resolve technical questions in a number of critical areas such as prevention and treatment of malaria, treatment of intestinal parasites, screening and treatment of STIs and anaemia, and prevention and treatment of pre-eclampsia/eclampsia. Consecutive drafts of comprehensive charts and algorithms for the pregnancy, delivery, and postpregnancy components of the guide have been produced. The charts deal with obstetric first aid, antenatal care, postnatal care and postabortion care, as well as delivery and newborn care. Following external review scheduled for the first half of 2000, validation studies of the guide will commence.

Managing complications in pregnancy and childbirth: a guide for midwives and doctors. This manual has been developed for use by doctors, midwives and other senior health workers responsible for the inpatient care of pregnant women. Its approach is symptom-based and focuses on the emergency care of women and neonates suffering complications during pregnancy or delivery or in the immediate postpartum period. Thus, this manual is targeted for use at district hospitals, which are defined as facilities that can provide comprehensive obstetric care, including operative delivery and blood transfusion. Work on the manual began in 1997 and, since 1998, has involved close collaboration with the JHPIEGO Corporation, Washington DC (USA). A meeting hosted by JHPIEGO in 1997 reviewed the manual and also discussed the most effective ways to distribute it to health workers in district hospitals. An Internet working group was set up to provide feedback on changes suggested during this review meeting. The final stages of development will involve a further detailed external review and a substantial initial print run of copies in English. Plans include translation of the manual into other languages and the development of accompanying reference and training materials. *Managing complications in pregnancy and childbirth: a guide for midwives and doctors* will be actively disseminated through, among others, WHO Regional and Country Offices, professional organizations, United Nations agencies and NGOs with safe motherhood programmes in countries, as well as other partners in the Safe Motherhood Initiative.

Midwifery training modules on vacuum extraction and abortion care. The original midwifery training modules were published in 1996 and have since been widely used. The first volume focuses on safe motherhood in the community, and the others are practice-based volumes on eclampsia, haemorrhage, obstructed labour and sepsis. They were designed to expand and improve the life-saving capacity of midwives and doctors in the field when faced with obstetric complications. Access to Caesarean section is not universal and the problem of obstructed labour can often be handled effectively by vacuum extraction, a technique which is well within the competence of trained midwives. A procedural manual on vacuum extraction prepared by the Department is being externally reviewed before field-testing.

A brand new module, *Managing incomplete abortion,* together with its *Notes for students* are currently being field-tested in Kenya.

A package to improve health systems' responses to implementing the IMPAC norms is being developed simultaneously with the production of materials to improve family and community practices relating to pregnancy and childbirth.

The three-stage IMPAC strategy is designed to be adapted to local situations and to be implemented in countries by governments in collaboration with United Nations and bilateral agencies, professional bodies, NGOs, and other organizations within the context of prevailing needs and priorities. To facilitate this process, adaptation guides will be developed in the coming biennia.

IMPROVING THE QUALITY OF CARE DURING PREGNANCY, DELIVERY AND THE POSTPARTUM PERIOD

Evaluation of a new antenatal care programme

RHT contributed both technically and financially to a large trial being conducted by HRP to evaluate the effects of a new antenatal care programme on the health of mothers and neonates.

A total of 24 703 women presenting for antenatal care in Argentina, Cuba, Saudi Arabia and Thailand were randomly assigned to either a group receiving standard antenatal care or a group receiving the new antenatal care programme. For mothers, the outcomes include pre-eclampsia or eclampsia (convulsions) during pregnancy or within 24 hours of delivery; postpartum anaemia; and severe urinary tract infections. For neonates, the primary outcome is the rate of low birth weight (<2500 g).

Data obtained during the study were analysed in the Department during 1999 and several papers are being prepared for publication in 2000. An extensive dissemination effort is planned, including presentations at meetings and symposia, and through medical and non-medical publications.

Evidence on best practices for active management of the third stage of labour

Postpartum haemorrhage is one of the major causes of maternal mortality. Active management of the third stage of labour to reduce the risk of haemorrhage includes three components: routine administration of an oxytocic drug after the birth of the child, early clamping of the umbilical cord, and controlled cord traction. This has been proved effective in developed countries but the feasibility of using active management of the third stage of labour in resource-poor settings has not been fully investigated. Such a study is currently under way with the support of the Department. The project was initiated in 1999 in both a peripheral and a central maternity hospital in the Luanda province of Angola and it involves the use of oxytocin given by means of a single-use disposable syringe. After completion of the formal study, monitoring of the routine use of active management of the third stage of labour will be continued over a longer period using oxytocin in regular syringes.

A second study, coordinated by HRP, is investigating the relative effectiveness of oral doses of misoprostol compared to systemic oxytocin for the prevention of postpartum haemorrhage. Some 18 500 women were enrolled in the trial which commenced in 1997 and ended in 1999, and data analyses are under way in the Department. The first report will be available in 2000 and the misoprostol protocol has been provisionally approved for publication in *The lancet*. The results will influence recommendations on which drug to use for the active management of the third stage of labour.

Technical working group on postpartum care

The document, *Postpartum care of mother and newborn: a practical guide*, which was issued in 1998, reports the outcomes of a technical consultation on a full range of issues relevant to the postpar-

tum period for the mother and newborn. Taking as a starting point women's perceptions of their own needs during this period, the guide examines the major maternal and neonatal health challenges; nutrition and breastfeeding; birth spacing; immunization and HIV/AIDS. It makes a series of recommendations covering this crucial, yet under-researched and under-supported, period in the life of mothers and newborn children. The guide also includes a classification of common practices in the postpartum period, distinguishing between useful practices and those which are harmful, those which are frequently used inappropriately, and those for which insufficient evidence exists. The report has been widely disseminated in English and has been translated into French.

Standards and guidelines for the care of neonates

In 1998, a systematic review was started with the objective of gathering evidence for the identification, assessment and management of newborn illness after birth. The results of this work are being used to develop standards of newborn care, guidelines and case-management charts for birth attendants at the primary health care level.

A multicentre study was completed on the feasibility of newborn resuscitation using a simple mouth-to-mouth device at the most peripheral level of the health care system. Results from Bangladesh, India, Indonesia and the Islamic Republic of Iran showed that the device was safe for use with the training and supervision provided in the study. The findings of the study contributed to the development of the document, *Basic newborn resuscitation: a practical guide*, which was issued in 1998.

A systematic review of available evidence on best care of the umbilical cord was published in *The Cochrane Library* (Zupan J. Garner P. Topical umbilical cord care at birth. The Cochrane Pregnancy and Childbirth Group. *Cochrane database of systematic reviews. Issue 2, 2000).* The findings contributed to the document *Care of the umbilical cord: a review of the evidence* issued by the Department in 1998.

Caesarean section

There is a growing demand for data on Caesarean section and guidance on appropriate levels of this and other operative delivery interventions. In response to this demand, RHT has assembled national data for an initial review and developed a structure for a potential database on Caesarean section.

Concurrently, HRP has been providing technical support to a large multinational trial in Latin America, funded by the European Union, to test the effectiveness of mandatory second opinion prior to performing a Caesarean section in lowering the (mis)use of this surgical intervention. Data from this trial and from other large studies coordinated by HRP will allow new estimates to be made of the ranges of Caesarean section rates among different populations.

Guidelines on maternal health care for adolescents

The paper entitled *Adolescent pregnancy; health problem and health care – a review of the literature with emphasis on the tailoring*

of clinical management practices to meet the special needs of adolescents was developed by WHO's former Unit on Adolescent Health and Development with input from RHT. It is currently undergoing external review. Based on an exhaustive review of the literature and consultation with WHO Regions and country experts this thoroughly documented text explores the many aspects of health care provision for childbearing adolescents. With its analysis of the challenges of maternal health care provision for very young women and girls and actual examples of care provision for them, the text fills a gap in the literature on a subject that has received insufficient attention.

NEW TOOLS FOR IMPROVING MANAGEMENT

Costing spreadsheet for the Mother-baby package

The *Mother-baby package: implementing safe motherhood in countries*, which was published in 1994, brought together the main clinical interventions necessary to make the pregnancy, delivery, postpartum and newborn periods safer. The package is used widely to revitalize activities in the area of maternal and newborn health. WHO has developed the *Mother-baby package costing spreadsheet* to assist in estimating the cost of implementing at district level the interventions described in the package.

The model includes a standard set of assumptions that represent a hypothetical rural district population. For a rough estimate of cost based on "standard" treatment, the base inputs can be used with minimal modification or adaptation. For a more rigorous analysis that better reflects the local situation, the inputs can be more critically examined and modified. The model can be used to estimate the total programme cost for the district under study or the incremental cost of upgrading the existing district health system. The model provides estimates of total per capita and per birth costs for the district. The estimates are broken down by input (drugs, vaccines, salaries, infrastructure, etc.), by intervention (haemorrhage, eclampsia, sepsis, etc.), and by service location (hospital, health centre, health post).

FIGURE 4. TOTAL ANNUAL COST, BY INPUT

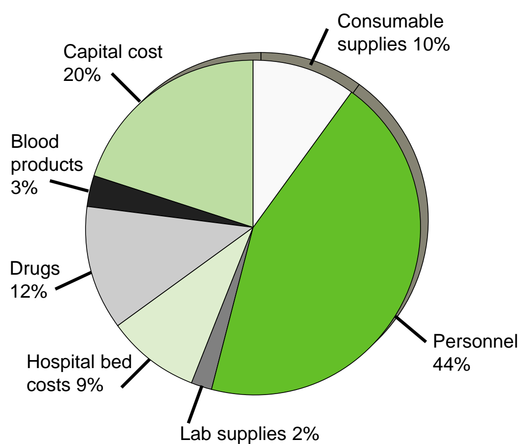
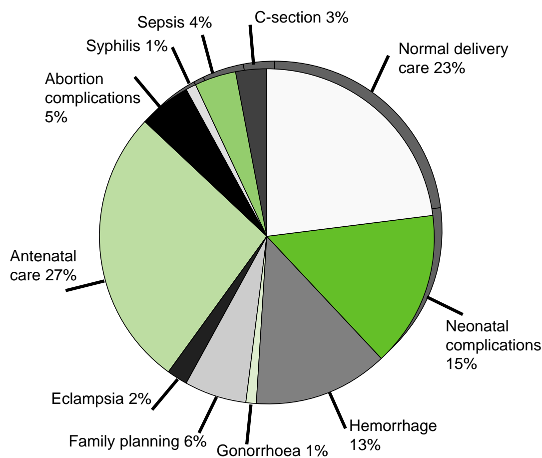


FIGURE 5. TOTAL ANNUAL COST, BY INTERVENTION



The spreadsheet and accompanying *User guide* are designed for use by a local health economist with minimal external support. The spreadsheet may also be of interest to potential programme donors or other interested parties.

In 1998, the development of this important tool was brought closer to completion. An initial field test was successfully completed in Bolivia and a second and final test was carried out in Uganda. The field test in Bolivia confirmed that it is feasible to apply the model in a short time period and that its application provides useful information for safe motherhood planners and managers. The results of this study were published in Spanish.

In Uganda, the national authorities have decided to develop a programme to intensify national efforts to reduce maternal mortality. Part of this effort included applying the spreadsheet in two districts of the country. As in Bolivia, the field test in Uganda was supported by WHO staff and consultants who, in addition to assisting the national authorities, also assessed the global spreadsheet tool and made recommendations for refinement. Subsequently, the WHO team worked with a team from USAID Partnerships for Health Reform to validate the results of the Uganda application.

In late 1998, the model was revised and finalized. It is expected to be published in 2000. The electronic version of this document is already available on the Department's Internet web site.

PLANNING GUIDANCE FOR DISTRICT MANAGERS

Uganda has also provided the setting for the second field test of the District-Level Safe Motherhood Planning Workshop. Health services at district level need to develop detailed plans of work on safe motherhood that implement national level policy and planning, particularly in the context of health sector reform. To assist countries in this process, RHT has developed generic workshop materials which deal with the improvement of delivery care and the provision of life-saving skills at health centres that have been upgraded. The aim has been to decentralize, as far as possible, essential obstetric care functions. After the six-day workshop in Uganda, modifications were made to the materials in light of the lessons learned. Greater emphasis was put on empowering workshop facilitators through more detailed examples and case studies in the facilitator guide. Following a further field test in Myanmar, held in 1999, the materials are being finalized. The basic planning and managerial principles used in this workshop can be applied to supporting the implementation of various guidelines currently being developed by the Department such as *Managing complications in pregnancy and childbirth: a guide for midwives and doctors* and the *Essential care practice guide for pregnancy, childbirth and the newborn.*

INTERVENTIONS TO REDUCE MOTHER-TO-CHILD TRANSMISSION OF HIV

Most of the 33 million people living with HIV/AIDS are in the developing world, where HIV infection in preg-

nancy has become the most common complication of pregnancy in some countries. More than 70% of all HIV infections are a result of heterosexual transmission and over 90% of infections in children result from mother-to-child transmission (MTCT). Almost 600 000 children are infected by mother-to-child transmission of HIV annually, over 1600 each day. In parts of southern Africa, the prevalence of HIV in pregnant omen is over 30%, while rates of new infections are rising in south-east Asia and the proportion of infections occurring in women is increasing in many developing countries.

Reported rates of transmission of HIV from mother to child range from 15% to over 40% in the absence of antiretroviral treatment and vary across countries. Transmission can occur in utero, during labour and delivery or postpartum through breast milk. Most of the transmission is thought to occur in late pregnancy and during labour. Factors associated with an increase in the risk of transmission include viral factors, such as viral load, genotype and phenotype, strain diversity and viral resistance; maternal factors, including clinical and immunological status, nutritional status and behavioural factors such as drug use and sexual practice; obstetric factors such as duration of ruptured membranes, mode of delivery and intrapartum haemorrhage; and infant factors, predominantly related to the increased risk of transmission through breastfeeding.

Since 1994, when an intensive prenatal, intrapartum and neonatal zidovudine (ZDV) regimen was first shown to be effective for reducing the risk of perinatal HIV transmission, this regimen has sharply reduced the risks of transmission in the USA and Europe (to between 5 and 10%) and the number of perinatally acquired HIV infections in developed countries has dropped dramatically. However, since fewer than 50% of women in developing countries deliver in hospital and even fewer attend regularly for antenatal care, these regimens are of limited applicability in developing countries where over 90% of paediatric infections occur. Also, the cost of these regimens is prohibitive in almost all developing countries (for instance, the cost per mother-child pair treated is currently estimated to be around US$160 for the "long" antiretroviral regimen).

Several clinical trials have been conducted to assess the efficacy of shorter and easier to deliver antiretroviral regimens. Results from the first of these studies carried out in Bangkok (Thailand) demonstrated that a short course of ZDV used from 36 weeks' gestation until delivery was well tolerated, safe and reduced the risk of transmission from 19% to 9% in non-breastfed children. Following release of preliminary results from this study, recommendations on the use of such a short ZDV regimen were published in the *Weekly epidemiological record*, 9 October 1998, Volume 73, No. 41 (pp 313-320).

Since then, results from a number of other trials conducted in predominantly breastfeeding African populations have become available. Among these, the data on the reduction of MTCT with a single dose of nevirapine given to the mother as soon a labour started and a single dose to the child within 72 hours of birth have attracted considerable attention because the treatment is cheap (around US$4) and gives the impression of being programmatically easy to implement. However, concern has arisen

about the reported emergence of a strain of the virus resistant to this drug.

Throughout the biennium, the Department has participated in, or organised, a number of meetings at WHO dealing with different aspects of the various antiretroviral regimens. These meetings have addressed issues such as programme implementation of MTCT, HIV and infant feeding, and the potential benefits of nevirapine. A comprehensive review of HIV and maternal care was completed and published in the Department's Occasional Paper Series with the title *HIV in pregnancy: a review*. The paper provides an up-to-date review of vertical transmission of HIV and the factors that influence it, either positively or negatively.

Together with UNICEF, UNFPA and UNAIDS, WHO also launched, in 1998, a public health initiative to reduce MTCT of HIV with initial funding to UNICEF by the United Nations Foundation, Inc. The initiative comprises a series of pilot projects in 10 sub-Saharan African countries to demonstrate the technical feasibility of interventions to prevent MTCT in resource-constrained settings. Within the framework of this interagency partnership, WHO:

- provides technical support to research, local capacity building, and monitoring and evaluation of MTCT interventions;
- develops technical norms and standards;
- promotes the integration of interventions within health systems;
- updates drug policies and strategies;
- strengthens global surveillance.

Contributions are being made by the Department to all of these areas, but particularly to the first four.

SAFE MOTHERHOOD

To strengthen its global advocacy for safe motherhood, WHO has long acknowledged the gains that result from effective collaboration with appropriate NGOs, particularly professional bodies and other partners active in the field. Thus, the Department maintains a close working relationship with the International Confederation of Midwives (ICM), the International Federation of Gynecology and Obstetrics (FIGO) and the Inter-Agency Group for Safe Motherhood, with the aim of strengthening maternal and neonatal care provision worldwide.

Highlights of the biennium have included: the workshop on Frontiers of midwifery – STDs/HIV/AIDS, which was organized with ICM (with contributions also from UNAIDS and UNICEF) prior to ICM's Triennial Congress in Manila (the Philippines) in 1999; and the participation in ICM's first French-speaking midwifery congress for safe motherhood held in Montpellier (France) in December 1998. The congress included a workshop for midwives from 14 French-speaking developing countries on strengthening research capacity in support of safe motherhood. It resulted in the first step toward the creation of a network for nurturing research capacity among French-speaking midwives.

Within the WHO/FIGO Alliance for Women's Health, preparations were started for a workshop on emergency obstetric care which will precede FIGO's triennial congress in Washing-

ton DC (USA) in August 2000, and include reports from the countries participating in a FIGO-led initiative in the area of safe motherhood, known as the Save the Mothers Fund.

Work was also undertaken during the biennium in preparing for a Technical Consultation on Skilled Attendance at Delivery which the Department will host in April 2000 on behalf of the Inter-Agency Group for Safe Motherhood of which WHO is the current Chair.

The safe motherhood newsletter

As part of its contribution to the Safe Motherhood Initiative, WHO began publishing in 1989 the newsletter *Safe motherhood. A newsletter of worldwide activity.* The newsletter provides a news update and offers an opportunity to exchange information on activities and programmes and to describe results and developments in research. It is printed and disseminated in English and French from WHO Headquarters, in Arabic from the WHO Eastern Mediterranean Regional Office, and in Chinese through the WHO Regional Office for the Western Pacific. During 1998-1999, three issues of the newsletter were published with special feature articles focusing on the 10 areas for action identified as key to making pregnancy safe, the health status of mothers and infants in eastern Europe and Central Asia, and the tragedy of vesico-vaginal fistula.

Reduction of maternal mortality

During 1998, UNFPA, UNICEF, the World Bank and WHO developed a joint statement on the reduction of maternal mortality. The statement builds on the lessons learned during the first ten years of the Safe Motherhood Initiative (1987-1997) as identified during the Safe Motherhood Technical Consultation held in Colombo (Sri Lanka) in 1997. The statement *(Reduction of maternal mortality: a joint WHO/UNFPA/UNICEF/ World Bank statement)* was published in 1999 and was launched at a press conference in New York (NY, USA) attended by the Director-General of WHO, the Executive Director of UNICEF, the Executive Director of UNFPA and a senior representative of the World Bank.

The key messages of the joint statement include the policy and legislative actions essential to the reduction of maternal mortality as well as the social and community interventions that must accompany any actions by the health sector. Safe motherhood is considered as a human right, underpinned by laws that support effective action to increase women's access to appropriate services. Families and communities have a major role to play in making that access possible and in protecting women's health through improved nutrition and the prevention of unwanted pregnancy. The health sector is encouraged to make good-quality services, including essential care for obstetric complications, available to all women during pregnancy and childbirth, with particular emphasis on ensuring that a skilled attendant is present at every birth. The final message underlines the importance of monitoring progress through the use of appropriate indicators and analysis of each maternal death to identify contributory factors that could have been mitigated or avoided.

The statement is addressed to governments; policy-makers in social, eco-

nomic, and health fields; managers of maternal and child health and nutrition programmes; NGOs and community members. It is intended to help them in decision-making at national and local levels, in adapting interventions to the needs of a specific country or situation, and in mobilizing and making the most effective use of resources to ensure safer pregnancy and childbirth.

World health day

As a key element in the Department's strategy to increase public awareness of reproductive health issues, World Health Day on 7 April 1998 had the theme of safe motherhood. As in previous years, the day was marked by publicity and events all around the world. In Geneva, WHO Headquarters hosted an exhibition of art on the theme of safe motherhood with paintings and sculptures from countries on all continents. WHO's Regional Offices organized their own activities and publicity campaigns. Local groups in many cities, towns and villages also organized events on this theme.

An information pack was prepared and widely disseminated. It contained two posters, one of which was a statistical wall chart with data on maternal and perinatal mortality and maternal health care and carrying the World Health Day message "Pregnancy is special – let's make it safe". The information pack also contained 11 fact sheets, each one focused on one of the key messages that emerged from the international Technical Consultation on Safe Motherhood that took place in Colombo (Sri Lanka) in October 1997. Three video clips were prepared and distributed to television networks worldwide and RHT staff gave a number of radio, newspaper and magazine interviews.

Making pregnancy safer initiative

Making Pregnancy Safer is a new initiative launched by WHO to highlight the O¦1rganization's commitment to reducing the global burden of unnecessary deaths, illness and disability associated with pregnancy, childbirth and the neonatal period. Making Pregnancy Safer describes the contribution WHO intends to make during the next few years to the worldwide Safe Motherhood Initiative movement.

WHO's contribution will focus on what the health sector, working in collaboration with other partners and sectors, can do to ensure that all pregnancies are wanted, that women can go safely through pregnancy and childbirth, and that infants are born alive and healthy. Key messages of Making Pregnancy Safer are:

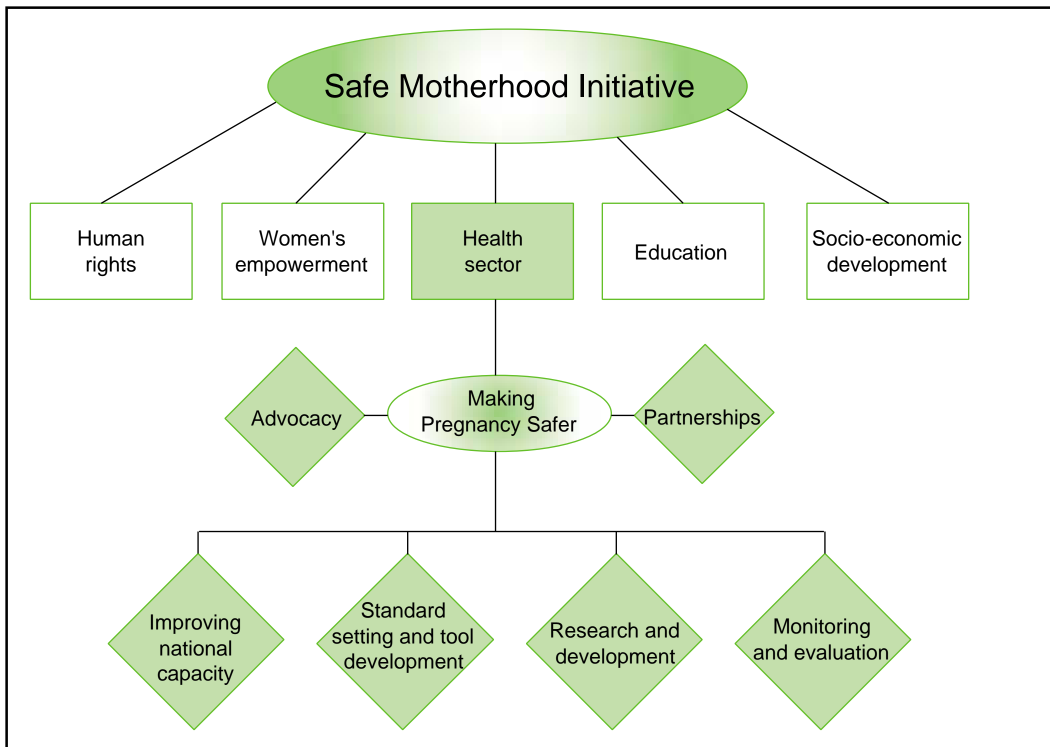
- Every pregnancy should be wanted.
- All pregnant women and their infants should be able to access skilled care.
- All women should be able to reach a functioning health facility to obtain appropriate care for themselves or their neonates when complications arise during pregnancy, delivery or the postpartum period.

The Making Pregnancy Safer initiative proposes to contribute to the efforts countries are making to achieve the global goals in maternal and infant mortality reduction. These contributions could include:

- promoting partnerships at global, regional and national levels among United Nations agencies, bilateral and lending agencies, the public and private sectors, NGOs, collaborating centres, and institutions;
- advocating support at global, regional and country levels and among interested parties, to promote consistent, ethical and evidence-based policies and advocacy positions – to keep safe motherhood high on the international health and development agenda;
- providing technical and policy support and increasing government capacity to plan, design and implement effectively functioning health systems that provide affordable and accessible quality services;
- establishing norms and standards and developing tools, technologies and interventions for the health care of mothers and neonates, and supporting countries and partners in their adaptation for local use and special circumstances (such as complex emergencies) with a focus on highly vulnerable populations;
- promoting, coordinating and disseminating research, including on health systems performance and ways of averting maternal deaths and morbidity in mothers and neonates;
- monitoring and evaluating implementation of the work supported by the Making Pregnancy Safer initiative, assessing maternal and neonatal health programmes generally, and providing global monitoring of maternal and perinatal health outcomes.

Reference to the Making Pregnancy Safer initiative was first made by WHO's Director-General while attending a Maternal Mortality Advocacy Meeting in Maputo (Mozambique) in April 1999. Following formal approval

FIGURE 6. THE MAKING PREGNANCY SAFER INITIATIVE



by WHO's Cabinet shortly thereafter, some 15 Departments at WHO Headquarters together with their counterparts in WHO Regional Offices collaborated in the formulation of the goals, objectives and strategies of the initiative and in the development of a plan of work for the biennium 2000-2001.

Wide-ranging consultations with sister United Nations agencies and other key partners were held to review the initiative's proposed orientation and modus operandi and solicit input in the refinement of objectives and strategies. Together with the WHO Regional Offices a selected number of countries were approached about their potential interest in participation and the first ten were selected for the first phase of the initiative due to start in the biennium 2000-2001. These countries are: Ethiopia, Mauritania, Mozambique, Nigeria and Uganda in the African region, Sudan in the Eastern Mediterranean region, Indonesia in the South-East Asia region, the Lao People's Democratic Republic in the Western Pacific region, Bolivia in the Americas region, and the Republic of Moldova in the European region.

CHAPTER 3

Fertility regulation – improving standards, choices and care

Family planning programmes face the increasing challenge of finding better ways to deliver services to the millions of people who would use family planning if they had access to it. Over the last thirty years, use of contraceptives has increased worldwide from less than 9% of couples in the 1960s to nearly 60% today. However, in the developing world as a whole, at least 100 million married couples have an unmet family planning need, either for limiting or spacing births. Outside sub-Saharan Africa, most women with an unmet need do not want to have any more children, whereas in sub-Saharan Africa the need is mostly for birth spacing.

Another telling indicator of the challenge facing family planning programmes – an indicator sometimes described as "the ultimate unmet need in family planning" – is the estimated 45 million women who resort to induced abortion each year. What is more, in 1990, it was considered that about 300 million couples, not included in the estimate of unmet need, were using methods with which they were dissatisfied or which they considered unreliable. As a consequence, it is estimated that 8-30 million unintended pregnancies occur each year among people practising contraception.

If fertility regulation programmes could meet all unmet needs for family planning among sexually active people, irrespective of marital status, about half a billion more women and men would be able to achieve their reproductive intentions, effectively and safely.

ADDRESSING MYTHS AND MISCONCEPTIONS

While some of the more common myths and misconceptions surrounding family planning and contraceptive use are already being addressed by various organizations, many remain among health workers and clients that have not been systematically reviewed and answered. These misconceptions contribute to the cultural, behavioural and information barriers that prevent family planning services from providing accurate information and appropriate levels of quality care. They also prohibit users from seeking care when it is most needed.

To address this issue, the Department, in collaboration with the International Planned Parenthood Federation (IPPF), London (United Kingdom) has approached 70 family planning associations, WHO Country Representatives, institutes and NGOs to complete an international survey to determine the common myths and misconceptions prevalent in each country. The response rate has been very high and the data are currently being analysed. A systematic review will be undertaken of the latest research findings and principles of best practice to provide evidence-based counter arguments to correct the reported myths and misconceptions, and a technical consultation will be convened in 2000 to review the collected evidence and reach a consensus on areas where no definitive evidence exists.

The Department has also contributed to an information package *Contraceptive safety: rumours and realities*, produced by the Population Reference Bureau, Washington DC (USA). In addition, a manual will be developed to address the information and training needs of health care providers, enabling them to counteract common misconceptions. It is anticipated that this manual will be published by the end of 2000.

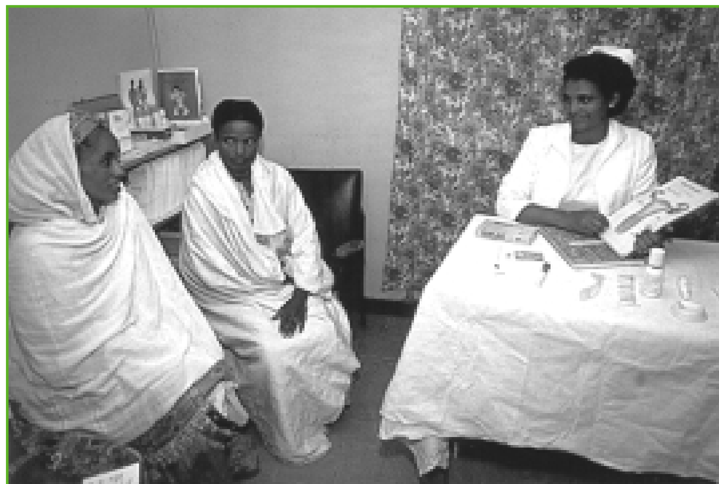
EVIDENCE-BASED NORMS AND GUIDELINES

During the biennium, the work carried out by the Department on the development of norms and guidelines relevant to fertility regulation has focused on: (i) increasing information about contraceptive options; (ii) developing and updating technical guidelines and training materials on family planning methods; (iii) developing and updating technical guidelines and training materials on family planning services; and (iv) developing a collaborative process to support effective dissemination, adaptation and utilization of the norms, standards and guidelines generated by the Department. The last of these activities is being carried out as an interagency exercise and aims to structure the way in which technical documents are distributed. Through this work it is hoped that countries will be better able to use these documents to improve access to family planning and reproductive health services as well as the quality of care provided by these services. This activity also provides an important link between the Department's strategic operational objectives of developing norms and tools and its technical support to countries.

Development, dissemination and updating of contraceptive eligibility criteria

In order to assist countries in updating their medical guidelines on family planning, two scientific expert group

meetings were convened in March 1994 and May 1995, bringing together scientific experts in family planning from all regions of the world as well as women's health advocates and repre-



sentatives of major organizations/ agencies active in the area of family planning research and programme development. The objectives of the meetings were twofold, namely:

- to review the data from clinical and epidemiological research on contraceptive methods over the last decade which pertain to the study of medical criteria used in advising and prescribing various contraceptive methods; and
- on the basis of this review, to recommend medical eligibility criteria for different contraceptive methods that would ensure that men and women are protected from the potential adverse effects of contraceptives by an adequate margin of safety while at the same time are not unduly denied a choice of suitable methods.

The resulting document, *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use*, was published in 1996 and widely distributed to policy-makers, family planning programme managers and the scientific community. It aims at providing guidance to national family planning/reproductive health programmes in the preparation and revision of national medical and service provision guidelines based on new recommendations for initiating and continuing the use of each contraceptive method. French, Spanish, Russian, Chinese, Vietnamese and Bahasa Indonesian versions of the report were printed in the 1998-1999 biennium.

In an effort to strengthen further the interagency collaborative work undertaken for revising the medical eligibility criteria for contraceptive use, active support has been given to follow-up work on programme guidelines that a number of agencies initiated in 1998-1999. This has helped to maintain WHO's continued coordinating role in this initiative by ensuring that the programmatic and service delivery guidance being provided to countries by various groups is consistent and reflects adequately the international consensus on medical issues. Examples of this support are as follows.

- Assistance, with either technical review or development of materials for programme managers and service providers (based on WHO recommendations), was given to IPPF, London (United Kingdom); the Johns Hopkins University Center for Communications Programs (JHUCCP), Baltimore (MD, USA); the Program for International Training in Health (INTRAH), Chapel Hill (NC, USA) Family Health International (FHI), Research Triangle Park, (NC, USA); and the Program for Appropriate Technology in Health (PATH), Seattle, (WA, USA). This resulted in the following four joint documents:

- *Medical and service delivery guidelines for family planning*
- *The essentials of contraceptive technology*
- *Recommendations for updating selected practices in contraceptive use, Volumes I and II*
- *Family planing methods: new guidance, a special issue of Population Reports, Series J, Number 44.*

- Technical support was also provided by the Department to assist regional teams and countries in using the recommendations through the presentation and introduction of the document to relevant staff in the WHO African, American, South-East Asian and Western Pacific regions, the Team Leaders of UNFPA Country Support Teams (CSTs), and their reproductive health specialists, departments of health, NGOs, and country project staff in India, the Philippines, South Africa, Turkmenistan and Zambia.
- Intensive support was provided to the Ministry of Health of South Africa in initiating the process of building a national consensus and developing national policy and service delivery guidelines for family planning in line with the latest WHO recommendations.
- Discussions were held with relevant experts to review and carry out the necessary revisions of the medical eligibility criteria. Preparations were initiated for an expert committee meeting to be convened on 8-10 March 2000 to revise the document *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use* in the light of new scientific evidence.

Practical materials for family planning service providers

In 1998, preparatory work was carried out on the translation of WHO's recommendations for medical eligibility criteria for contraceptive use into practical materials for family planning service providers. A booklet entitled *WHO call to action: standardizing contraceptive eligibility criteria* is being produced as a companion volume to *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use*. This booklet is being prepared to provide suggestions to decision-makers for updating national family planning counselling and prescription practices. In particular, it discusses the programmatic implications of the new WHO criteria in terms of policy modification, service delivery, personnel training, logistics and evaluation. It also outlines a step-by-step process that programme managers can follow to adapt the criteria to the often diverse situations in which contraceptive services are provided.

A further document, *Improving access to quality care in family planning: a guide for providers*, is also under development and will provide method-by-method summaries of the service delivery implications of the WHO medical eligibility criteria. This guide will deal with all the widely used modern and traditional contraceptive methods and will provide synthesized information to providers on linked reproductive health issues and how they can be addressed. These issues include: clients' rights, effective counselling, prevention of STIs, including HIV/AIDS, gender sensitivity and encouraging men's involvement in sharing responsibility for reproductive health, and domestic violence.

WHO, IPPF, AVSC International (New York, NY, USA), PATH and The Population Council (New York, NY, USA) have initiated discussions to develop and produce a joint publication for supervisors, managers and trainers to improve the quality of family planning services. Work on the development of a *Guide to facilitative supervision* and a facilitators' guide has begun. The agencies will then develop a strategy to introduce these materials and monitor the impact of this strategy. This interagency collaboration will help countries maximize the use of scarce resources as it will avoid duplication of effort and support the bringing together of technical and programmatic guidance. Collaboration also continued with FHI to evaluate the impact of selected guidelines produced by the Department on the quality of service delivery.

Technical and managerial guidelines on contraceptive methods

To ensure that family planning programmes have access to the latest information, the Department issues technical and managerial guidelines which translate the results of clinical and operational research in family planning into practical guidance. The publications aim to help improve contraceptive safety, choice and quality, and are intended for use by, in particular, national and district-level family planning programme managers or administrators. In 1997, work on two sets of guidelines was given priority because of the urgent need to update the guidance provided to countries on two of the most widely used contraceptive methods, namely, intrauterine devices (IUDs) and oral contraceptives.

The publication, *Intrauterine devices: guidelines for programme managers*, was finalized in line with WHO's new recommendations for medical screening and counselling for IUD use and was printed in English in 1997. This book was widely disseminated through WHO and UNFPA channels, and French and Spanish versions of the document were produced during the course of the biennium 1998-1999.

Work to finalize the document provisionally entitled *Technical and managerial guidelines on oral contraceptives* was completed during 1999. The document now incorporates the latest data on oral contraceptive use and the risk of myocardial infarction. It will be published during 2000.

In 1997, a document entitled *Emergency contraception: a guide for service delivery* was prepared for service providers, policymakers and programme managers as part of an effort to increase awareness and disseminate accurate information about the emergency use of combined oral contraceptives and copper-releasing IUDs. The English language version of the guide was published in 1998 and the French translation in 1999; a Spanish translation is being finalized. The guide gives complete technical information for service providers on the two methods of emergency contraception. It also covers issues of safety, efficacy, medical eligibility, counselling and screening, and side-effects and their management. For decision-makers and programme managers, the document contains a discussion of the role of emergency contraception in family planning/reproductive health programmes, and it suggests actions to dispel misunderstanding about the mode of action of the methods. Finally, information is provided on possible approaches to introducing

emergency contraception in various programmes and services.

Development of simple information/education materials on contraceptive methods

Simplified companion volumes to each of the technical and managerial guidelines have been developed, addressing the needs of various levels of providers in a user-friendly format and presentation. They aim at improving the counselling that health-care providers offer by increasing their knowledge of the method, addressing concerns about safety and efficacy, and showing the benefits and disadvantages of each method. These materials also include an assessment of the efficacy of each method in providing adequate protection against STIs, including HIV, and the method's suitability for women at various stages in their reproductive lives.

Text for a brochure entitled *Oral contraceptives: what health workers need to know* was prepared in 1999. This brochure, which will be issued in 2000, will be the latest in a series of brochures of this type. The two most recently preceding it, *Injectable contraceptives: what health workers need to know* and *Intrauterine devices: what health workers need to know*, were published in 1997, with French versions prepared in 1999.

In addition, French and Spanish translations of the following brochures were completed in 1998-1999:

- *Health benefits of family planning*
- *Providing an appropriate contraceptive method choice*
- *Vasectomy: what health workers need to know*
- *Female sterilization: what health workers need to know*

The essential care practice guide for family planning

The *Essential care practice guide for pregnancy, childbirth and the newborn*, described in the previous chapter, includes guidance on family planning as one of the essential components of maternal health. The information is intended to assist health care providers to make the appropriate decisions based on individual need and eligibility considerations. Separate sections provide guidance on counselling of breastfeeding and non-breastfeeding women, adolescents and women who had an abortion.

The experience gained in the development of the *Essential care practice guide for pregnancy, childbirth and the newborn* is being used to develop a comparable document entitled *Essential care practice guide for family planning*. The process of compiling this guide was initiated during the biennium and discussions were held with FHI, John Hopkins University (Baltimore, MD, USA), PATH, The Population Council, IPPF and others. An informal meeting of potential collaborating agencies took place in 1999 and publication of the guide is expected in 2001.

Technical guidance on contraception and HIV

As part of the ongoing debate on whether steroid hormone contraceptives affect the risk of HIV transmission or the progression of AIDS, a review of all information and study results on HIV and contraceptive methods was prepared to assist in developing technical guidelines in this

area. The paper is undergoing review and will be used as background information in the planned revision of the document *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use*. Meanwhile, in response to country needs and the interest of donors, a handbook is being produced on integrated STI and HIV prevention and care for family planning services intended for programme managers at national and district levels, responsible for the planning and implementation of reproductive health care programmes. A wide consultative process was used to produce the initial draft of this document, which was subsequently reviewed both internally and externally. An expert panel was also involved in distilling principles of best practice into specific guidance on the technical and managerial issues involved in the partial or full integration of these various programmes.

THE MALE LATEX CONDOM[2]

Guidance materials on condom programming

During 1998-1999, as part of the joint programme of work, UNAIDS and WHO, in collaboration with the private sector and with scientific, technical and programmatic experts, published and disseminated a package of materials designed to summarize the latest scientific evidence and principles of best practice in the key areas of condom programming.

This compendium of materials is entitled *The male latex condom* and contains the following publications:

Specification and guidelines for condom procurement focuses primarily on procurement issues related to condom quality, since these differ significantly from those used to procure other health products.

Ten *Condom programming fact sheets* are designed to review the latest scientific evidence and best practices regarding key elements of condom programming. The fact sheets can be used for generating a higher level of confidence in promoting condom use, improving levels of competence in major areas of condom programming, improving the quality of ongoing condom programmes, and increasing public awareness of the effectiveness of condoms to prevent both unwanted pregnancy and the transmission of STIs, including HIV/AIDS.

The monograph *The latex condom – recent advances and future directions* is produced by FHI and published in collaboration with WHO and USAID. The monograph supports the information provided in the fact sheets by reviewing the large number of published studies and articles concerning multiple aspects of condom quality, performance in use, acceptability and user behaviour.

During the biennium, the Department also collaborated with Johns Hopkins University/Center for Communication Programs (JHU/CCP) on the preparation for publication of the Popline report entitled *Closing the condom gap*, an extensive review of literature published over the last decade on a wide variety of issues related to condom research, production, quality and

2 See also Chapter 4 which includes additional information about the work of the Department on condoms and dual protection.

programming. Information from this literature review has been incorporated into a CD-ROM produced by JHU/CCP and UNFPA, providing an interactive review of literature and materials that have been used around the world for condom promotion.

The work undertaken by the Department in relation to the male latex condom to date is the first phase in a series of activities designed to support national family planning and STI/HIV/AIDS prevention programmes. So far, these activities have generated evidence-based technical guidance materials. The next phase, due to start in the year 2000, will focus on providing technical assistance to countries to help disseminate, adapt and put into operation the technical guidelines to improve the quality of condom programming activities. This will form part of an integrated programmatic approach to support the prevention of STI/HIV/AIDS and unwanted pregnancies.

In 1999, UNAIDS approved funding for the Department to assess country-specific managerial and technical needs required to sustain improved quality assurance measures. This assessment will inform subsequent country support activities designed to improve the procurement, distribution and quality of the male and female condom. Already technical support has been provided to South Africa to update national regulatory standards for condom procurement and improve the quality assurance measures applied to procurement and distribution.

International condom standards

The Department participates in the biannual meetings convened by the Organization of International Standardization, Technical Working Group 157 for Mechanical Contraceptives (ISO/TC/157). This Group is currently working on the revision of the *International standard for male latex condom 4074*. The meetings involve delegates representing condom manufacturers, testing laboratories, consumer groups, national regulatory boards and scientific experts from around the world in the process of analysing and agreeing upon the quality assurance tests and procedures that should be incorporated into Standard 4074. The WHO document, *Specification and guidelines for condom procurement,* is used as a technical reference document at these meetings. It is expected that the new Standard 4074 will be published by the end of 2000. The Department and UNAIDS will then undertake a scientific review of the WHO specification to ensure consistency with the published standard.

Social marketing

The Department is collaborating with UNAIDS in developing a comprehensive strategy to support condom programming activities for the prevention of STI/HIV/AIDS and unwanted pregnancy. Social marketing of products, establishment of services and behaviour-change communication will be components of this package of strategies designed to improve reproductive health. As part of this strategy, UNAIDS, WHO and UNFPA are planning to hold a “Social Marketing Forum”. This Forum will be designed to bring together donor agencies,

collaborating partners and country representatives in order to explore the comparative advantages and potential of social marketing in improving access to reproductive health services and technologies, particularly for the prevention of STI/HIV/AIDS and unwanted pregnancies.

The Forum, scheduled for the end of 2000, would seek to clarify the definition of social marketing and address misconceptions through a series of papers that will examine and provide evidence on:

- the effectiveness of social marketing – whether it works and whether it affects behaviour;
- equity – whether social marketing really reaches the poor;
- cost-effectiveness – whether it is cost-effective and how does it compare with other approaches;
- sustainability – whether social marketing is sustainable financially, institutionally and in terms of impact;
- public sector roles – how the public sector can adjust to and work with social marketing.

The Forum is being designed to analyse and make recommendations on how best to go forward, to identify a common research agenda, and explore the best means of utilizing social marketing approaches to strengthen efforts already under way to prevent STI/HIV/AIDS and unwanted pregnancy.

THE FEMALE CONDOM

The development of the female condom has introduced into the market a barrier method against unwanted pregnancy and the transmission of STI/HIV that is under the control of women. The Department maintains a Condom Working Group which collaborates closely with HSI, UNAIDS, and the Female Health Company (London, United Kingdom).

Within this area of work, the Department and UNAIDS have:

- developed and widely disseminated an information package entitled *The female condom: an information pack;*
- developed a new document entitled *The female condom: a guide for planning and programming.* This guide, to be published in early 2000, is intended to assist programme managers in the design, implementation, monitoring and evaluation of activities to introduce, or expand access to, the female condom in ongoing activities for the prevention of pregnancy and sexually transmitted infection;
- worked with countries in eastern and southern Africa to explore different IEC strategies that can be used to ensure the successful introduction and sustained use of the female condom;
- worked with a national project in South Africa to introduce the female condom into the public sector and conducted research to determine the feasibility, acceptability and safety of reusing female condoms.

CHAPTER 4

Combating RTIs, STIs and cervical cancer

Reproductive tract infections (RTIs) include: sexually transmitted infections (STIs); endogenous infections (such as bacterial vaginosis); and iatrogenic infections. RTIs, including STIs, have been a neglected area in public health in most countries – in both the developing and the developed world. In most parts of the globe, it is now accepted that control of RTIs and STIs is an urgent health need. It is estimated that more than 340 million new cases of curable STIs occur worldwide every year, most of them in developing countries. The highest priority for public health services is the primary prevention of infection. Primary prevention efforts are not 100% successful, however, resulting in a need for additional interventions to manage established RTI. Failure to treat RTIs leads to severe consequences for both women and men and substantial evidence now exists on the facilitating role that RTIs play in HIV transmission.

Since the 1994 International Conference on Population and Development (ICPD), reproductive health programmes have been encouraged to adopt a broader mandate encompassing RTIs and their management in addition to the maternal health and family planning efforts that had been their primary concern. The Department endeavours to assist reproductive health programmes in confronting this extra challenge. It does so both through direct technical assistance and through its work in research and evidence, advocacy and the development of norms and tools for integrated reproductive health.

GUIDELINES FOR RESEARCH ON REPRODUCTIVE TRACT INFECTIONS OR GYNAECOLOGICAL MORBIDITY

The Department has been addressing the issue of social and behavioural research on RTIs and has made substantial progress in a project that will continue in the coming biennium.

Over the last decade, several studies in developing countries have highlighted the widespread prevalence of RTIs or gynaecological morbidities in community settings. HRP, in collaboration with the Ford and Rockefeller Foundations, has undertaken a project that draws on existing social and biomedical research. The intention is to develop a set of guidelines or research approaches on how to plan and implement rigorous studies on the prevalence of RTIs, and such gynaecological morbidity as genital prolapse, vesico-vaginal fistula and menstrual disorders. The guidelines will also address behavioural determinants and examine the consequences of RTIs and gynaecological morbidities for women's lives. Recommendations on research approaches to the study of RTIs and other gynaecological disorders will be published and disseminated widely, and a few studies may be launched following the publication of this document. To prepare these guidelines, an international multidisciplinary consultative group has been formed, with representation from the social, biomedical and biostatistical spheres. The group met in mid-1999 and presented work-in-progress on their individual contributions. Finalization of chapters is under way and the document will be completed in 2000.

IMPROVING QUALITY OF CARE IN STI SERVICES

The role of RTIs in adverse pregnancy outcomes or in postsurgical procedures has been a longstanding concern. More recently, the role of RTI/STI in the transmission of HIV has also been receiving attention. Guidelines and training materials on the prevention and care of STIs are urgently needed by reproductive health programmes as they begin to address this important health concern. However, some aspects of the prevention and care of RTIs require further research to refine the tools and approaches needed, especially in the context of other reproductive health services.

Improved flow-chart for syndromic diagnosis and management of vaginal discharge

WHO's *Syndromic management for sexually transmitted diseases*, introduced in 1992, revolutionized the way symptomatic STIs were diagnosed and treated in patients seeking treatment for those infections. When ICPD advocated an expanded mandate for reproductive health services, particularly with an emphasis on the management of women's RTIs, *Syndromic management* was promoted as a way to **detect** RTIs in women attending reproductive health services but not seeking treatment for infections. What has followed since in the literature is a fierce debate about the utility of one part of *Syndromic management*, the recommended procedures for management of vaginal discharge, especially in areas or settings of low prevalence. Some of this debate stems from a failure to provide a means for countries to alter

or modify the approach to *Syndromic management for vaginal discharge* to suit specific needs.

In an attempt to assess whether it was possible to improve the sensitivity and specificity of the vaginal discharge flow-chart contained in *Syndromic management for sexually transmitted diseases*, a variety of additional tests and/or alternative logic was evaluated. None of the methods or alterations investigated represented an improvement over what was already recommended. However, it also became clear that this academic debate ignored the robust range of other interventions that could and should be used to control these infections in favor of the clinical interaction alone. The solution proposed and being field-tested is the *Programme guidance tool for improving the management of established reproductive tract infections*.

Programme guidance tool

Determining the most appropriate set of interventions for a public health programme to meet the needs of both men and women with established RTIs, including STIs, is a high priority but has often been problematic. A comprehensive mix of interventions could address, as appropriate, enhanced symptom recognition and health-care seeking behaviour, effective outreach programmes to identify symptomatic individuals and their sexual partners, and improved quality of clinical services for women and men. The appropriate mix of interventions for each local and/or national programme should, of course, be determined by a number of interrelated factors at that local or national level, based on an understanding of:

- prevalence and incidence of RTIs;
- cultural and social norms of sexual and health behaviours;
- local perceptions and beliefs concerning reproductive morbidity;
- patterns of health-care seeking behaviour;
- utilization of public and private sector health services;
- resources available at country level;
- existing structure of public health programmes; and
- patterns of antimicrobial use and resistance.

However, programme managers typically have imperfect data on many or all of the above factors. Furthermore, when data do exist, programme managers rarely have a clear process for deciding what actions might be indicated. Hence, the misuse or inappropriate use of *Syndromic management for vaginal discharge* in other reproductive health services is often a natural but insufficient response.

To address this problem, the Department and The Population Council's HORIZONS project have formed a collaboration to evaluate a process for making decisions about programme goals and directions and the key steps in implementing those decisions to improve management of established RTIs. This *Programme guidance tool* is designed to allow programme managers to assess the nature and possible determinants of the particular RTI problem they face and to design interventions that address them. To accomplish this, a procedure that has been developed and field-tested by HRP in more than 15 countries, the *Strategic Approach to Contraceptive Technol-*

ogy Introduction has been brought to bear on a new problem. This procedure has contributed the methods for the assessment of the RTI problem in a country.

In 1999, RHT and the HORIZONS project developed the key components of the *Programme guidance tool* and reviewed these with outside experts in a meeting in Geneva (Switzerland) in March 1999. Four sites were identified for field tests, proposals were developed and funded in three. These sites, Cambodia, Latvia and the state of Ceara in north-east Brazil, all became active in the field test in 1999.

At the completion of this exercise, it is hoped that WHO and its partners can make available to countries a flexible approach to addressing established RTIs and designing solutions that match their needs with their capacity.

Update of STI treatment guidelines

WHO plays a key role in the development and distribution of guidelines for the treatment of STIs for the developing world. Updated every four years or as needed, these guidelines are important in forming the basis for national guidelines for treatment of STIs and in influencing national drug policies in countries.

In 1999, the Department participated with WHO's Initiative on HIV/AIDS and Sexually Transmitted Infections (HSI) and UNAIDS, in convening a consultation to review the existing guidelines and to assess their adequacy in the light of changing patterns of epidemiology, patterns of antimicrobial resistance and the development of new antibiotics.

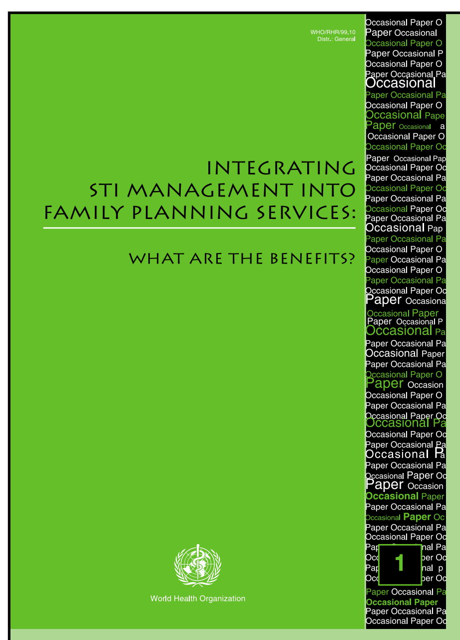
In addition to some modifications in the recommended drugs for some specific STIs, this revision also altered the way in which vaginal discharge as a symptom is interpreted and treated within the context of *Syndromic management*. Previously, vaginal discharge was taken as a symptom of cervical infection. In the proposed revision, vaginal discharge will be considered as an indication of vaginal infection only. Treatment for cervical infection will not be routinely recommended as initial treatment for women with vaginal discharge alone in the absence of obvious risk factors for infection. However, in countries where the prevalence of gonorrhoea and/or chlamydia are known to be high, programme managers may choose to recommend treatment for cervicitis based on this clinical symptom alone. The revised guidelines will be available in 2000.

CASE STUDIES ON INTEGRATING STI PREVENTION AND CARE INTO OTHER REPRODUCTIVE HEALTH SERVICES

Integration of services in reproductive health has been in existence since family planning services and maternal/child health (MCH) services were integrated in many countries decades ago. The issue received new impetus from concerns regarding infection, especially HIV, and the need to protect women from these infections. This concern motivated ICPD to call for expanded attention to infections, their prevention and treatment, through usual sources of reproductive health care for women, primarily family planning or family planning/MCH clinics. While the idea of integration

has an intuitive logic, it was not clear how much imperical evidence about how, and how well, it worked actually existed.

In 1998, RHT commissioned a review of what was known about integrating STI management into family planning services. This review, released in its entirety as Occasional Paper No. 1 from the Department in 1999, concluded that relatively little evidence exists on this topic. The issue is further compounded by differing definitions, differing expectations, differing levels and types of services into which STI management is integrated, and altogether too little evaluation. Clearly, more must be known and understood about integration, its costs and benefits in general, as well as the different operational models in use before guidance on the topic can be developed.



Following the completion of the review, the Department formed a partnership in 1999 with UNAIDS and the The Population Council's FRONTIERS Project. The purpose of this partnership has been to develop additional case studies on integration to broaden the available information base about the topic.

In 1999, proposals for case studies were developed and three were funded through the UNAIDS partnership. All three focus on antenatal syphilis screening. They describe the various operational models that have been used to integrate antenatal syphilis screening into MCH services or the factors that have influenced whether or not a successful research trial on antenatal syphilis screening resulted in programmatic change following its completion. The studies are short in duration and are descriptive, not evaluative. Others are planned on additional topics. Included may be topics such as the integration of syndromic management of sexually transmitted diseases into reproductive health services or the integration of the logistics systems for family planning and STI.

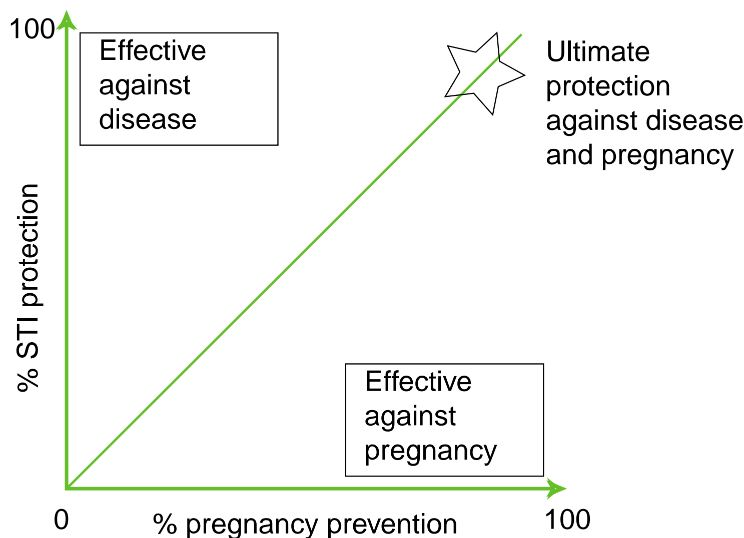
When complete, these studies will expand by a substantial amount both the number of studies available on the topic of integration and the specific types of integration documented. They will form the empirical basis for guidelines on the best approaches for the integration of RTI/STI management into other reproductive health services in developing countries.

DUAL PROTECTION

Dual protection is the prevention of two unplanned and undesirable outcomes – unintended pregnancy and HIV/STI infection. At the service-delivery level, how best to provide dual protection to clients is not comlpetely clear. Dual protection is afforded either by the consistent use of a condom or by the simultaneous use of two contraceptive methods, one of which must be a condom. Evidence shows, however, that both approaches present difficulties. Among these difficulties are: (i) the added cost of using two methods; (ii) reluctance of many women to use two methods; (iii) apparent difficulty of maintaining

consistent condom use; and (iv) the seemingly higher value placed on protection against pregnancy. For dual protection to work, family planning providers must change their practices and their views, especially the view among many that the condom is not an effective method of contraception.

FIGURE 7. PROTECTING AGAINST DISEASE AND PREGNANCY



In 1999, the Department hosted a five-day consultation on the topic of dual protection. The consultation was cofunded and coorganized by WHO, UNFPA and UNAIDS. In the first three days, the issue of dual protection was addressed at a global level, with representatives of family planning organizations and STI/HIV prevention efforts from countries in all the regions represented. The results of this initial part of the consultation were a strong endorsement of a single-method approach to dual protection where appropriate, and a call for guidance and assistance from international agencies in helping countries adopt dual protection. A joint statement of the sponsoring agencies was specifically requested and was drafted.

In the next two days, representatives from eastern European countries and the Newly Independent States addressed dual protection from their particular regional perspective. This region is characterized by low birth rates, high rates of abortion, rapidly evolving local HIV epidemics and a regionwide epidemic of other STIs, especially syphilis. At the same time, the modernization of health services following the end of the Soviet Union has included the establishment of modern family planning activities, with an emphasis on hormonal contraception in an attempt to decrease the rate of abortion use. In this region-specific consultation, the most appropriate target groups for dual protection and the assistance from international agencies and organizations that would be most helpful in making dual protection a reality were highlighted.

In the next biennium, additional cosponsored and cofunded regional consultations are planned, to assess the nature of the problems that each region faces in attempting to address the issue of dual protection and to discuss and recommend the best course of action.

CERVICAL CANCER

Cervical cancer is the most common cancer among women in many devel-

oping countries, and accounts for the deaths of 300 000 women each year. Cervical cancer is now known to be associated with infection with certain strains of the human papilloma virus (HPV), a sexually transmitted infection, and is therefore ultimately preventable. It is also curable if detected and treated early. The mainstay of cancer control programmes in developed countries, where cervical cancer mortality rates have decreased substantially, is cytological screening by Pap smear combined with prompt and appropriate treatment. However, Pap smear testing is neither feasible or affordable for widespread use in low-resource settings and, in general, developing countries do not have comprehensive cervical cancer control programmes.

In 1998, RHT supported a meeting held in Nairobi (Kenya) on cost-effective methods of addressing the prevention, detection and treatment of cervical cancer in low-resource settings in east and southern Africa. Experience from countries in these regions makes it clear that, while resources are invariably constrained, what is possible in terms of action varies considerably. In large urban centres, Pap smear and other sophisticated techniques may be feasible, while in more rural settings low-cost visualization techniques are needed. In the next biennium, the Department will be assessing the contribution it can make to this area of work in light of the recent establishment of an Alliance for the Prevention of Cervical Cancer, funded by the Bill and Melinda Gates Foundation.

CHAPTER 5

Supporting countries and collaborating agencies

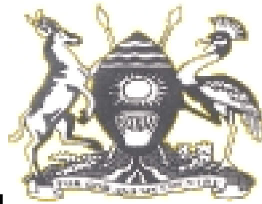
The establishment of appropriate mechanisms for responding to country needs was a prime consideration in the process of reorganization that took place following the creation of the Department of Reproductive Health and Research. Specifically, a Team for Technical Support to Countries was organized to facilitate the provision of comprehensive technical support to countries to improve reproductive health. Such support is aimed at strengthening the capability of countries and their communities to address their reproductive health needs. It includes assisting countries in building their programmatic and research capacities. This is accomplished by employing diverse strategies, which ensure that the necessary research is conducted and that the research findings inform the development of appropriate tools and practice guidelines. The results of research may also assist in determining policy and necessary resource allocation for the implementation of appropriate programmes. As a result of the formation of the Department of Reproductive Health and Research it is expected that the linking of research, at national and regional levels, with technical support will facilitate a more effective response to country needs in reproductive health.

INITIATING, FORMULATING AND REVIEWING NATIONAL HEALTH PLANS

During the biennium, the Department has been providing support to research and for programmatic activities in close to 80 countries. In some of

them, the support was small consisting of, for example, a small grant that enabled a developing country institute to translate some of the Department's new publications into their own language. In other instances, more comprehensive assistance was provided on a national level to update national policies and guidelines relating to, for example, eligibility criteria for the use of contraceptive methods. Two illustrative examples of such broader technical assistance work are given below.

Uganda



Since 1998, the Department has been involved in a major technical assistance project in Uganda. Other stakeholders in this project include the Ministry of Health, various United Nations organizations, The World Bank, and several NGOs. At the start of the project, a consensus was reached between the various partners to develop an essential care package for reproductive health for the country. The Department has contributed by training nurses and midwives from district teams in life-saving midwifery skills and by carrying out community mobilization activities in order to develop a community response to the challenges posed by safe motherhood. In association with WHO's Department of Child and Adolescent Health, a strategy and plan have been developed for adolescent reproductive health activities in Uganda. Also, 15 district medical officers have been trained in the Safe Motherhood District Planning process. The *Mother-baby package costing spreadsheet*, developed by the Department, has been applied in two districts, which provided valuable information on the cost of strengthening maternal health. The activities undertaken in this project will be reviewed in 2000.

Lao People's Democratic Republic (Lao PDR)

After initial visits to discuss the interest of the Ministry of Health in conducting an assessment of the contraceptive method mix, assistance was provided to the Maternal and Child Health Institute in Vientiane to implement a more comprehensive assessment of reproductive health needs. A background paper on the reproductive health situation in Lao PDR was compiled and a national planning workshop held, after which the field work for the strategic assessment was conducted in March and April 1999. The findings and recommendations of the assessment were discussed at a national dissemination workshop in June.

The assessment focused on issues related to contraception, maternal health, RTIs including HIV, and adolescent reproductive health needs. It documented a general reproductive health situation characterized by a high level of need of individuals and communities, in part reflecting a lack of availability of adequate reproductive health services. For example, in many locations, despite high levels of interest and demand for contraception, services and/or a range of methods are often unavailable and high rates of method discontinuation result from poor management of side-effects and inadequate information provided to clients. As a result, unsafe abortion appears common and contributes to the very high rates of maternal mortality. This high mortality also reflects extremely low rates of utilization of

maternal health services, resulting from both a lack of availability of adequate prenatal, delivery and post-partum care in many districts, as well as a low awareness on the part of the community of the potential dangers associated with pregnancy and child-birth.

The assessment also found that most community members and even frontline health providers lacked critical information concerning RTIs, despite a situation where behavioural patterns of many men are likely to contribute to increased risk for RTIs including HIV infection. Access to appropriate treatment for symptomatic infection was seriously limited in many areas and, where available, was highly variable in content and quality.

In the Lao PDR, adolescents often marry and commence childbearing, yet the team found that there was little awareness among community members or providers of the different reproductive health needs of adolescents. Adolescents were found to have little access to information or services including condoms or other contraception, and unwanted pregnancy and RTIs among unmarried youth were reported to be growing problems.

The assessment report made a variety of specific recommendations concerning policy, programme and research needs to assist in developing comprehensive reproductive health policies, strengthening existing reproductive health programmes and moving towards integrated quality reproductive health services to address the problems and needs identified.

A proposal is currently being developed for a Stage II action project addressing some of the recommendations of the assessment. The activities are expected to focus on strengthening the availability and utilization of essential obstetric care at the district and community levels, as well as testing approaches to strengthening outreach by health staff from the district level to support health centre and community level reproductive health services. This will complement the new UNFPA project activities that will emphasize community level training for village health workers in reproductive health and develop a community-based system of contraceptive distribution throughout the country. The planned Stage II project is expected to be jointly funded by UNPFA, the Laotian Government and the Department. Technical assistance to activities in the Lao PDR has also been provided by the Population Council Bangkok Office, the International Council on Management of Population Programmes (Kuala Lumpur, Malaysia) and Family Care International (New York, NY, USA).

Reproductive health in refugee settings

The United Nations High Commissioner for Refugees estimates that there are presently over 22 million refugees (internally displaced persons, asylum seekers, returnees and stateless persons) all over the world. About half of these would be female, with the majority in their reproductive years. Any emergency has a profound negative impact on the health of women, men, children and adolescents. Poverty, loss of livelihood, disruption of services, breakdown of social support systems and acts of violence combine to destroy health. Within any population facing the trauma of natural disasters or conflict and displacement, the social and physical vulnerability of women, particularly pregnant women,

increases. Basic services can be disrupted, particularly transportation, food, clean water and sanitation. Pregnant women and adolescent girls may find themselves without the necessary support to cope with pregnancy and childbirth. Families may become separated and traumatized women may have no practical or emotional support during pregnancy and lactation. Access to health care facilities, medication, equipment and trained personnel is often lacking.

The Department is a member of the Inter-Agency Working Group on Reproductive Health in Refugee Situations which has supported the development and publication of *Reproductive health in refugee situations – an inter-agency field manual*. This manual is based on WHO norms and standards and it has been tested by some 50 agencies working in refugee situations in 17 countries over a period of two years before being finalized and published in 1999.

The *Inter-agency field manual* addresses technical issues related to reproductive health. To address the mechanics of actually developing and managing reproductive health services in any man-made and/or natural disaster, the Department – in collaboration with the former Unit of Women's Health and Development and the new Cluster of Social Change and Mental Health – has built upon the technical norms and guiding principles outlined in the *Inter-agency field manual* to develop a complementary manual entitled *Reproductive health in conflict and displacement: a guide for programme managers*. This manual focuses on the managerial and service delivery aspects of reproductive health care in conflict and displacement and includes sections on:

- the issues to be considered before responding to reproductive health needs during the different phases of conflict and displacement;
- programmatic measures that can be taken to lessen the negative impacts of conflict and displacement on reproductive health;
- management tools for the effective assessment of needs and the implementation, monitoring and evaluation of reproductive health;
- reproductive health implications of the post-conflict period;
- ways on responding to gender-based and sexual violence.

The next phase of activities for the year 2000 is to support the dissemination, adaptation and use of both of these manuals by developing a training curriculum and training tools for programme managers who will potentially manage reproductive health programmes in each phase of conflict and displacement. The curriculum will be designed to provide managers with the necessary skills, not only in management but also for training others to judge how to meet reproductive health needs in populations facing any phase of conflict and displacement.

A FRAMEWORK FOR ACTION PLANNING IN HEALTH PROMOTION AND EDUCATION

The methodology known as A Framework for Action Planning in Health Promotion and Education (FAPHPE) is designed to focus health promotion and IEC efforts on achievable objectives. The methodology promotes an innovative planning process that can be used in different settings to integrate health promotion and IEC in existing reproductive health initiatives with no extra programme costs. It also

emphasizes the need for partnerships with others working towards the same goals. FAPHPE describes effective ways to establish and maintain such partnerships among policy-makers, programme managers, health services and education personnel, consumers, their families and peers, and community organizations. All these players must become involved and committed in order to have an impact on the reproductive health of the population as a whole. Working together to make full use of FAPHPE, they can progress a reproductive health agenda at national, regional and local levels.

Countries where people have been trained to apply the methodology include Argentina, Bolivia, Canada, Chile, Estonia, Kenya, Nepal, Nicaragua, Nigeria, Romania and the USA, including Puerto Rico. Through this field experience, the FAPHPE has been refined, expanded and revised, taking into account lessons learned from its application. It has now also been translated into Spanish.

SUPPORT TO THE DISSEMINATION, ADAPTATION AND USE OF TECHNICAL GUIDANCE DOCUMENTS

The Department is particularly concerned to ensure that the evidence-based technical norms and standards it generates are appropriately disseminated, adapted and put to use. To build on lessons learnt from the successful dissemination of the medical eligibility criteria, the Department convened a two-day meeting in May 1999, with representatives from FHI, JHPIEGO, and Johns Hopkins University/Center for Communication Programs (JHU/CCP). The aim was to identify how the agencies could collaborate to develop a strategic approach which will ensure effective dissemination, adaptation and use of technical guidelines at the policy and programmatic levels. A second meeting, involving the same groups and additional potential collaborators (UNFPA, AVSC International, The Population Council, and IPPF) was held in August 1999. The participants in the meetings pledged the support of their agencies and organizations to this strategy and agreed to collaborate in its implementation at country level. The first such country workshop is scheduled to take place in the South-East Asia Region, in June 2000.

TECHNICAL SUPPORT TO UNITED NATIONS AGENCIES

The Department collaborates with and supports other United Nations agencies, NGOs and WHO Regional Offices in planning and programming activities at country level. During the biennium, a high priority was placed on strengthening the links between WHO's normative and technical capacity and the operational capacity of its partners. Not only is WHO a partner in the UNPFA-funded interagency Technical Advisory Programme (TAP) providing technical support to UNFPA country programmes through the WHO staff on Country Support Teams (CSTs) as well as technical backstopping to the CSTs by Headquarters staff, but Department staff also give technical advice to UNFPA country programmes directly, as and when requested.

In addition to the joint work with UNFPA, close collaboration also exists with other sister agencies such as UNICEF and The World Bank, to assist them in their work in various

areas of reproductive health. For example, during the biennium, technical support was provided to The World Bank missions in Bangladesh and programme reviews in Bangladesh, Morocco and Pakistan. The Department is also collaborating with The World Bank on the development of a life-cycle approach to reducing poverty and has contributed to various UNICEF activities in maternal health, such as the Mother-Friendly Initiative and the Neonatal Tetanus Elimination Initiative. In Pakistan, a joint review of UNICEF activities in reproductive health and planning of future programme activities was undertaken.

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