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Department of Reproductive Health and Research *including*
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Special Programme of Research, Development and
Research Training in Human Reproduction (HRP)



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Introduction

This report constitutes the annual technical report for the Department of Reproductive Health and Research (RHR) of WHO for 2012. RHR is comprised of the UNDP/UNFPA/UNICEF/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP) and Programme Development in Reproductive Health (PDRH).

The work is conducted in line with the *RHR Medium-term Strategic Plan 2010–2015*, within the 2012–2013 *RHR Programme Budget*, and contributes to the WHO Medium-term Strategic Plan 2008–2013. The Department has been active in all major areas of sexual and reproductive health and rights as defined in the *WHO Global Reproductive Health Strategy*, as follows:

- quality of and access to family planning
- improving maternal and perinatal health
- control of sexually transmitted and reproductive tract infections
- prevention of unsafe abortion
- sexual health, gender and reproductive rights
- adolescent sexual and reproductive health.

In all of these areas, the Department has teams that have worked to generate and synthesize research evidence and to develop norms and standards and has also collaborated with countries to strengthen their research and technical capacity.

Contribution to WHO's Medium-term Strategic Plan 2008–2013

The Programme contributes to the achievement of five WHO Strategic Objectives (SOs).

Strategic objective 2: To combat HIV/AIDS, tuberculosis and malaria

Within this objective, the Programme contributes to "Policy and technical support provided to countries towards expanded gender-sensitive delivery of prevention, treatment and care interventions for HIV/AIDS, tuberculosis and malaria, including integrated training and service delivery; wider service-provider networks; and strengthened laboratory capacities and better linkages with other health services, such as those for sexual and reproductive health, maternal, newborn and child health, sexually transmitted infections, nutrition, drug-dependence treatment services, respiratory care, neglected diseases and environmental health".

Strategic objective 4: To reduce morbidity and mortality and improve health during key stages of life, including pregnancy, childbirth, the neonatal period, childhood and adolescence, and improve sexual and reproductive health and promote active and healthy ageing for all individuals

Within this objective, the Programme contributes to results related to "National research capacity strengthened as necessary and new evidence, products, technologies, interventions and delivery approaches of global and/or national relevance available to improve maternal, newborn, child and adolescent health, to promote active and healthy ageing, and to improve sexual and reproductive health".

The work on the development of norms, tools and guidelines contributes to “Guidelines, approaches and tools made available, with provision of technical support to Member States for accelerated action towards implementing the strategy to accelerate progress towards the attainment of international development goals and targets related to reproductive health, with particular emphasis on ensuring equitable access to good/quality sexual and reproductive health services, particularly in areas of unmet need, and with respect for human rights as they relate to sexual and reproductive health”.

Strategic objective 5: To reduce the health consequences of emergencies, disasters, crises and conflicts, and minimize their social and economic impact

Within this objective, the Programme contributes to “Effective communications issued, partnerships formed and coordination developed with other Organizations within the United Nations system, governments, local and international non-governmental organizations, academic institutions and professional associations at the country, regional and global levels”.

Strategic objective 6: To promote health and development, and prevent or reduce risk factors for health conditions associated with use of tobacco, alcohol, drugs and other psychoactive substances, unhealthy diets, physical inactivity and unsafe sex

Within this objective, the Programme contributes to “Evidence-based and ethical policies, strategies, interventions, recommendations, standards and guidelines developed and technical support provided to Member States to promote safer sex and strengthen institutions in order to tackle and manage the social and individual consequences of unsafe sex”.

Strategic objective 10: To improve health services through better governance, financing, staffing and management, informed by reliable and accessible evidence and research

Within this objective, the Programme contributes to “Coordination of the various mechanisms (including donor assistance) that provide support to Member States in their efforts to achieve national targets for health-system development and global health goals improved”.

Promoting Family Planning

Summary

Key objectives

In 2012, the RHR Department had an increased level of activity in its various areas of work relating to family planning. This reflects and addresses an increasing interest in family planning, highlighted by global initiatives such as the London Summit on Family Planning in July 2012, which launched Family Planning 2020 (FP2020), and the inclusion of key contraceptives among the commodities monitored by the UN Commission for Life-Saving Commodities for Women and Children. The Department's work on family planning focused on continuing and expanding the research activities on contraceptive technology and product effectiveness and safety, on the development of family planning guidelines, norms and tools, and on programmatic issues contributing to these global initiatives. The scope of the Promoting Family Planning (PFP) team's work included research and normative work on infertility.

Major achievements

- Studies on contraceptive safety and effectiveness:
 - Phase II trial of a male hormonal contraceptive method that combines progestin (norethisterone ethantate) and androgen (testosterone undecanoate): Results have previously shown that the method induces low sperm levels that could be considered to achieve contraceptive effects. However, the high number of side-effects has led to the injections being stopped and recruitment discontinued. Participants were observed until their sperm levels recovered. The study data will be analysed in 2013 after cleaning and verification.
 - Multicentre randomized clinical trial on safety, effectiveness and acceptability of hormonal contraceptive implants: This study is nearing completion of the five-year follow-up, with the last three sites to be closed in 2013. The paper reporting the baseline data was published in Contraception in 2012.
 - Prospective open-label, single-arm, multicentre study to evaluate the safety and contraceptive effectiveness of levonorgestrel 1.5 mg taken at the time of intercourse: This study was started at three sites, with the fourth site to start in early 2013.
 - First WHO Report of global, regional and national estimates of prevalence of and trends in infertility in 190 UN member states. Analysis of demographic and reproductive survey data have shown that despite population growth and worldwide declines in preferred number of children, little evidence was found in changes in infertility prevalence for two decades in heterosexual 5-year stable relationships, apart from Sub-Saharan Africa and South Asia. Further research is needed to identify the etiological causes of these patterns and trends.
- Contraceptive technology research leads: A technical consultation was convened in November 2012, and an online survey was completed in 2012 that outlined a prioritization process for an agenda in family planning research.

- Guidelines and norms:
 - Continuous Identification of Research Evidence (CIRE): The Department used the CIRE system to monitor new developments in published research and their implications for the Department's two major family planning guidelines – Medical eligibility criteria for contraceptive use and Selected practice recommendations for contraceptive use.
 - Possible risk of HIV acquisition and the use of hormonal contraception: This was one major issue reviewed, especially with regard to the use of progestin-only injectables (POIs). The work included reviewing the evidence to update the existing guidance, communicating these messages to various target audiences, and identifying programmatic and research issues. The review and discussions led to the conclusion that women living with HIV or at risk of HIV can continue to use POIs for contraception while further research continues. The use of condoms (male or female) as a general precaution is recommended. A technical statement, Hormonal contraception and HIV, was issued.
 - Guidelines on task shifting and sharing for the provision of family planning products and services: These guidelines were prepared as part of the WHO recommendations: optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting. A policy brief, Optimizing the health workforce for effective family planning services, was produced to reflect the main recommendations of the guidelines. Dissemination and implementation plans are being discussed with partners.
 - WHO guidance for sub-fertility/infertility diagnosis, management and interventions for treatment during the peri-conceptional period: A working consultation was held to plan the revision of the existing guidance, which was last updated in 1992. Prioritized topics to be updated in compliance with the standards of the Guidelines Review Committee include: male sub-fertility work-up, female sub-fertility work-up, polycystic ovary syndrome, ovarian stimulation, intrauterine insemination with or without ovarian stimulation, and in vitro fertilization.
- Advocacy and support to countries:
 - 'Evidence to policy' briefs on expanding access to family planning: The HRP Programme contributed to the establishment of relevant policies at the global level for implementation at the regional and country levels. A set of 'evidence to policy' briefs were prepared for the 2012 London Summit on Family Planning. The development of these briefs involved a technical consultation with experts and partners who conducted systematic reviews on task shifting or sharing, providing access to sexual and reproductive health services for adolescents, increasing use of long-acting and permanent contraceptive methods, and strengthening health systems to support family planning. A subsequent technical consultation prepared operational plans for the programmatic and research aspects of these policy briefs. To help countries make the most of the commitments made at the Summit, WHO also identified a set of recommended policy actions.

1. Introduction

The RHR Department continues to be engaged in four main areas of work in promoting family planning, including infertility:

- research on contraceptive technology and development, including evaluation of safety, efficacy and risks;
- implementation research to support scaling up family planning to reduce barriers to contraceptive use;
- development and updating of evidence-based guidelines and tools;
- work with countries to support the systematic introduction of evidence for strengthening policies, programmes and advocacy to promote family planning.

2. Research projects and priorities

2.1 Progress

2.1.1 Long-term safety and effectiveness of existing methods

The Department has continued to work on family planning studies on product development; effectiveness and safety; interventions to address infertility-related health issues; and measurement of indicators.

For contraceptive product development, the results of a phase II trial of a combined progestin (norethisterone ethantate) and androgen (testosterone undecanoate) approach to male fertility control have previously shown that low sperm levels that can be considered to have contraceptive effects can be achieved. However, the high number of side-effects has led to the injections being stopped and recruitment discontinued. While the early termination of the regimen will compromise the precision of a final estimate of the contraceptive failure rate of this regimen, other analyses linking the serum hormone levels to the clinical effects are planned. The sites have completed follow-up on the recovery phase. Data cleaning and analysis are ongoing and the analysis of the serum hormone levels is due to be completed in the first quarter of 2013.

On the topic of contraceptive effectiveness, the Department is conducting a prospective, open-label, single-arm, multicentre study to evaluate whether oral levonorgestrel 1.5 mg, taken around the time of intercourse, can offer an acceptable level of safety and contraceptive effectiveness and establish any advantages of the regimen over a traditional daily pill, such as convenience and ease of use among women who have infrequent sex. Recruitment started in early 2012, with a target sample size of 300 women. Participants will be followed for 6.5 months of method use at one of four country sites: Brazil, Hungary, Singapore and Thailand. Approximately 200 women have been enrolled; enrolment is anticipated to be completed in 2013, with follow-up to be completed in early 2014.

A combined retrospective analysis of data from four published WHO trials of levonorgestrel 1.5 mg for emergency contraception (EC) included data from 5055 women. Modelling the effectiveness of levonorgestrel treatment for EC with diverse ethnicities (Chinese or Nigerian) demonstrates that ethnicity is a highly significant predictor of pregnancy, even with stepwise logistic regression analysis. Treatment delay, conception probability related to the day of cycle, height and further acts of intercourse are also significantly associated with pregnancy (at $p=0.05$). Given that ethnicity is a predictor, this implies that effectiveness of levonorgestrel for EC varies not only by individual characteristics but also at a population level.

All seven study sites of the multicentre, randomized clinical trial of safety, effectiveness and acceptability of the implantable hormonal contraceptives levonorgestrel 75 mg (Jadelle®) and etonorgestrel 68 mg (Implanon®) have completed recruitment, with two study centres (Campinas, Brazil and Ankara, Turkey) completing the five years of clinical follow-up. The three remaining sites will be closed in 2013. The paper reporting the baseline data was published online in *Contraception* in 2012, and the manuscript reporting on the results of the first three years of client follow-up is being prepared for publication.

2.1.2 Proposals on contraception and infertility submitted for approval

This section describes projects that have been approved by the Research Project Review Panel (RP2) and Ethics Review Committee (ERC) and prepared by the HRP Programme.

The Programme is collaborating with the Effective Care Research Unit, University of the Witwatersrand, Fort Hare University and the Eastern Cape Department of Health in South Africa in conducting a randomized controlled trial comparing effectiveness, safety, adverse effects, HIV seroconversion and HIV progression and acceptance of injectable depot medroxyprogesterone acetate (DMPA) and the copper-containing intrauterine contraceptive device (Cu-IUD) in Kenya and South Africa.

The Programme is also about to start two additional implementation research studies after final approval by the ERC:

- Evaluation of the feasibility, utility and effects of the use of family planning counselling tools at the community level (in India with the Population Council)
- A multi-component impact evaluation linking the BlueStar social franchise with demand-side financing to improve poor women's access to reproductive health services (in Eastern Visayas, Philippines, with Marie Stopes International).

In addition, an implementation research study protocol is presently being developed to test an implementation strategy aimed at increasing access to IUD insertion for women in the postpartum and post-abortion periods. It is envisaged that the study could be the first step towards promoting country level policies to expand the contraceptive method mix and prevent unintended pregnancy.

Two research proposals on infertility have been submitted for implementation in 2013:

- Addressing zero transmission of STIs/HIV in HIV-discordant couples with access to safer pregnancy and fertility interventions (Kenya)
- Developing a strategic assessment tool for analysing policy, services and systems for infertile individuals and couples (dedicated funding has been secured through the Institute of Health and Biomedical Innovation, Australia).

An algorithm defining a specific measure for infertility was developed together with the statistics team from the WHO Department of Health Statistics and Information Systems, to determine a proxy, but stable, global prevalence value.

2.2 Research agenda priority-setting

Two main activities have looked into identifying the possible key areas for research on contraceptive technology and on programmatic areas relating to family planning.

2.2.1 Contraceptive technology research leads

With regards to potential research areas on contraceptive technology, the Programme convened a technical consultation with participants from 10 countries

to discuss the state of the art on contraceptive methods (existing and those in the pipeline) and the potential for expanding the family planning method mix as well as to identify the research gaps and needs with a view to widening the range of FP commodities. For contraceptive technology development, the topics that have been listed for consideration include: studies on long-acting and permanent contraceptive methods, improving delivery systems for methods such as the IUD and implants, and exploring new methods.

2.2.2 Family planning research priority-setting survey

In 2012, WHO completed a global online survey to define a prioritized research agenda for family planning. Stakeholders from 19 institutions in 25 different countries took part in the survey with the inputs ranked using the Child Health and Nutrition Research Initiative (CHNRI) process. The highest-ranking research priorities included: health system research, policy research, and social and behavioural research to reduce barriers to contraceptive uptake. Integration of family planning with other services, such as child immunization, and interventions for underserved populations, such as adolescents and people living with HIV, were also seen as priorities.

2.3 Planned activities

- Study sites and analysis of the research on implants, pericoital use of levonorgestrel and male hormonal contraception will be completed and closed out.
- Planning will continue with other teams and partners for research on multipurpose prevention technology for prevention of pregnancy, HIV and STIs.
- Planning and approval processes will continue for proposals on implementation research on family planning programmes, in areas of work such as integration with other services (maternal and newborn, immunization, HIV/STIs, services for people with disabilities, etc.).
- The study groups recommended by the technical consultation on contraceptive research leads will be organized and convened. Study groups on biological mechanisms that could lead to new contraceptive methods, multipurpose prevention technologies and implementation research are presently being convened.

3. Family planning guidelines and norms

The four cornerstones of family planning guidance¹ have remained the standards on which global policies and tools on family planning use and delivery of contraceptive services have been based. Work in the past year addressed specific questions on hormonal contraceptive use for people living with (and at risk of) HIV, the development of communication strategies and counselling tools, promoting community-based programmes, and updating guidelines on infertility.

¹ *Medical eligibility criteria for contraceptive use; Selected practice recommendations for contraceptive use; Decision-making tool for family planning clients and providers; Family planning: a global handbook for providers.* Available at: http://www.who.int/reproductivehealth/publications/family_planning/clinical/en/index.html

3.1 Progress

3.1.1 Family planning guidelines and CIRE

The Department has two major family planning guidelines: *Medical eligibility criteria for contraceptive use* (MEC, fourth edition) and *Selected practice recommendations for contraceptive use* (SPR, second edition with updates). Since the last main meeting on these guidelines in 2008, the PFP team and partners from the United States Centers for Disease Control and Prevention/WHO Collaborating Centre for Reproductive Health (CDC/WHO CC) have used the Continuous Identification of Research Evidence (CIRE) system to monitor the published research literature and to identify new publications that may contribute to the body of evidence that determines whether guidance recommendations should be retained or changed.

In the last year, the team and partners identified the following seven topics for which systematic reviews were prepared:

- when to start combined hormonal contraception (CHC)
- when to start IUDs
- provision of advanced emergency contraception (EC)
- prevention of nausea and vomiting from EC
- treatment of menstrual abnormalities associated with progestin-only contraceptives (POCs)
- postpartum IUD use
- management of missed CHC doses.

After discussions and external peer review of these seven systematic reviews, it was determined that the present guidance in the MEC and SPR remains consistent with the latest body of evidence for these topics.

3.1.2 Hormonal contraception and HIV

One issue identified in the published literature was the use of hormonal contraception (particularly progestin-only methods) and reports that it may increase the risk of HIV acquisition. WHO convened a technical consultation that re-examined the evidence on potential effects of hormonal contraception on HIV acquisition, disease progression, and infectivity/transmission to sexual partners. A technical statement concluded that women living with HIV or at high risk of HIV can continue to use hormonal contraceptives to prevent pregnancy.²

3.1.3 Family planning guidelines on task shifting or sharing

As part of the Optimize for Maternal and Newborn Health guidance on task shifting or sharing, and as a result of the consultation in June 2012, recommendations were produced on task sharing in the delivery of family planning services. A summary is presented in Table 1.

² Hormonal contraception and HIV: technical statement. World Health Organization, Geneva, 2012 (http://www.who.int/reproductivehealth/publications/family_planning/rhr_12_8/en/index.html).

Table 1. Summarized WHO recommendations on task sharing in family planning services

| | Lay health workers | Auxiliary Nurses | Auxiliary Midwives | Nurses | Midwives | Associate Clinicians | Advanced Associate Clinicians | Non-specialist doctors |
|-------------------------------|--------------------|------------------|--------------------|--------|----------|----------------------|-------------------------------|------------------------|
| Tubal ligation | | | | | | | | |
| Vasectomy | | | | | | | | |
| IUDs | | | | | | | | |
| Contraceptive implants | | | | | | | | |
| Injectable contraceptives | | | | | | | | |
| Oral contraceptives & condoms | | | | | | | | |

Key

| | |
|---|--|
| WHO recommended as already widely recognized and established practice | |
| WHO recommended | |
| WHO recommended with targeted monitoring and evaluation | |
| WHO recommended only in the context of rigorous research | |
| WHO recommends against | |

A policy brief was produced on *Optimizing the health workforce for effective family planning services* to reflect the main recommendations of the task sharing guidelines.³ In December 2012, at a meeting convened by Marie Stopes International for the Support for International Family Planning Organizations (SIFPO) project, interagency consensus was developed on best practices for implementing task sharing reforms, as reflected in the WHO guidance.

3.1.4 Guidelines on infertility

The revision of the WHO guidance for sub-fertility/infertility diagnosis, management and interventions for treatment during the peri-conceptional period, (last updated in 1992) was initiated in a working consultation on WHO guideline development processes and planning in 2012. The consultation brought together experts from academic institutions and representatives of international and regional societies, who conducted a critical scoping exercise and developed PICO questions (i.e. population, intervention, comparison, outcomes) with six priority topics for review, namely:

- male sub-fertility work-up (basic clinical evaluations, diagnosis, expectant management);
- female sub-fertility work-up (basic clinical evaluations, diagnosis, expectant management);
- polycystic ovary syndrome or PCOS (basic clinical evaluations, lifestyle factors, expectant management);

3 Available at: http://www.who.int/reproductivehealth/publications/family_planning/rhr_12_19/en/index.html

- ovarian stimulation (basic, hyperstimulation, endometrial factors);
- intrauterine insemination or IUI (with or without ovarian stimulation);
- in vitro fertilization or IVF (including basic laboratory issues relating to oocytes and semen, clinical issues associated with embryo transfer, and intra-cytoplasmic sperm injection or ICSI).

To ensure developing country input throughout the WHO infertility guideline development process, the Department worked with the Geneva Foundation for Medical Education and Research (GFMER) and the American Society for Reproductive Medicine (ASRM) to deliver an innovative online educational module on the preparation of systematic reviews to 80 selected participants from developing countries in November 2012.

3.2 Normative guidance development

3.2.1 Communicating HIV and sexual and reproductive health issues

The Department is undertaking the preparation of operational guidance on how to communicate and use new information, how to operationalize the recommendations on family planning and HIV prevention, and how to engage representatives from civil society. Towards this end, a process for communicating on hormonal contraception and HIV prevention was developed during two technical consultations.

3.2.2 Postpartum family planning

WHO convened a technical consultation in September 2012 to develop a document that includes a synthesis of the literature and a consensus statement that will define programmatic strategies for policy-makers and programme managers to consider when designing programmes aimed at addressing the unmet need for family planning among women who have delivered within the previous 12 months.

3.3 Family planning tools – development and updates

The Programme contributed to the preparation of numerous tools and guidance documents to help in the dissemination and implementation of family planning guidelines in various settings and for specific audiences.

One key document was *Preventing HIV and unintended pregnancies: strategic framework 2011–2015*, which was published by the Interagency Task Team (IATT) for Prevention and Treatment of HIV Infection in Pregnant Women, Mothers and their Children.⁴ This document is in support of the Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. The Framework gives clear guidance on the prevention of HIV transmission and acquisition, as well as preventing unintended pregnancies in women living with HIV, through family planning. A workshop to disseminate the strategy and to inform the countries of family planning integration tools was held in December 2012 in Zambia. *Reproductive choices and family planning for people living with HIV* is a flipchart to be used in HIV clinics for clients interested in family planning.⁵ It was updated to reflect the updated guidance on HIV risk and contraceptive use, breastfeeding, use of antiretroviral (ARV) therapy, and updated treatment modalities, in the context of family planning (Figure 2).

4 Available at: http://www.who.int/reproductivehealth/publications/linkages/hiv_pregnancies_2012/en/index.html

5 Available at: http://www.who.int/reproductivehealth/topics/family_planning/9241595132/en/

The *Module on provider-initiated testing and counselling (PITC)* is a new tool on HIV counselling to be included in the present family planning cornerstone counselling guide, *Decision-making tool for family planning clients and providers*. Field-tested in Zimbabwe, it includes concepts from WHO guidance on couples' counselling prepared by the HIV Department. (Figure 3).

A simplified version of the decision-making tool, *A guide to family planning for community health workers and their clients*, has been published in print and on the web, in English, French and Spanish. This tool is intended to be adapted and translated for use by community health workers or lay health workers as they inform and counsel their clients on the various family planning methods (Figure 4).

The *Training resource package for family planning (TRP)* is a comprehensive set of materials designed to support up-to-date training on family planning and reproductive health, based on the cornerstones for family planning guidance. It contains curriculum components and tools needed to design, implement and evaluate training. The materials are appropriate for pre-service and in-service training and applicable for reproductive health trainers, supervisors and programme managers in both the public and private sectors.⁶

The content of the Medical eligibility criteria for contraceptive use (MEC) document has previously been made available through handy tools such as the MEC wheel, in both printed and electronic forms. The mobile phone application for Java-based operating systems has been developed and is available online.⁷

3.4 Planned activities

- The Guideline Development Group meeting to initiate the revision of the MEC and SPR guidelines will be convened in May 2013.
- A technical report noting the epidemiological, biological and implementation research gaps and priorities on hormonal contraception and HIV disease will be finalized.
- The reports from the technical consultations on communicating sensitive topics in sexual and reproductive health in December 2012 and the programmatic strategies for postpartum family planning in September 2012 will be finalized.
- The team will work with partners to disseminate guidance on task shifting/sharing of FP services, particularly focusing on contraceptive delivery services that are recommended to be monitored and evaluated, and those that are to be conducted only in the context of rigorous research protocols.
- Dissemination activities will be conducted to inform the regions, countries and partners about the new and updated tools on family planning, including efforts to facilitate local adaptations and translations.
- New models of the mobile phone applications ('apps') for the family planning tools and planning for the updating of the *Decision-making tool for family planning clients and providers* will be developed.
- Scoping of the research questions; conducting systematic reviews; and grading of the evidence for the guidelines on infertility will be completed.

⁶ Available at: <http://www.fptraining.org/>

⁷ MEC mobile application available at: http://www.who.int/reproductivehealth/publications/family_planning/mec_mobile_app/en/

4. Advocacy and support to countries

4.1 Progress

4.1.1 HRP contributions to the London Summit on Family Planning

The Programme contributed to the establishment of relevant policies at the global level for implementation at the regional and country levels. A set of 'evidence to policy' briefs were prepared for the Summit and are available to download.⁸

To help countries make the most of the commitments made at the Summit, WHO has identified the following set of recommended policy actions:

- expand the range of family planning choices on offer, through stepping up the prequalification of affordable and safe products and enhancing research into the safety and effectiveness of existing and new contraceptives;
- increase the number of skilled health workers trained and allowed to provide family planning services;
- make family planning an essential component of other health-care services, including antenatal, postnatal and post-abortion care;
- make long-acting and permanent methods of family planning available and acceptable;
- eliminate social and non-medical restrictions on the provision of contraceptives to adolescents to help reduce early pregnancy and the associated health risks.

4.1.2 Contributions to the UN Commission on Life-Saving Commodities for Women and Children

- The Programme provided support to the WHO prequalification process through specific scientific and technical support for medicines relevant to women's and children's health. A note on the status of the prequalification of Sino-Implant (II)TM was prepared.
- The Programme contributed to the development of a WHO workplan for the Commission, focusing on contraceptives that are included in the list of commodities;
- The Programme provided continuing support for the development of evidence-based guidelines and tools, including their systematic introduction, dissemination and translation into national recommendations and policies.
- The Programme designed and produced dissemination and communication materials for the meetings of the commissioners.

4.1.3 Training, workshops and conferences on family planning

HRP participated in a global online forum on postpartum use of progestin-only contraceptive methods. It was active at the FIGO World Congress of Gynecology and Obstetrics, and at the 2012 meeting of the Francophone Society of Contraception.

⁸ Family Planning Summit information and WHO policy briefs are available at: www.who.int/reproductivehealth/topics/family_planning/policybriefs/en/

4.1.4 Innovative communication

As with other aspects of sexual and reproductive health, family planning has been at the centre of scientific debates and controversies, with major social and political ramifications. To better explore and communicate critical and potentially controversial issues, HRP began collaborating with two universities specialized in communication design: SciencesPO (Paris, France) and Politecnico (Milan, Italy). The collaboration has already produced five student projects on controversial issues in reproductive health (contraception, abortion, caesarean section) and a scientific paper will be finalized by July 2013. In addition, the Programme started a new visual communication project, the Human Reproduction Series, based on information graphics (or infographics), which are clear and succinct visual representations of complex information, data and knowledge. The first issue of the Human Reproduction Series is dedicated to the contraceptive pill, with information on its history, worldwide distribution, mechanism of action and social implications.

4.1.5 Advocacy activities for infertility

In collaboration with the Social Science Study Group of the European Society of Human Reproduction and Embryology's (ESHRE's) Special Task Force on Developing Countries and Infertility, and in cooperation with the Walking Egg Foundation and the University of Amsterdam, the Netherlands, three topics on infertility care in resource-poor areas were researched and presented in July 2012, in Istanbul, Turkey, during the ESHRE annual meeting.

Figure 5: 'Fertility always comes from the outside', by Koen Vanmechelen

A gift of art was donated to the HRP by the Walking Egg, a non-profit organization addressing access to infertility care in developing countries. The title of the work, 'Fertility always comes from outside', is explained by the artist, Koen Vanmechelen: "Dualism is necessary to create something new, and you need 'the other' to create new life. 'Cross-pollination' is crucial to my work, as it is the opposite of 'in-breeding' which is what happens if we don't reach out to someone or something else."



The Walking Egg by Koen Vanmechelen

4.2 Planned activities

- The Programme will continue to participate in the WHO-led activities for family planning commodities with the UN Commission on Life-Saving Commodities for Women and Children, particularly for emergency contraception, hormonal implants and the female condom.
- The Programme will disseminate and provide support to countries to implement recommendations on the 'evidence to policy' briefs on expanding access to family planning.
- The Programme will participate in the technical consultation on reviewing the evidence for policy development on human rights and family planning.
- The Promoting Family Planning (PFP) team will promote and disseminate PFP products, tools, guidelines, and briefs (including those relating to infertility) at international meetings such as the European Society of Contraception meeting, and the International Family Planning Conference.

Adolescent Sexual and Reproductive Health

Summary

Key objectives

WHO's Global Reproductive Health Strategy to accelerate progress towards the attainment of international development goals and targets (adopted by the 57th World Health Assembly in 2004) notes that on the one hand, early, unprotected and coerced sexual activity has both immediate and long-term negative health and social consequences, while on the other hand, taboos and norms about sexuality pose strong barriers to providing sexuality education and sexual and reproductive health services to adolescents. It stresses that meeting the needs and protecting the rights of adolescents worldwide are essential in order to safeguard the health of current and future generations.

Based on a careful examination of the needs in the field, mapping of the work being done by other organizations, RHR's mandate and comparative advantage, and inputs provided by various stakeholders (including RHR's advisory and governing bodies), RHR has defined three complementary work objectives relating to adolescent sexual and reproductive health (ASRH):

1. strengthening epidemiology, including programme monitoring data, to provide the basis for policy formulation and programme design;
2. carrying out research to strengthen the evidence base for policy formulation and programme design;
3. supporting countries to translate available knowledge into practice in strengthening policy formulation, and programme implementation and monitoring.

Major achievements

In 2012, work began on Objective 1; there are no major achievements to report as yet.

The following three achievements relate to Objective 2.

- Collaborative study on sexual development in early adolescence: The study parameters have been agreed and the protocol has been developed, involving six countries (China, Egypt, Kenya, India, Nigeria and USA). The study will examine the nature of sexual development in early adolescence, including gender socialization, and its effect on relationship formation and sexual behaviour in later adolescence.
- WHO-ExpandNet framework on scaling up health innovations: Using this framework, two analytic case studies have been prepared on nationwide scale-up of sexual and reproductive health education in Nigeria and health services in Colombia.
- Reviews of research evidence and programmatic experience: Support was provided for reviews on protecting and empowering adolescents; fostering participation and leadership; and providing adolescents with comprehensive sexuality education and friendly health services.

The following two achievements relate to Objective 3.

- Raising the profile of adolescent sexual and reproductive health: The Department organized and/or contributed to high profile events, including the meeting of the Commission on Population and Development (April 2012), the World Health Assembly (May 2012) and the First International Day of the Girl Child (October 2012).
- Regional workshops on strengthening adolescent sexual and reproductive health policies and programmes: The Department contributed to workshops focusing on Latin America and the Caribbean (Cuba, October 2012), Francophone West Africa (Benin, November 2012), and South-East Asia (Sri Lanka, December 2012).

1. Introduction

In the area of adolescent sexual and reproductive health (ASRH), the RHR Department has taken clear steps forward to build the evidence base to guide policy formulation and programme design, and to support countries in translating available knowledge into practice in policy formulation, and in programme implementation and monitoring. It has also taken initial steps to strengthen epidemiology and programme monitoring data.

2. Strengthening the evidence base on ASRH

2.1 Understanding the realities of very young adolescents' lives and effective ways of shaping their development and responding to their needs

2.1.1 Sexual activity of 13 to 15-year-old schoolchildren in sub-Saharan Africa and Latin America and the Caribbean

At a meeting conducted by RHR in 2010, research priorities on the sexual and reproductive health of young adolescents were identified.¹ The limited availability of data on the levels of sexual activity among young adolescents (age 10–14 years) and the context in which this occurs were identified as key knowledge gaps.

In 2011–2012, RHR supported an analysis of the Global school-based student health surveys (GSHS) conducted between 2003 and 2007 with national or sub-national data sets. These data sets are posted on the GSHS web site. The analysis contributed to the development of a policy brief on the sexual activity of 13 to 15-year-old schoolgirls and schoolboys and the implications of this for policies and programmes.²

The key messages of the policy brief are:

- Considerable numbers of 15-year-old schoolgirls and higher numbers of schoolboys responding to the GSHS reported having had sexual intercourse in the past year. Male and female students in Latin America and the Caribbean report higher levels of sexual activity than African students, although the regional patterns overlap.

1 World Health Organization. *The sexual and reproductive health of young adolescents in developing countries: reviewing the evidence, identifying research gaps, and moving the agenda*. Report of a WHO technical consultation, Geneva, 4–5 November 2010. Geneva, 2011. (http://www.who.int/reproductivehealth/publications/adolescence/rhr_11_11/en/index.html).

2 World Health Organization. *Sexual activity of 13–15-year-old schoolgirls and schoolboys in sub-Saharan Africa and Latin America and the Caribbean: implications for policies and programmes*. Geneva, 2012 (in press).

- In line with the results of other similar studies, girls and boys responding to the GSHS who say they had sexual intercourse in the past year are also more likely say they engage in other risky behaviours and less likely to say that their parents or guardians generally know how they spend their free time.
- Sexual initiation at the age of 15 years or younger poses substantial threats to the health and well-being of young people in low- and middle-income countries. This is especially true for girls, in part because early sexual encounters are more often unwanted and unprotected.
- Comprehensive sexuality education and related health services are essential if young adolescents are to acquire the information and skills they need to postpone sexual initiation and to make safe, informed and voluntary sexual decisions.
- School-based health-promotion and life-skills curricula must address a broad range of situational and behavioural issues in the lives of young adolescents and identify key areas for intervention and support.

The brief will be used by RHR to press for comprehensive sexuality education to be delivered in an age-appropriate manner, starting in early adolescence.

2.1.2 A conceptual framework for early adolescence: a platform for research and action

At the meeting in 2010 to identify research priorities referred to above,¹ participants identified the need for a conceptual framework to guide thinking and work in this area. In 2011–2012, RHR developed a conceptual framework that lists five central goals of adolescent development, factors that contribute to it at the individual, community and wider societal levels, interventions that could contribute to it, and indicators and tools to measure it.³ The framework places adolescent development in the context of a life course trajectory, recognizing that turning points in one's life can alter the course of one's life trajectory.

The five central goals of adolescent development identified in the conceptual framework are:

- engagement with learning
- emotional and physical safety
- positive sense of self/self-efficacy
- acquisition of life skills and decision-making skills
- physical and mental health.

The conceptual framework will be used by RHR to shape research and action on early adolescence.

2.1.3 Multicountry study on the nature of sexual development – including gender socialization – in early adolescents and its effect on relationship formation and sexual behaviour in later adolescence

One of the recommendations made at the 2010 meeting to identify research priorities referred to above,¹ was for RHR to engage in research to identify the social determinants of young adolescents' sexual and reproductive health, similar to the WHO initiative on social determinants of health.

³ Blum RW, Astone NM, Decker MR. *A Conceptual framework for early adolescence: a platform for research and action*. World Health Organization, 2012. Unpublished draft.

In 2012, RHR worked with researchers from six countries (China, Egypt, Kenya, India, Nigeria and USA), led by a team from the Johns Hopkins Bloomberg School of Public Health, to define the objectives, methods and design of a multicountry study. The objectives of the study are as follows:

- to describe the evolving processes of sexual development in different cultural settings from early to later adolescence;
- to determine the roles of parents and other adult caregivers, siblings and peers in shaping sexual development of young adolescents;
- to understand how the contexts (schools, neighbourhoods, media, culturally diverse settings) within which a young adolescent develops moderate parental/adult caregiver influences on sexual development, with special attention to gender socialization;
- to understand how sexual development – including gender socialization – of young adolescents influences relationship formation and ultimately informs sexual behaviours in middle and late adolescence.

A draft protocol has been prepared. It will be revised following consultations within and outside WHO, after which it will be submitted for technical and ethical clearances, and funds will be raised to carry out the study.

2.1.4 Guidance on ethical considerations in planning and reviewing research studies on ASRH

Participants at the 2010 meeting to identify research priorities referred to above¹ noted that there are special challenges in meeting established ethical and safety requirements when carrying out research on adolescents. One challenge is that of obtaining the consent of parents and guardians when carrying out electronic surveys or surveys of adolescents living on the street. Another challenge relates to the risk of causing harm to adolescent survey participants who disclose illegal behaviour or behaviour that is not socially acceptable (e.g. homosexual behaviour). Researchers, members of review boards and funders of research struggle with these issues, for which there are no clear right or wrong answers.

In 2011–2012, RHR supported the development of a tool to help the groups mentioned above consider and address the ethical challenges in carrying out research on adolescents. Existing documents were identified and gathered, key informants were consulted and a short list of issues to address was prepared. In 2013 a guidance document on this topic is to be completed and field-tested.

2.2 Understanding and overcoming national-, provincial-, district- and local-level barriers to the provision of ASRH education and services

2.2.1 Documenting case studies of large-scale and sustained implementation of programmes providing ASRH education and services

In most countries, initiatives to provide adolescents with sexual and reproductive health (SRH) education and health services have been described as 'boutique projects'. In a slowly growing number of countries, these initiatives have moved from small-scale and time-limited projects to large-scale and sustained programmes. These initiatives have been discussed at seminars and workshops, but there is generally little about them in the published literature.

RHR set out to document the scaling up of sexuality education in Nigeria and of SRH services in Colombia, using the WHO-ExpandNet framework for scaling up health innovations. The analytic case studies examined the factors that created the climate for scale-up to occur and how scale-up was implemented and measured. The Nigerian case study was completed and accepted for inclusion in the first report of the Independent Expert Review Group of the Commission on Information and Accountability for Women's and Children's Health.⁴ The Colombia case study is to be completed in 2013. These case studies – and others that are planned – are intended to show decision-makers what it takes to translate policies and strategies into large-scale and sustained programmes.

2.2.2 Systematic review of effective interventions to improve the access of young married women and couples to contraceptives and maternal health services in low- and middle-income countries

Globally, nearly one in three girls are married before the age of 18 years. Studies show that factors such as misconceptions about the negative effects of contraceptives, social norms that favour early childbearing and health services that are unfriendly and of poor quality all act as barriers preventing young married women and couples from obtaining the SRH services they need.

RHR collaborated with the Mamta Health Institute for Mother and Child, an Indian NGO, to carry out a systematic review of interventions that have been shown to improve the access of young married women and couples to contraceptives and maternal health services in low- and middle-income countries. The review is to be completed in early 2013.

2.2.3 Reaching young adolescents with a package of complementary health interventions along with the HPV vaccine

In most low- and middle-income countries, maternal and child health (MCH) programmes are not geared to respond to older children and young adolescents. Furthermore, in many of these countries (especially in sub-Saharan Africa and South Asia) school health programmes are either weak or non-existent. As a result, boys and girls in primary and junior secondary school, and those who don't attend school, are not reached with effective promotive and preventive health interventions.

Within WHO, the RHR Department worked with the Department of Maternal, Newborn, Child and Adolescent Health (MCA) and the Department of Immunization, Vaccines and Biologicals (IVB) to complete a review of effective interventions that could be delivered to adolescents along with the HPV vaccine.⁵ The three WHO departments also worked with the London School of Hygiene and Tropical Medicine (LSHTM) to do the groundwork for implementation research to test the feasibility of delivering a complementary package of health interventions to school-going adolescents in the United Republic of Tanzania and to measure the effects on the acceptability and uptake of the HPV vaccine. The objectives of the study are:

4 First report of the Independent Expert Review Group of the Commission on Information and Accountability for Women's and Children's Health. Geneva, World Health Organization, 2012. Page 39.

5 Broutet N et al. A review of effective adolescent interventions that demonstrate potential to be provided as an adjunct to global HPV vaccination programmes. World Health Organization, 2012. Unpublished draft.

- to identify the health interventions currently recommended by the Government of the United Republic of Tanzania for delivery to older children and adolescents, including school-going ones;
- to investigate which of these interventions are being delivered and the degree to which they are being delivered according to planned schedules;
- to define a potential set of health interventions that could be delivered with the HPV vaccine within the United Republic of Tanzania;
- to test the feasibility, acceptability and costs of delivering a package of interventions with the HPV vaccine, and the impact of this on the acceptability and uptake of the HPV vaccine.

In response to the feedback of HRP's Research Project Review Panel, the protocol is being revised. It is to be resubmitted in early 2013.

2.2.4 Quantifying the contraceptive needs of adolescents, understanding the barriers they face in obtaining contraceptive services and identifying effective ways of improving their access to these services

There is a severe need for contraceptive services appropriate for adolescents who are in formal unions. The needs of adolescents not in union are estimated to be high, although there are gaps in the data. Studies point to the barriers that adolescents face in obtaining contraceptive services. Other studies and small-scale projects highlight effective approaches to increasing access to contraception for adolescents.

RHR worked with MCA and with collaborators from Macro International, FHI360 and the Medical Research Council (United Kingdom of Great Britain and Northern Ireland) to develop working papers that were tabled and discussed at a meeting of experts in June 2012. The papers and the discussion at the meeting led to the development of a policy brief titled *Expanding access to contraceptive services for adolescents*, which contained recommendations for policy, programmes and research.⁶ The recommended actions are listed below:

Recommended policy actions:

- enact policies requiring the provision of accurate, age-appropriate and comprehensive sexuality education for all adolescents;
- eliminate social and non-medical restrictions on the provision of contraceptives to adolescents;
- enact policies enabling adolescents to obtain a full range of contraceptive methods and services through delivery mechanisms that are appropriate and acceptable to them, including, among others, social marketing outlets and health facilities.

Recommended programme actions:

- engage adolescents as full partners in designing, implementing and monitoring contraceptive information and service provision (and draw upon the support of parents and other influential adults in providing contraceptive services);

6 WHO/RHR/HRP. *Expanding access to contraceptive services for adolescents*. A policy brief in the series 'From evidence to policy: expanding access to family planning'. Geneva, World Health Organization, 2012 (www.who.int/reproductivehealth/topics/family_planning/policybriefs/en/index.html).

- make available a full range of contraceptive methods through outlets that different groups of adolescents are likely to frequent, including social marketing outlets, educational and social facilities and the health system;
- use traditional and innovative ways of providing contraceptive information and services to adolescent girls and boys;
- link the provision of contraceptive services to the provision of broader SRH services for adolescents, notably information and clinical services related to sexually transmitted infections (STIs) and HIV, as an integral component of a comprehensive response to sexual violence;
- require and support contraceptive service providers to be respectful of adolescents, regardless of whether or not they are in formal unions.

Recommended research actions:

- generate evidence on the needs, preferences and circumstances of different groups of adolescents as a basis for strengthening existing, and building new, service delivery mechanisms;
- conduct evaluation and implementation research to support implementation of large-scale, sustainable contraceptive services that are appropriate for all groups of adolescents;
- ensure that health information systems gather, analyse and use age-disaggregated data, on the need for, and use of, contraceptives.

In November 2012, at a follow-up meeting convened by RHR, concrete steps to operationalize the policy brief were discussed and agreed upon. They included wider dissemination of the policy brief and engagement with partners in countries to support the provision of contraceptives to adolescents.

2.2.5 Research priorities on ASRH

ASRH is high on the global public health agenda. A range of organizations are carrying out or supporting research on ASRH, focusing on different issues considered to be important and relevant to their work.

RHR contributed to a research priority-setting exercise led by the Department of Maternal Newborn Child and Adolescent Health.⁷ Using a structured and consultative process, a set of priority research questions was identified, with an emphasis on moving from research on behaviours and their determinants to research on testing ways and means of expanding access to interventions such as contraception and safe abortion care.

Based on the outputs of this and other priority-setting exercises, RHR has developed its own proposed five-point research agenda on ASRH, in line with its analysis of the Department's comparative advantage and its potential to lead work in this area. The five points are expressed in terms of the following research questions:

1. What are the estimates of and trends in (i) maternal mortality, (ii) pregnancy and child bearing, and (iii) STIs in adolescents?
2. How does sexual development – including gender socialization – occur in early adolescence, in different contexts? How does this influence relationship formation and sexual behaviours in later adolescence?

⁷ Hindin MJ, Christiansen CS, Ferguson BJ. Setting research priorities for adolescent sexual and reproductive health in low- and middle-income countries. *Bulletin of the WHO*, 2013, 91(1):10–18.

3. What are the social determinants of early pregnancy and of other sexual and reproductive health problems in adolescents? What legal, feasible and/or effective social and economic measures can be used to address the social determinants of early pregnancy?
4. What are the factors that help and hinder the provision and uptake of sexual and reproductive health (SRH) education and services? What are the ways and means of delivering effective SRH interventions to different population groups of adolescents in different contexts?
5. How can we improve the monitoring of the quality and coverage of SRH interventions for especially vulnerable populations (e.g. using mHealth)?

In each of these areas, a portfolio of work is being built.

2.3 Understanding the determinants of early pregnancy and identifying effective and feasible legal, social and economic measures for preventing it

2.3.1 Discussion on early marriage, and early and young pregnancies at the World Health Assembly

A WHO report entitled *Early marriage, early and young pregnancies* was tabled for discussion at the 65th World Health Assembly in 2012.⁸ It covered the current global situation of early marriage and adolescent pregnancies, their determinants, their health and social consequences and their prevention. In line with WHO guidelines, its key recommendations were for countries to take action – at the levels of national laws and policies, the adolescent, the family and community, and the health system – to:

- reduce marriage before the age of 18 years
- increase knowledge and understanding of preventing early pregnancy
- increase the use of contraception by adolescents at risk of unintended pregnancy
- reduce coerced sex
- reduce unsafe abortion
- increase the use of skilled antenatal care, delivery care and postnatal care.⁹

Up to 30 countries, from all six WHO regions, and seven organizations made statements in the two-hour long discussions on this subject at the World Health Assembly. That early marriage was illegal in most places where it occurred, that it was a violation of the rights of girls, and that it had detrimental health and social consequences for adolescent girls and their families and communities was reiterated by all speakers. Several of them went on to describe activities that their countries were involved in to prevent early marriage and the consequences of early and unprotected sexual activity.

8 *Early marriage and adolescent and youth pregnancies*. World Health Assembly 65. Geneva, World Health Organization, 2012.

9 *Preventing early pregnancy and poor reproductive outcomes in adolescents in developing countries*. Geneva, World Health Organization, 2012.

2.3.2 First International Day of the Girl Child – ‘My life, my right, end child marriage’

The 11th of October 2012 was commemorated as the first International Day of the Girl Child, in line with a resolution adopted by the United Nations General Assembly. Ending child marriage was chosen as the theme of the inaugural day.

Events were held around the world to mark the inaugural International Day of the Girl Child. In Geneva, the mission of the Netherlands to the United Nations, WHO and UNFPA convened a meeting of representatives from Geneva-based country missions, international organizations and civil society to build a shared understanding of the scale of child marriage, the factors that contribute to it, its health and social effects, and ongoing initiatives to prevent it.

RHR published a commentary to mark the occasion, which made the following five key points:¹⁰

- Child marriage is an enormous problem. It is also a widespread problem.
- The good news is that some countries are making progress on reducing child marriage. But the progress is slow.
- This slow rate of progress is deadly – both for young girls who become young mothers, and for their babies. Health is one of the major problems associated with child marriage. But it is not the only one. Child marriage has terrible negative social and economic consequences.
- Child marriage is so prevalent because poverty, low levels of education and social norms pressurize families to let it continue.
- But this need not and should not continue. We have the means at our disposal to work together to stop child marriage.

3. Contributing to keeping ASRH on the global public health agenda

3.1 Commission on Population and Development meeting with the theme of ‘Adolescents and Youth’

At the Commission on Population and Development (CPD) event in New York City in April 2012, the RHR Department contributed to the public discussion and debate and to the negotiations on the draft resolution by presenting a statement on behalf of WHO, participating in lunchtime presentations, and providing technical input to the difficult and protracted negotiations. Along with other stakeholders, RHR contributed to the development and adoption of a strong outcome document on meeting the SRH needs of adolescents and youth. This document strongly reiterated the importance of providing adolescents with SRH services in a non-judgemental manner.¹¹

¹⁰ Svanemyr J et al. Preventing child marriages: first international day of the girl child “my life, my right, end child marriage”. *Reproductive Health*, 2012, 9:31.

¹¹ Commission on Population and Development. *Report on the forty-fifth session* (15 April 2011 and 23–27 April 2012). Official Records, Supplement No. 5. United Nations Economic and Social Council (ECOSOC), 2012.

3.2 'What works' in ASRH policies and programmes

This activity is intended to ensure that national, regional and global negotiations for the ICPD+20 agenda are well informed by the reality on the ground with regards to the needs of adolescents and the current state of the responses to these needs.

RHR worked with the International Women's Health Coalition and UNFPA to review research evidence and programmatic experiences and prepared papers in five areas that are central to the International Conference on Population and Development (ICPD) Programme of Action:

- providing adolescents with age-appropriate and culturally sensitive sexuality education
- providing adolescents with sexual and reproductive health services, and increasing community support and adolescent demand for them empowering adolescents – especially girls - to protect themselves and to take charge of their lives
- exploring effective ways of fostering participation and leadership by adolescents
- exploring effective ways of preventing violence against adolescent girls and fostering gender norms that support equality between women and men, boys and girls.

Each paper examines both what has been done to respond to the call for action, and what has worked to improve the identified health and social outcomes. Based on this, each paper then proposes policy and programme recommendations, and identifies gaps to be addressed by further research. An expert group meeting is to be held in early 2013 to build consensus on a set of recommendations for policy and programme development and for further research.

3.3 Global Youth Forum

A Global Youth Forum on the topic of 'ICPD Beyond 2014' was held in Bali, Indonesia, 4–6 December 2012. The Forum was held in the context of the review and follow-up to the implementation of the Programme of Action of ICPD Beyond 2014. In addition the Forum aimed to provide recommendations for the post-2015 United Nations development agenda, as well as to generate a new consensus on putting youth rights at the heart of development.

The Forum was preceded by national-level discussions. Following this, over 3000 on-site and virtual delegates came together to participate in the Forum. The participants included young people from around the world and a range of relevant stakeholders, under the leadership of young people themselves. The output of their discussions – *The Bali Declaration* – is a groundbreaking document that will go directly to the Secretary General and feed into the ICPD+20 review.

RHR worked with UNFPA to prepare a background paper entitled *Staying healthy*, which was tabled and discussed at the Forum. RHR participated in the forum, presented the paper jointly with UNFPA and contributed to the discussions.

4. Building capacity to strengthen policies and programmes on ASRH in low- and middle-income countries

4.1 Contributing to and drawing from regional workshops of country teams on different aspects of ASRH

Regional workshops that bring together national-level health ministry programme managers and managers from other government departments (such as education and youth) as well as from NGOs provide a valuable forum for sharing experiences, exchanging information and building capacity to strengthen policies and programmes on ASRH. RHR participated in four major regional workshops, which provided useful opportunities to learn about what was happening on the ground, to share WHO's recommendations and tools, and to build capacity. They included a workshop in Ethiopia (September 2012) to introduce WHO's Guidelines on safe abortion; one in Cuba (November 2012) to take stock of progress made in implementing comprehensive sexuality education programmes in Latin America; a workshop in Benin (November 2012) on strengthening policies and programmes to achieve Millennium Development Goal (MDG) 5¹² with a particular focus on the adolescent girl; and a workshop in Sri Lanka (December 2012) on strengthening mental health and reproductive health programmes for adolescents. A workshop for Arab states was also planned for December 2012 in Egypt, but had to be postponed due to civil unrest.

In addition to these workshops, the knowledge generated through RHR's work is also disseminated through the Internet, through journal articles and at conferences. One example of this is provided in section 4.2.

4.2 E-course on sexual and reproductive health

The rapidly growing reach of the Internet, and growing experience in e-teaching and e-learning, present both opportunities and challenges with regards to use of this medium for distance education.

For the third year running, a five-week block on adolescent health and development with a particular focus on sexual and reproductive health was conducted as part of the seven-month (May to November 2012) distance learning course entitled 'From Research to Practice: Training Course in Sexual and Reproductive Health Research'. The course was organized by the Geneva Foundation for Medical Education and Research, the Réseau en Afrique francophone pour la télémédecine (RAFT), University Hospital Geneva and RHR/HRP.¹³ Approximately 235 participants from nearly 48 countries participated in the course. As in previous years, the organizers of the course followed up with the participants to assess how they have applied what they learnt.

12 Millennium Development Goal 5.A: Reduce the maternal mortality ratio by three quarters between 1990 and 2015

5.1 Maternal mortality ratio

5.2 Proportion of deliveries attended by skilled health personnel

Millennium Development Goal 5.B: Achieve, by 2015, universal access to reproductive health

5.3 Contraceptive prevalence rate

5.4 Adolescent birth rate

5.5 Antenatal care coverage

5.6 Unmet need for family planning

13 Course details are available online at: www.gfmer.ch/SRH-Course-2012/index.htm

5. Planned activities

In 2013, RHR will strengthen its ASRH work in three key areas.

- RHR will continue to strengthen the evidence base, including the epidemiological basis for ASRH policies and programmes. During 2013, a multicountry study on the nature of sexual development in early adolescents will be initiated. Case studies on outstanding initiatives that have scaled up sexuality education and sexual and reproductive health (SRH) services will be evaluated and documented. The epidemiological data on selected aspects of ASRH (e.g. contraceptive needs and STI prevalence) will be strengthened. Studies to investigate barriers to scaling up SRH education and services and how to overcome these barriers (specifically relating to contraception, safe abortion care and maternal health care) will be initiated. Data on the prevalence of early pregnancy, within or outside child marriage, and the determinants of this will be strengthened, and the effects of wider social, economic and legal measures on early marriage and early pregnancy within and outside marriage will be documented and evaluated.
- RHR will continue to work with partners to press for attention to ASRH in the global public health agenda. Reviews on this topic will be initiated and completed in 2013, a meeting of experts to build consensus will be organized, and a strategy to disseminate its conclusions and recommendations and to engage key stakeholders will be developed and put in place.
- RHR will continue to work with partners to disseminate the knowledge generated and to build capacity to strengthen policies and programmes on ASRH in low- and middle-income countries. In the lead up to the MDG target date of 2015, RHR will make every effort to use the opportunities created by the *Global Strategy for Women's and Children's Health* and the H4+ initiative to strengthen policies and programmes to achieve MDG 5. Three key focus areas will be (i) preventing early pregnancy within and outside child marriage, (ii) increasing access to contraception, and (iii) preventing unsafe abortion and associated deaths.

Improving Maternal and Perinatal Health

Summary

Key objectives

The primary objective of the maternal and perinatal health (MPH) group is to generate new knowledge and synthesize existing knowledge to develop international norms and standards to improve maternal and perinatal health. The group engages actively in knowledge translation by developing and strengthening knowledge networks in MPH and disseminating evidence-based information in low- and middle-income countries. An essential component of the MPH team's work is in improving research and research methods and strengthening research capacity within its collaborative network. The MPH group tracks and supports innovations that have the potential to improve health outcomes for mothers and infants.

Major achievements

- Randomized controlled trial on the active management of the third stage of labour: The trial has been completed and the results published in *The Lancet*. The results showed that controlled cord traction can be omitted with little increase in the risk of postpartum haemorrhage in settings where skilled birth attendants are not available. The implications at policy and programme level are that in settings where skilled birth attendants are not available but injection capability exists, oxytocin intramuscular injection after birth should be incorporated into programme guidance.
- Multicountry cross-sectional survey on maternal and newborn health: The survey, which involved 370 health-care facilities in 29 countries, was completed and two main analyses have been submitted for publication. Key findings showed that to accelerate reductions in maternal mortality and severe morbidity, it is necessary to go beyond maximizing the coverage of essential interventions to consider additional facets of quality of care and to ensure timely and comprehensive management of complications.
- Multicountry study on fetal growth: HRP is implementing a 10-country study to develop international fetal growth standards by assessing fetal growth under nutritionally unrestricted conditions in different populations. Recruitment started in 2012 in three countries and will start in February 2013 in the remaining seven countries (Argentina, Brazil, Democratic Republic of Congo, Egypt, France, India, and Thailand).
- WHO recommendations for the prevention and treatment of postpartum haemorrhage: In 2012, WHO's two postpartum haemorrhage guidelines (on prevention and management, respectively) were updated and consolidated into one guidance document, including guidance on management of the third stage of labour and use of misoprostol by health workers in the community.
- WHO recommendations: optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting: After a process of discussions and consultations, the guidelines were prepared and published in 2012. This is the first guideline that helps to address critical health workforce shortages, with a view to improving access to key maternal and newborn health interventions.

1. Introduction

The work undertaken in the area of Maternal and Perinatal Health (MPH) taps on a wide range of disciplines with the aim to coordinate research and normative efforts from the laboratory to the health systems, public health to politics, society and culture and increase the awareness of the general public to issues related to maternal and newborn health. Work in these disciplines is briefly described below.

2. Basic sciences

2.1 Progress

In 2012, HRP again convened the annual meeting of the International Preterm Birth Collaborative (PREBIC). The analysis of phase II of the 'Preterm birth genome project' (PGP) was expanded to include new replication cohorts and updated results are expected in early 2013. The PGP consortium has secured funding for phase III: expansion to non-Caucasian populations from India, Mexico and the United States of America (USA).

3. Clinical research

In 2012, HRP continued to coordinate clinical trials.

3.1 Progress

The randomized controlled trial on the active management of the third stage of labour with and without controlled cord traction was completed and the results published by HRP in *The Lancet*.¹ More than 23 000 women from eight countries participated. The results indicate that controlled cord traction has a minimal role in reducing severe postpartum haemorrhage and health-care planners can focus on the uterotonic component for prevention in settings where it is difficult to deploy skilled birth attendants who can correctly perform cord traction.

HRP is leading the research on the Odón device, a new low-cost instrument used to deliver the fetus when complications occur during the second stage of labour. The Odón device may be a safer alternative to using forceps and vacuum extractor for assisted vaginal delivery and also may be a safer alternative to some caesarean sections in settings with limited surgical capacity and limited human resources. In 2012, the device has been tested with good results in 30 normal deliveries in Argentina. Recruitment will be expanded to centres in Hong Kong, Monaco, South Africa and Switzerland in 2013. Importantly, HRP was instrumental in identifying and engaging as a partner a major company (Becton, Dickinson and Company; also known as BD) that will acquire the license for manufacturing the Odón device and will collaborate with HRP in developing and optimizing it.

1 Gülmezoglu AM et al. Active management of the third stage of labour with and without controlled cord traction: a randomised, controlled, non-inferiority trial. *The Lancet*, 2012, 379(9827):1721–1727 (http://www.who.int/entity/reproductivehealth/topics/maternal_perinatal/3rd-stage-cord-traction.pdf).

HRP is implementing a multicountry study to develop fetal growth standards for international application by assessing fetal growth under nutritionally unrestricted conditions in different ethnic and geographic populations in 10 countries. By October 2012, 398 pregnant women had been recruited in Denmark, Germany and Norway. Recruitment in Argentina, Brazil, the Democratic Republic of the Congo, Egypt, France, India and Thailand will start in February 2013. The study is expected to finish in 2014.

In 2011, the Calcium and Pre-eclampsia (CAP) study was initiated to determine whether peri-conceptional calcium supplementation for women reduces the incidence of recurrent pre-eclampsia more effectively than supplementation starting at 20 weeks gestation (i.e. the current WHO recommendation). In 2012, sites in Argentina, South Africa and Zimbabwe started or continued recruitment. By November 2012, 648 women had been screened and 242 recruited, including 16 women who became pregnant and gave birth.

During 2012, HRP has been discussing with Wayne State University in Detroit, USA, the analysis of blood and urine samples collected during the implementation of the study on screening for pre-eclampsia. As a result of these discussions, it has been agreed that the analyses, led by HRP, will be performed during the first half of 2013 at Wayne State University.

Jointly with EngenderHealth, HRP is implementing a trial on the non-inferiority of short-term catheterization following fistula repair surgery. The specific aim is to determine whether or not short-term (7-day) catheterization is inferior to longer-term (14-day) catheterization in terms of incidence of fistula repair breakdown. Eight African countries are participating and the trial is progressing well. By October 2012, 273 women had been recruited. The trial is expected to be completed in December 2013.

3.2 Planned activities

- As part of the United Nations Commission on Life-Saving Commodities, a study is planned on oxytocin stability in extreme climate conditions. This is an observational study to evaluate how temperature changes in the supply chain affect the amount of active oxytocin present in ampoules at the point of care.
- A three-way confidentiality agreement has been signed with Ferring and Merck to discuss new data on a heat-stable formulation of carbetocin, a long-acting oxytocin agonist for potential low- and middle-income country use. In 2014, HRP plans to launch a multicentre randomized controlled trial to compare a new formulation of carbetocin to standard oxytocin.
- The Merck for Mothers initiative has prioritized work with HRP on increasing utilization of magnesium sulphate for pre-eclampsia/eclampsia. A technical consultation will be convened in 2013 to agree on a research plan.
- BOLD (Better Outcomes in Labour Difficulty) is an initiative currently being discussed with the Bill and Melinda Gates Foundation. The objective is to submit a planning grant early in 2013 to assess the feasibility of an intervention to improve detection of obstructed labour, with a view to improving intrapartum care and reducing perinatal deaths.

- At Newcastle University in the United Kingdom of Great Britain and Northern Ireland, scientists have developed a simplified, low-cost (less than US\$ 100) ultrasound device for possible obstetric use. HRP is discussing with the team and experts in obstetric ultrasonography how to test and develop the device for clinical application.

4. Social sciences

4.1 Progress

Women's magazines represent an important source of information on pregnancy and delivery that can influence women's opinions and decisions on childbirth. HRP started a multicountry systematic review of the information published in these magazines on the topic of caesarean section versus vaginal delivery. Results from Brazil were published in the *British Medical Journal* in 2011. The review of articles in Spanish magazines was submitted for publication in 2012. Similar conclusions emerged from both reviews. Results show that the majority of the articles published present no scientific or objective information about caesarean section and tend to underestimate its long-term and perinatal risks. Only a minority of the reviewed articles presented precise information that could help educate readers on the benefits and risks of different modes of delivery.

In collaboration with the University of Toronto and the Knowledge Translation Canada (KT Canada) programme, a study was conducted in Kosovo on factors associated with knowledge and the use of WHO MPH guidelines. The lack of communication between the Ministry of Health and professional organizations, and the lack of a proper supply chain for commodities were identified as the main barriers. An implementation strategy to overcome these identified barriers is planned.

5. Epidemiology

In 2012, HRP continued to conduct large epidemiological studies to generate evidence on the burden of maternal and perinatal health conditions and on the quality of the clinical management of pregnancy and childbirth complications.

5.1 Progress

The WHO multicountry survey on maternal and newborn health is a large cross-sectional study involving 370 health-care facilities in 29 countries. This project is focused on the management of severe complications of pregnancy and childbirth, and is based on the use of a maternal near-miss approach and a criterion-based clinical audit tool developed by RHR. Two main analyses, focusing respectively on maternal and perinatal outcomes, were carried out and the manuscripts submitted for publication in 2012. The results can be summarized as follows:

- To accelerate reductions in maternal mortality and severe morbidity, it is necessary to go beyond maximizing the coverage of essential interventions.
- It is important to consider other facets of quality of care, ensuring timely and comprehensive management of complications, including the early detection and appropriate treatment of organ dysfunctions.
- The maternal near-miss approach is useful for evaluating the quality and performance of maternal health care in health facilities.

A total of 10 secondary analyses are being prepared for publication in 2013.

Maternal puerperal sepsis is the third leading cause of maternal mortality. Normally, these deaths occur between 24 and 48 hours after delivery, mostly at the community level. Therefore, community-based detection, treatment and referral has the potential to prevent mortality and also morbidity related to this condition. In 2012, in collaboration with Johns Hopkins University, HRP conducted a systematic review of clinical algorithms to diagnose maternal puerperal sepsis for potential use at the community level. The manuscript with the results of the review has been submitted for publication.

5.2 Planned activities

In cooperation with six countries in the Eastern Mediterranean Region and the Collaborative Perinatal Neonatal Network (CPNN), a cohort study on early screening and intervention for the detection and treatments of impairments of cognitive and sensorial development is planned. This study will be conducted in the context of an inter-cluster project to develop a WHO programme on early childhood development. The first meeting of experts will be held in January 2013.

6. Health policy, NGOs and linkages with other institutions

6.1 Progress

HRP published the results of a secondary analysis of the WHO Global Survey on the role of faith-based (FBOs) and nongovernmental organizations (NGOs) in the provision of obstetric services in the Democratic Republic of the Congo, Kenya and Uganda. The results, published in the *American Journal of Obstetrics and Gynecology*,² showed that FBOs and NGOs were comparable to government institutions in their capacity to deliver obstetric care, as well as having higher rates of births attended by obstetricians and lower rates of some maternal and perinatal complications.

In 2008, the World Health Report stated that we must “resist the temptation to rely on user fees”.³ In the context of understanding barriers to universal care during pregnancy and childbirth, in 2012 HRP continued the collaboration with the NGO Doctors With Africa CUAMM within the framework of the operational project ‘Free access to quality delivery care in four faith-based hospitals in Africa’, which includes a research component measuring equity in access to maternity services. A manuscript with the results of this analysis has been submitted for publication.

The WHO near-miss approach for maternal health, released by RHR in 2011, has attracted the interest of a number of national ministries of health for local adaptation and implementation. HRP is currently working with specific countries (including China, Peru, Sri Lanka and Uganda) to document how policy-makers and specifically Parliamentarians can play an active role in advocating for women’s and children’s health and in translating the evidence collected through the multicountry survey on maternal and newborn health into policy action.

2 Vogel JP et al. Role of faith-based and nongovernment organizations in the provision of obstetric services in 3 African countries. *American Journal of Obstetrics and Gynecology*. 2012, 207(6):495.e1–7.

3 World Health Organization. World Health Report 2008. Primary Health Care. Now more than ever. Geneva, 2008.

With regard to preterm birth, HRP participated in the publication of two important reports: (1) the *White paper on maternal and newborn health and aftercare services in Europe* and (2) *Born too soon*. In addition, the team is working in collaboration with the European Foundation for the Care of Newborn Infants (EFCNI) and with the group of European Parliamentarians concerned about maternal and child health to organize a hearing at the European Parliament in early 2013, focusing on women's and infants' health.

The Department's collaboration with CDC, WHO Department of Nutrition and Development, WHO Collaborating Centre on the control of birth defects, and the International Clearinghouse for Birth Defects Surveillance and Research (ICBDSR) continued with the successful organization of the second course on birth defects surveillance, which was attended by more than 25 participants from several developing countries.

The DECIDE project ('Developing and evaluating communication strategies to support informed decisions and practice based on evidence') is a five-year project funded by the European Commission that aims to improve the dissemination and use of evidence-based recommendations by policy-makers. As part of this project, the MPH team conducted an international survey of a diverse group of stakeholders to determine perceptions of the DECIDE framework (for using evidence in health systems decisions) and evidence summaries. Respondents strongly favoured use of the DECIDE framework and clear, succinct summaries of evidence to inform health systems decision-making processes. The results of this survey were submitted for publication.

6.2 Planned activities

- In follow-up to the policy-maker survey conducted in 2012, HRP will actively engage with EU-DECIDE to test the instruments (i.e. the DECIDE framework and evidence summaries) for effectiveness in informing health-related decision-making processes among policy-makers.
- Since 2009, in collaboration with the Italian NGO ONDa (Osservatorio Nazionale sulla Salute de la Donna, or the National Observatory for Women's Health), HRP organizes an annual meeting on sexual and reproductive health with a group of Italian Parliamentarians. This collaboration informed Parliamentary action that led to legislation and health policy activities aimed at reducing the overuse of caesarean section in Italy. HRP is now working to disseminate and build on the results of this experience through advocacy platforms such as the International Parliamentary Union and Women Deliver.

7. Implementation science

7.1 Progress

The cluster randomized trial to determine the effectiveness of birth plans in increasing use of skilled care at delivery and in the postnatal period in a rural district in the north of the United Republic of Tanzania was completed, and a manuscript was submitted for publication. Results show that preparation of birth plans during antenatal care increased the uptake of skilled delivery and post-delivery care in the study district without negatively affecting women's and providers' satisfaction with available antenatal care services.

The formative research phase informing the design of a cluster randomized trial to improve the delivery of the WHO antenatal care model in Mozambique concluded that shortages in and ruptures of stocks of commodities is one of the major factors affecting the implementation of the model. On the basis of these results, the Steering Committee designed an intervention aimed at reducing barriers in the commodity supply system for antenatal care through a kit system. The intervention will be implemented using a step-wedge approach in 2013.

In 2012 HRP continued the collaboration with the United States National Institutes of Health (NIH) Global Network for Women's and Children's Health Research to implement a trial to increase the use of corticosteroids for the prevention of mortality in preterm newborns. The study is still in progress.

7.2 Planned activities

- In collaboration with the University of Toronto and the KT Canada programme, HRP will implement knowledge translation research and activities in the GREAT project (Guidelines, Research priorities, Evidence synthesis, Applicability of evidence, Transfer of knowledge). Knowledge translation methodologies will be used to identify barriers and facilitating factors to implementation of maternal and perinatal health guidelines in four countries (Argentina, Kosovo, South Africa and Thailand).
- As part of the United Nations Commission on Life-Saving Commodities for Women and Children (Recommendation 9), knowledge translation activities to improve clinical guideline implementation will be undertaken in three developing countries if funding becomes available. This will lead to an implementation strategy for health systems to improve the use of WHO guidelines, as well as identifying criteria to monitor guideline use.
- HRP is developing an implementation research project to improve the quality of intrapartum care with support from the United States Agency for International Development (USAID).

8. Advocacy and innovative financing

8.1 Progress

Building on the positive experience of the 'Women create life' project, an innovative mechanism for advocacy and mobilization of resources to improve women's and children's health, in 2012 the MPH team expanded the focus of its advocacy activities to launch a 'Women create life' Facebook page, which rapidly gathered over 150 000 fans, mostly from developing countries.

Also in 2012, several new art exhibits were organized, notably at the APEC meeting in Saint Petersburg, Russia. In addition to cause-related marketing initiatives, MPH started a close collaboration with Vogue Italy and its Editor in Chief, Ms Franca Sozzani. The collaboration aims at generating resources for HRP's work in women's and children's health through several fundraising activities. In addition, Vogue will collaborate with HRP to fully dedicate the features in its June 2013 issue to women's health issues. Following a Scientific and Technical Advisory Group (STAG) recommendation, the MPH team established a collaboration with Artakt, a department of the University of the Arts London (UAL) that specializes in the intersection between arts and sciences. A programme of advocacy and fundraising activities has been set up for 2013 including a high-level advocacy and cultural event to be held in Monaco in March.

8.2 Planned activities

- HRP will present several key projects at the forthcoming Women Deliver conference, to be held 28–30 May 2013. These projects will include the work on the task shifting guidelines and the multicountry survey on maternal and newborn health.

9. Norms and standards

9.1 Progress

Since 2007, HRP/RHR has been developing evidence-based guidelines on sexual and reproductive health using the GRADE approach for appraising the quality of evidence and determining the strength of recommendations. In 2012, the following guideline-related activities were undertaken:

- Prevention and treatment of postpartum haemorrhage: In 2012, the two postpartum haemorrhage guidelines – the *WHO recommendations for the prevention of postpartum haemorrhage (2007)* and the *WHO guidelines for the management of postpartum haemorrhage and retained placenta (2009)* – were updated and consolidated into one document: *WHO recommendations for the prevention and treatment of postpartum haemorrhage*.⁴
- Optimizing the delivery of key maternal and newborn health interventions through task shifting: Following preparatory meetings, an electronic forum discussion, systematic reviews and consultations, the guideline document was prepared and released in 2012. This is the first guideline that addresses this key human resource issue with a view to improving access to key interventions. The guidance includes maternal and newborn health interventions as well as contraceptive delivery.⁵
- Optimal birth spacing intervals: In 2012, the systematic review to assess optimal birth spacing intervals for the best possible maternal, perinatal, newborn, infant and child health outcomes was finalized. A manuscript presenting the findings was prepared and will be published in 2013.

9.2 Planned activities

- The WHO recommendations on augmentation of labour will be developed, and, in the context of the 'Born too soon' initiative, a guideline on prevention and management of preterm birth may also be initiated, depending on the resources available.
- In partnership with the Cochrane Pregnancy and Childbirth editorial base, HRP will conduct work to map the core outcome measures that have been used to date in pregnancy and childbirth research, and to reach a priority set of outcomes for both trials and guidelines. The first activities will include sepsis and labour augmentation.

4 Available at: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9789241548502/en/index.html

5 Available at: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/978924504843/e/index.html

- HRP is taking the lead in bringing together key international and national entities that release recommendations, such as the International Federation of Gynecology and Obstetrics (FIGO), the United Kingdom's National Institute for Health and Clinical Excellence (NICE), and several Obstetrics and Gynaecology national colleges, to collaborate in the development of guidelines that could receive the largest possible endorsement.
- The issue of the optimal caesarean section rate continues to challenge policy-makers and clinicians globally. To address this question, HRP will develop an analytical framework in 2013 in collaboration with key scientists in this field. It is anticipated that by 2014 an instrument for monitoring caesarean section rates and informing health policy action will be developed. This effort may also lead to an intervention project aimed at limiting the unjustified use of caesarean section.

10. Research prioritization

In November 2012, HRP started a prioritization exercise in the area of maternal and perinatal health. The objective of this exercise is to identify those areas of research that could contribute to tackling major causes of maternal morbidity and mortality. This exercise will follow the Child Health and Nutrition Research Initiative methodology (CHNRI), which allows systematic listing and transparent scoring of competing research options, exposing their strengths and weaknesses.

Prevention of Unsafe Abortion

Summary

Key objectives

The work on preventing unsafe abortion strives towards the goal of eliminating unsafe abortion using a multi-disciplinary approach that includes estimating the magnitude of the problem; conducting clinical, operations and social science research; developing appropriate guidelines and tools; and providing technical support to countries to implement safe, legal abortion care.

Major achievements

- WHO/RHR guidance on safe abortion: The second edition of Safe abortion: technical and policy guidance for health systems was launched in June 2012 and has subsequently been translated into French, Portuguese and Spanish. It presents new evidence-based recommendations on clinical care, service-delivery strengthening, and human rights and legal considerations.
- Workshops on dissemination and implementation of safe abortion guidance: Three regional workshops – in the African, European and South-East Asia Regions – were held to disseminate the guidance, and a subregional workshop involving 10 African countries was held in Kenya to develop detailed strategies for in-country implementation.
- Reporting research results: A special supplement issue of the International Journal of Gynaecology and Obstetrics entitled ‘Expanding access to medical abortion: Perspectives of women and providers in developing countries’ was devoted entirely to reporting on the results of the ongoing HRP research initiative for preventing unsafe abortion.
- Global and regional trends in safe and unsafe abortion: Induced abortion: incidence and trends worldwide from 1995 to 2008’ was published in *The Lancet*, generating widespread media attention. Overall, 43.8 million induced abortions were estimated to have taken place in 2008. The majority (86%) took place in developing countries and nearly half (49%) were unsafe, compared to 44% in 1995.
- Results of two clinical trials published:
 - (i) Findings of a multicentre randomized trial showed that cervical preparation with 400 micrograms of vaginal misoprostol can reduce the incidence of complications from vacuum aspiration for first trimester abortion (published in *The Lancet*).
 - (ii) Findings of a study of acceptability of misoprostol-only medical abortion showed that, given the choice between the misoprostol-only method and surgical abortion, the women who chose misoprostol-only medical abortion were more likely to be “satisfied” or “highly satisfied” with the procedure (published in the *British Journal of Obstetrics and Gynaecology*).

- Current research: The Department is coordinating the implementation of 17 operations research studies on expanding access to medical abortion, spanning 15 countries across Asia, Africa and Latin America, as well as two clinical trials – one on pain control and the other on cervical preparation prior to surgical abortion.
- Scaling up safe abortion care: With technical support from WHO, safe abortion care continued to be scaled up in both Moldova and Ukraine, and a pilot project was developed in Kyrgyzstan to demonstrate the feasibility, acceptability and effectiveness of training and supporting midwives to provide medical abortion in underserved rural areas.

1. Introduction

Nearly one out of every two abortions in the world is unsafe (49%). Every year, 21.6 million unsafe abortions take place, and nearly one in ten pregnancies ends in an unsafe abortion. Better access to and use of contraception, sexuality education and provision of care for complications are all essential to reducing unsafe abortion, as is the availability of safe, legal abortion care. HRP's work focuses on mapping and generating scientifically sound evidence on the incidence of unsafe abortion and related morbidity and mortality, with a view to improving technologies and interventions to make abortion safer. HRP also works to translate the available research evidence into norms, tools and guidelines, and to assist countries in the development of programmes and policies that prevent unwanted pregnancies, reduce unsafe abortion and improve access to safe, legal abortion. This work forms an integral part of WHO's efforts to improve reproductive health and to reduce maternal morbidity and mortality.

2. Estimates of the magnitude of unsafe abortion

2.1 Progress

The estimates of the magnitude of unsafe abortion that were published in 2011 were developed into simplified information sheets and a poster, for use by policy-makers and programme managers. The information sheets are available online at the HRP web site.

- *Unsafe abortion incidence and mortality: global and regional levels in 2008 and trends during 1990–2008*¹
- *Safe and unsafe induced abortion: global and regional levels in 2008, and trends during 1995–2008*²
- *Facts on induced abortion worldwide*.³

In collaboration with the Guttmacher Institute, the estimates on unsafe abortion were combined with estimates on safe abortion and a paper describing the global and regional trends in abortion was published in *The Lancet*.⁴ The findings generated widespread media attention, with over 300 newspapers, radio spots or television sound bites covering the news on the main findings. Overall, 43.8 million induced abortions were estimated to have taken place in 2008. The majority (86%) took place in developing countries and nearly half were unsafe (49%). The proportion of unsafe abortions has increased since 1995, when approximately 44% of all abortions were deemed unsafe. The numbers of all abortions, safe and unsafe, by region are shown in Table 1.

1 Available at: http://www.who.int/reproductivehealth/publications/unsafe_abortion/rhr_12_01/en/index.html

2 Available at: http://www.who.int/reproductivehealth/publications/unsafe_abortion/rhr_12_02/en/index.html

3 Available at: http://www.who.int/reproductivehealth/publications/unsafe_abortion/abortion_facts/en/index.html

4 Sedgh G et al. Induced abortion: incidence and trends worldwide from 1995 to 2008. *The Lancet*, 2012, 379(9816):625–632.

Table 1: Number of safe and unsafe induced abortions, 2008 (millions)

| | Total | Safe | Unsafe |
|--------------------|--------------|-------------|---------------|
| World | 43.8 | 22.2 | 21.6 |
| Developed regions | 6.0 | 5.6 | 0.4 |
| Developing regions | 37.8 | 16.6 | 21.2 |
| Africa | 6.4 | 0.2 | 6.2 |
| Asia | 27.3 | 16.5 | 10.8 |
| Latin America | 4.4 | 0.2 | 4.2 |
| Europe | 4.2 | 3.8 | 0.4 |
| Northern America | 1.4 | 1.4 | - |

An article was published that highlighted the need to prevent unintended pregnancy and increase access to safe and affordable abortion, particularly among young women in developing countries. Findings show that approximately 41% of all unsafe abortions that occurred in 2008 were among women below the age of 25 years, and one in every five unsafe abortions in 2008 occurred in Africa among young women aged 15–19 years, who are at greater risk of unsafe abortion compared to their counterparts in Asia or in Latin America and the Caribbean.

2.2 Planned activities

The next edition of the global and regional estimates of unsafe abortion will include data for 2012. The database is currently being updated. The new estimates will also attempt to capture the changing nature of risk from unsafe abortion (given the widespread practice of self-treatment with misoprostol), and will include disaggregated analyses to shed light on demographic, economic and social inequities. The document will also look at approaches to demonstrate the links between the legal situation and unsafe abortion.

3. Safe abortion guidelines

3.1 Progress

The second edition of *Safe abortion: technical and policy guidance for health systems* received final approval. A pre-publication version was introduced and discussed during a side event at the World Health Assembly, hosted by the Government of the Netherlands, and the guidance was officially released during the 2012 Policy and Coordination Committee (PCC) meeting. It presents new evidence-based recommendations on clinical care, service-delivery strengthening, and human rights and legal considerations.

The guidance is available in print in English and on the HRP web site in English and Spanish.⁵ French and Russian translations of the document are complete and will be on the web site within the coming weeks.

5 Available at: http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/

A derivative, companion document entitled *Clinical practice handbook for safe abortion care* was developed to reflect the recommendations for clinical abortion care, with additional detailed information for providers on the provision of abortion care. It has been submitted for executive clearance with publication expected in early 2013.

3.1.1 Dissemination and implementation of the guidelines

Since its launch, three regional workshops and one subregional workshop have focused on disseminating and implementing the updated guidance. These were conducted in the WHO European, South-East Asia, and African Regions. Overall, approximately 350 participants from ministries of health, WHO country offices and nongovernmental organization (NGO) partners from over 68 countries participated in the workshops. These included 28 European countries, 14 Asian countries and 26 in the African Region (10 Anglophone, 14 Francophone and 2 Portuguese-speaking countries). Apart from discussing the recommendations in the guidance, the workshops were used to develop country-specific priorities and plans of action for dealing with the problem of unsafe abortion. The importance and relevance of the issue and the level of in-country commitment can be gauged by the fact that at each meeting a significant proportion of participation was funded through the country or regional offices of the WHO and through partner organizations.

The evidence that underpins the clinical recommendations made in the guidelines has been compiled into an article entitled 'A review of evidence for safe abortion care' to be published in *Contraception* in 2013.⁶

3.2 Planned activities

- Guideline dissemination and implementation workshops will take place in other regions (resources permitting).
- As a follow-up to the workshops that have been conducted, WHO will work with selected countries in 2013 and beyond to provide technical support for revision of national standards and guidelines, conduct strategic assessments or test interventions aimed at expanding access to care. Selection of countries will depend on the interest from the country, availability of resources, geographical representation and the potential for achieving impact. As a specific follow-up to the workshops, countries have been asked to develop concept notes describing the priority actions that are needed in order to deal with the problem of unsafe abortion.
- Publication and active dissemination of the *Clinical practice handbook for safe abortion care* is also planned. An article outlining the various uses of misoprostol in reproductive health is also under preparation.

4. Operations research to expand access to medical abortion

The ongoing, multi-year research initiative on 'Social science and operations research to expand access to medical abortion' aims to provide evidence on the users', potential users' and providers' perspectives on medical abortion and to test interventions aimed at expanding access to medical abortion in low-resource settings.

6 Kapp N et al. A review of evidence for safe abortion care. *Contraception*, 2013 (in press).

4.1 Progress

The results from 10 studies during the first phase of the initiative were published in a special open-access supplement issue of the *International Journal of Gynecology & Obstetrics*, entitled 'Expanding access to medical abortion: perspectives of women and providers in developing countries'.⁷

The published studies reflect a diverse range of settings in Asia and Latin America, including contexts where abortion is not restricted and medical abortion is available as well as settings where safe abortion remains restricted by law or practice and where use of medical abortion is often informal and clandestine. The findings reflect the perspectives of providers, women abortion seekers and communities, as documented during the studies. The results as a whole highlight the lack of accurate knowledge among providers, the need to train non-physician providers and the need for training to include more than just clinical issues. In settings as diverse as Bolivia (restrictive laws) and India (liberal laws), lack of access to accurate information among women was demonstrated to be a key barrier contributing to high levels of unsafe abortion.

Included among the 10 studies in this compendium is an intervention study from Uruguay that successfully demonstrated the use of a harm reduction approach to making abortion care legally available within the restrictive legal conditions prevalent at the time, and a study from India that assessed post-abortion contraceptive uptake and continuation among women who underwent surgical abortions compared to those who had medical abortions. Contrary to the widely held belief that contraceptive use after medical abortion may be particularly low, the studies in India and Mexico showed that in settings where the quality of services and counselling is good and where contraception is available on site, contraceptive uptake after medical abortion is similar to that after an abortion with manual vacuum aspiration (MVA).

The results of several of the completed studies have been effectively used to bring about policy and programme change in the countries where the data were collected. For example, the researchers in Uruguay used the results of the risk reduction intervention to inform their efforts to advocate for legal reform.

Currently an additional 17 studies are under way (either in the phase of fieldwork or preliminary data analysis) including seven in Asia, seven in Africa and three in Latin America. This current set of studies focuses on interventions aimed at expanding access to care in low-resource settings. The topics include, among others:

- the role of providing information and training to pharmacists in reducing unsafe abortion (Kenya and Nepal);
- availability of misoprostol and whether this has altered the magnitude, severity and nature of unsafe abortion complications presenting to hospitals (Ghana, Laos, Myanmar, Nigeria and Sri Lanka);
- use of mobile cell phones to support women through medical abortion and to reduce the need for follow-up clinic visits (South Africa);
- the role of non-physician providers, such as nurses and community health workers, in providing abortions and related referrals and follow-up care (Ethiopia, Mexico, Nepal, South Africa and Uganda);

⁷ The full text of each article is available at the journal's website: [http://www.ijgo.org/issues?issue_key=S0020-7292\(12\)X0008-0](http://www.ijgo.org/issues?issue_key=S0020-7292(12)X0008-0)

- decentralizing services to public sector primary care settings (Bangladesh);
- analysis of the cost of providing safe, legal abortion versus providing post-abortion care (Colombia).

Results will be available in 2013.

4.2 Planned activities

- A further four studies are in the final stages of in-country approvals, with fieldwork expected to start shortly.
- During 2013, we expect the 17 ongoing projects to be finalized and the results disseminated through a special journal issue, other peer-reviewed articles and appropriate scientific forums. Research and policy briefs will be prepared based on the results of each study and overall articles synthesizing and collating findings from the disparate studies are also planned.
- An equally important outcome of the initiative will come when the research findings are translated into programme or policy action within individual local or national contexts and more broadly. Research teams have been encouraged to undertake locally appropriate activities towards that end. Subregional policy dialogues are planned for mid-2013 in Africa and South Asia to facilitate sharing of strategies across countries.

5. Improving technologies for safe abortion

5.1 Progress

HRP's clinical research is directed at simplifying and improving regimens for safe abortion, particularly regimens of medical abortion during the first and second trimesters of pregnancy, in addition to assessing the role, acceptability and method of preoperative cervical preparation and improving regimens of pain management during the abortion process.

5.1.1 Acceptability of misoprostol alone for first trimester medical abortion

Using data from a previously published multicentre, randomized, controlled equivalence trial to determine the most effective route of administration and dosing interval for medical abortion using misoprostol alone, we assessed the acceptability, at three discrete time points during the abortion process, of misoprostol-only medical abortion among women enrolled at six centres in Armenia, Georgia, India and Viet Nam. A total of 2339 women were included in the final analysis. Women choosing medical abortion reported being "highly satisfied" or "satisfied" 93% of the time, compared with 75% of women who requested surgical abortions. Acceptability generally persisted over time: among women receiving medical abortion 84% were "as satisfied" or "more satisfied" at the two-week follow-up, as were 96% of women in the surgical group. Sub-analyses of acceptability assessments were done among women who had a previous experience with either abortion method to compare with their most recent procedure. The only significant differences noted were that women who had a prior medical abortion and elected surgical abortion during this study were significantly more likely to be "more satisfied" with the surgical procedure (36% versus 10%, $p < 0.001$). A corollary was found among women who had previous experience with surgical abortion but chose a medical abortion during this pregnancy: members of

this group were significantly more likely to report being “more satisfied” with their current experience than those who elected a repeat surgical procedure (51% versus 24%, $p < 0.001$). This study of acceptability was published in *BJOG: An International Journal of Obstetrics & Gynaecology* in June 2012.⁸

5.1.2 Cervical preparation prior to surgical abortion in the second trimester

A randomized controlled trial is under way in South Africa comparing the use of buccal misoprostol to using laminaria for cervical priming prior to dilatation and evacuation (D&E). Women seeking abortion between 13 and 20 weeks gestation are randomized to one of two cervical preparation treatments: (i) misoprostol 400 micrograms with buccal administration approximately three to six hours prior to D&E and repeated three hours later if needed; or (ii) laminaria tents placed intra-cervically 18 to 24 hours prior to D&E. Approximately 100 women will be recruited to each treatment arm. Recruitment is in progress and enrolment is expected to be completed in early 2013.

The results of this study will be used to improve the quality of second trimester abortion care and to inform programmes and policies in other similar low-resource settings. The results of the study will also help to refine evidence-based clinical protocols for cervical priming prior to D&E around the world.

5.2 Planned activities

- In 2013, enrolment for a double-blinded, placebo-controlled randomized clinical trial comparing two strategies of pain management among women having early medical abortion will start in three countries: Nepal, South Africa and Viet Nam. The primary objective of the study is to determine whether prophylactic administration of ibuprofen is superior to administration after pain begins during the medical abortion process for reducing maximal reported pain levels.
- Secondary analysis of the data already published from the multicentre, randomized, placebo-controlled trial of cervical priming is under way, to assess whether acceptability of the procedure or of cervical priming varies depending on treatment with or without misoprostol.

6. Technical support to countries

6.1 Progress

During 2012, HRP provided technical support for safe abortion care to three countries: Kyrgyzstan, Moldova and Ukraine.

6.1.1 Scaling up access to and quality of safe abortion care in Moldova

The Moldova Ministry of Health (MoH), with technical support from the Reproductive Health Training Center (a national NGO) and technical and financial support from WHO, continued to scale up comprehensive outpatient abortion care in women's consultation units linked to perinatal and rayon-level health centres. By the end of August 2012, all infrastructure upgrades and health-care

⁸ Rodriguez M et al.; the World Health Organization Research Group on Post-Ovulatory Methods of Fertility Regulation. Acceptability of misoprostol-only medical termination of pregnancy compared with vacuum aspiration: an international, multicentre trial. *BJOG*, 2012;119(7):817–823.

provider training had been completed. Monitoring and evaluation at the project sites continues to demonstrate increasing numbers of induced abortions provided with vacuum aspiration and combination mifepristone and misoprostol, minimal use of dilatation and sharp curettage and general anaesthesia, very low rates of procedural complications, and a high rate of post-abortion contraceptive information and counselling sessions.

6.1.2 Scaling up access to and quality of safe abortion care in Ukraine

Based on the success of the pilot phase of the project (phase I), which initiated comprehensive services at three consultation centres, and the recommendations and priority actions identified and reported on in the previous STAG report, the MoH in Ukraine agreed that it would be important to scale up the 'Comprehensive care for unwanted pregnancies' (CCUP) approach in Ukraine. A workshop dedicated to the development of a strategy for scaling up was organized in Kyiv in October 2012 and brought together more than 40 representatives from government and nongovernmental institutions, international partner organizations, representatives of scientific and research institutions, stakeholders and partners from the regions of Ukraine.

Phase II of the project, to run from 2012–2014, is supporting the CCUP activities in the original pilot oblasts and also includes new pilot sites. The project will also include new activities to develop the capacity of medical personnel at perinatal centres who provide services for second trimester abortions. The project is supported by the Swiss Agency for Development and Cooperation (SDC) and is implemented by the MoH in close partnership with the NGO Women's Health and Family Planning (WHPF) and with technical support from HRP.

6.1.3 Technical support to Kyrgyzstan to develop a project to train midwives to provide medical abortion

At the request of the Kyrgyz MoH and as a response to a priority recommendation in the strategic assessment conducted in 2011, HRP provided technical assistance to develop a pilot project to demonstrate the feasibility, acceptability and effectiveness of training and supporting midwives to provide medical abortion in rural underserved areas of Kyrgyzstan.

6.2 Planned activities

- Monitoring and evaluation will continue for current projects in Moldova and Ukraine. The experience and lessons learnt from scaling up will be documented.
- HRP staff will support the Kyrgyz Ministry of Health to implement a demonstration project to train midwives to provide medical abortion services.
- Previous experiences with the strategic assessment approach in Africa will be documented through a peer-reviewed publication.

Controlling Sexually Transmitted and Reproductive Tract Infections

Summary

Key objectives

The programme of work of the team on Controlling Sexually Transmitted and Reproductive Tract Infections (the STI team) includes: (i) mapping and generating evidence, testing interventions, improving technologies; (ii) developing evidence-based norms, tools and guidelines; and (iii) providing technical support to countries.

Major achievements

- Global STI estimates: In 2012, the STI team published *Global incidence and prevalence of selected curable sexually transmitted infections – 2008*, which noted an estimated 500 million new infections among adults aged 15–49 years with four curable STIs: chlamydia, gonorrhoea, syphilis and trichomoniasis.
- Guidance on STIs and HIV published in 2012:
 - *Strategies and laboratory methods for strengthening surveillance of sexually transmitted infections 2012*;
 - *Global action plan to control the spread and impact of antimicrobial resistance in Neisseria gonorrhoeae*;
 - *Guidance for the prevention and treatment of HIV and other sexually transmitted infections for sex workers in low- and middle-income countries* in collaboration with the WHO Department of HIV/AIDS.
- Guidance on cervical cancer published in 2012:
 - *Prevention of cervical cancer through screening using visual inspection with acetic acid (VIA) and treatment with cryotherapy – A demonstration project in six African countries: Malawi, Madagascar, Nigeria, Uganda, the United Republic of Tanzania, and Zambia*;
 - *WHO technical specifications: cryosurgical equipment for the treatment of precancerous cervical lesions and prevention of cervical cancer*;
 - *WHO guidance note: comprehensive cervical cancer prevention and control – a healthier future for girls and women*;
 - In addition, during 2012, staff working on cervical cancer prevention and control have been updating the 2006 publication *Comprehensive cervical cancer control: a guide to essential practice*. A systematic review was conducted on screen-and-treat to inform WHO guidelines, and workshops to roll out national plans have been jointly organized with WHO offices in the regions.
- Mother-to-child transmission of syphilis: The team finalized the *Investment case for eliminating mother-to-child transmission of syphilis*, which outlines the rationale for investment in 12 countries.

- Antimicrobial resistance (AMR) in *Neisseria gonorrhoeae*: In support of the global action plan launched in June 2012, the major focus of activities was on strengthening the Gonococcal Antimicrobial Surveillance Programme (GASP) network and national reference laboratories.
- The STI surveillance roadmap: The roadmap has been finalized; a global reporting system established; and efforts to improve STI surveillance have been initiated in all WHO Regions.
- Research to improve cervical cancer prevention and control: Two key research protocols for multicountry studies have been developed and are ready for implementation with support from the GAVI Alliance, both in the United Republic of Tanzania: (i) Introduction and impact of the careHPV™ test in cervical cancer prevention and control programmes; and (ii) Integration of HPV vaccines with an adolescent health package.

1. Introduction

The RHR Department works to control sexually transmitted infections (STIs) and other reproductive tract infections (RTIs) in response to the recommendations made in WHO's first Global Reproductive Health Strategy, adopted by the 57th World Health Assembly in May 2004 (WHA57.12), and in the Global Strategy for the Prevention and Control of Sexually Transmitted Infections 2006–2015, approved by the World Health Assembly in May 2006 (WHA59.19).

2. Strategic information on STIs

2.1 Progress

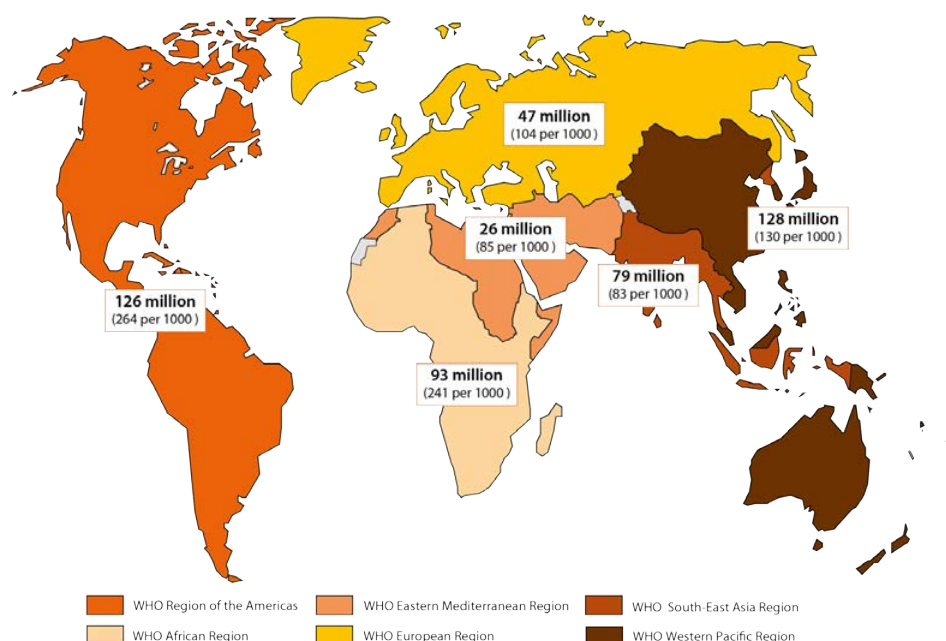
In 2012, the STI team published global estimates for 2008 of four curable STIs in adults aged 15–49 years: chlamydia (*Chlamydia trachomatis*), gonorrhoea (*Neisseria gonorrhoeae*), syphilis (*Treponema pallidum*) and trichomoniasis (*Trichomonas vaginalis*) (Figure 1). These estimates show the total number of new cases occurring in 2008 to be approximately 499 million, an 11% increase from the 2005 estimate of 448 million. In addition, 536 million people are estimated to be living with incurable herpes simplex virus type 2 (HSV-2) infection, and approximately 291 million women have a human papillomavirus (HPV) infection at any point in time. These data suggest that more than a million people acquire an STI every day.

The STI team also released a guidance tool for STIs at the national level: *Strategies and laboratory methods for strengthening surveillance of sexually transmitted infections 2012*.¹

To assist countries in using this tool, WHO developed a roadmap: Strengthening STI surveillance globally – a roadmap for improving the use of STI data to improve programmes. The roadmap outlines a 2–3 year plan to develop feasible reporting systems, to strengthen existing systems, and to use data to improve programmes at the national, regional and global levels. The roadmap was based on systematic reviews and needs assessments conducted with each of the regions in August 2012.

1 Available at: <http://www.who.int/reproductivehealth/publications/rtis/9789241504478/en/index.html>

Figure 1. Estimated numbers of new cases and incidence rates per 1000 population of curable sexually transmitted infections (gonorrhea, chlamydia, syphilis, and trichomoniasis) among 15-49 year-olds by WHO region, 2008



The implementation of the roadmap is under way: STI surveillance strengthening has been conducted in two countries (Argentina and Uruguay) and an STI surveillance workshop was held with participants from over 27 countries in the Americas.

2.2 Planned activities

Guidelines, tools and norms:

- The French, Russian and Spanish versions of Strategies and laboratory methods for strengthening surveillance of sexually transmitted infection 2012 will be finalized.
- Country pilot experiences will be used to develop tools to assist other countries.

Surveillance:

- Global data will be collected on an additional five STI indicators through the Global AIDS Response Progress Reporting (GARPR) system.
- STI-themed web pages and additional STI data will be added to the Global Health Observatory (GHO) for improved dissemination of information on the global STI burden of disease.
- The first global STI surveillance report will be released, summarizing available global data sources and indicating the next steps for improving STI data.

STI estimates:

- In collaboration with Erasmus University, the STI team will explore improved methods for estimating global STI burden and monitoring progress toward the Global STI Strategy (the method currently used by WHO is based primarily on the review of peer-reviewed publications, which are limited in number for several regions and several STIs).

Support to countries:

- STI surveillance will be strengthened in seven countries: China, India, Indonesia, Moldova, Mongolia, Myanmar, and in Zimbabwe.

Research:

- A research protocol will be submitted to the WHO Ethical Review Committee (ERC) to assess combining targeted prevention with HIV and STI surveillance among men who have sex with men (MSM) in Europe (the SIALON II study).

3. Global elimination of congenital syphilis

3.1 Progress

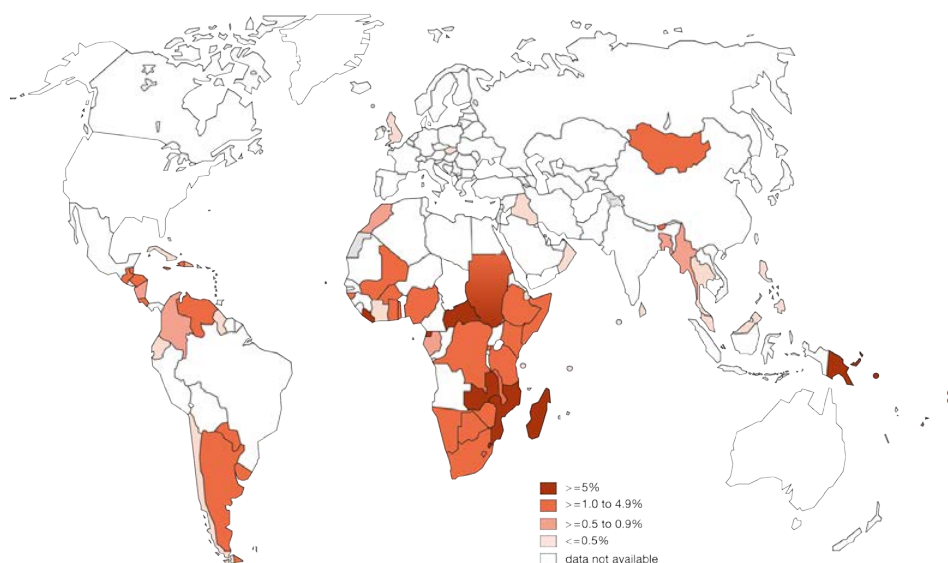
3.1.1 Monitoring and evaluation

In June 2012, the STI team and the HIV/AIDS Department jointly organized a technical consultation to develop criteria and processes for validation of elimination of mother-to-child transmission (eMTCT) of HIV and syphilis. UNFPA, UNAIDS and UNICEF co-sponsored this meeting in addition to country-level pilot exercises in Botswana, Cambodia, Kazakhstan, Malaysia, Moldova, South Africa and St Lucia. A draft global guidance document is under review and a global surveillance case definition for congenital syphilis is being validated in China.

The tool Methods for surveillance and monitoring of congenital syphilis elimination within existing systems is now available in English, French and Russian.² This tool has been used by countries and regions in several settings, including 10 video-conference training sessions with countries in Africa on the GARPR reporting system.

Figure 2

Syphilis seropositivity among women attending antenatal care reported through the World Health Organization HIV Universal Access reporting system as of 2010.



² Available at: <http://www.who.int/reproductivehealth/publications/rtis/9789241503020/en/index.html>

The STI team summarized progress towards eMTCT of syphilis in 80 countries in Progress report 2011: Global HIV/AIDS response – Epidemic update and health sector progress towards universal access which included a world map on syphilis seropositivity among antenatal care attendees (Figure 2).³ Data are also available through the GHO repository on syphilis seropositivity and syphilis testing coverage among antenatal care attendees.⁴ The report *Global estimates of syphilis in pregnancy and associated adverse outcomes in 2008: demonstrating the need for improved antenatal care services*⁵ was finalized and has been published in PLOS Medicine. Preliminary 2011 estimates indicated a decrease in the estimated number of pregnant women with syphilis from approximately 1.4 million in 2008 to 800 000 in 2011, due in part to the decrease in overall syphilis positivity in several regions.

3.1.2 Advocacy and awareness

The STI team finalized the *Investment case for eliminating mother-to-child transmission of syphilis: promoting better maternal and child health and stronger health systems*, which outlines the rationale for investing in eMTCT of syphilis in 12 countries.⁶

The Global Congenital Syphilis Partnership (GCSP) was launched in June 2012 to champion eMTCT of syphilis. WHO will collaborate with this new partnership, which includes the London School of Hygiene and Tropical Medicine (LSHTM), the Bill & Melinda Gates Foundation, Save the Children, and the United States Centers for Disease Control and Prevention (CDC).

3.1.3 Support to countries

The STI team is working with the WHO regional and country offices in Papua New Guinea and Indonesia to scale up rapid syphilis testing and to train trainers. WHO is also working with partners in Zambia to scale up dual eMTCT of syphilis and HIV.

3.1.4 Research

The Mozambique National Health Institute (INS), Health Alliance International (HAI), and WHO are conducting a study in central Mozambique to evaluate the effectiveness of syphilis treatment at different times during pregnancy and to evaluate new diagnostic tools for congenital syphilis. As of September 2012, over 10 000 women had been enrolled.

The China National STD Control Center, University College London (UCL) and WHO have jointly conducted a policy analysis of the integrated programme on prevention of MTCT of HIV, syphilis and hepatitis B, to understand the role of policy in programme success.

A meta-analysis of studies reviewing the expected frequency of adverse outcomes of untreated syphilis in pregnancy was published in *the Bulletin of the World Health Organization*.⁷

3 Available at: http://www.who.int/hiv/pub/progress_report2011/en/index.html

4 Available at: <http://apps.who.int/gho/data/?theme=main>

5 Newman L et al. (2013) Global Estimates of Syphilis in Pregnancy and Associated Adverse Outcomes: Analysis of Multinational Antenatal Surveillance Data. PLoS Med 10(2): e1001396. doi:10.1371/journal.pmed.1001396

6 Available at: http://www.who.int/reproductivehealth/publications/sexual_health/9789241504348/en/index.html

7 Gomez GB. Untreated maternal syphilis and adverse outcomes of pregnancy: a systematic review and meta-analysis. *Bulletin of the World Health Organization*, 2013, 91:217–226 (<http://www.who.int/bulletin/volumes/91/3/12-107623/en/index.html>).

PLOS One has accepted for publication a systematic review by the University of Brasilia, UCLA and WHO regarding the safety of benzathine penicillin, as fear of adverse reactions has been considered a barrier to same-day testing and treatment of syphilis in pregnancy.

An evaluation of the Perinatal Information System (SIP) to look at how to improve monitoring of adverse outcomes of syphilis in pregnancy has been completed in Peru.

3.2 Planned activities

Monitoring:

- A summary of global progress in eMTCT of syphilis will be published in a joint UNICEF/WHO publication, in addition to the publication of a WHO global STI report, and finalization of the global estimates of syphilis in pregnancy and associated adverse outcomes for 2011.
- RHR's STI team will work with PATH through a Bill & Melinda Gates Foundation grant in three countries (Ethiopia, India and Nigeria) to improve the evidence on the burden of MTCT of syphilis.

Guidelines:

- Global guidance on validation of eMTCT of HIV and syphilis will be released, and a global validation committee will be established to oversee the process.

Advocacy:

- The Investment case for eliminating mother-to-child transmission of syphilis will be formally launched at the Women Deliver Conference (May 2013).

Support to countries:

- WHO's STI team will work with key partners to create country profiles that summarize data necessary to engage countries and partners in implementing eMTCT of syphilis.
- The STI team will continue to provide technical support to regions and countries, with specific focus on dual elimination in the 12 'investment case' intensified-support countries.

Research:

- A protocol will be finalized in collaboration with Population Council for a multicountry field evaluation of dual HIV/syphilis rapid diagnostic tests.

4. Antimicrobial resistance in *Neisseria gonorrhoeae*

Antimicrobial resistance (AMR) in *N. gonorrhoeae* has consistently been documented to penicillins, tetracyclines, macrolides (including azithromycin) and fluoroquinolones. Only third-generation cephalosporins now remain recommended as the first-line treatment regimen for gonococcal infections. Resistance to cephalosporins is emerging and numerous cases of treatment failure have been reported. In some countries where gonococcal antimicrobial susceptibility surveillance is taking place, there are rising trends of decreased susceptibility in *N. gonorrhoeae* to ceftriaxone and cefixime (Table 1). Presumably, this is only the tip of the global health burden, as data from resource-constrained settings are scarce and a silent epidemic of AMR may be occurring.

Table 1. Number of countries participating in the Gonococcal Antimicrobial Surveillance Programme (GASP) network and reporting decreased susceptibility in *N. gonorrhoeae* to ceftriaxone or cefixime (2010)

| WHO Regions | Regional GASP focal point | Countries participating in GASP | Countries reporting decreased susceptibility to ceftriaxone or cefixime |
|-----------------------|--|---------------------------------|---|
| African | Currently none – Sexually Transmitted Infections Reference Centre, National Institute of Communicable Diseases, National Health Laboratory Service, Johannesburg, South Africa (until February 2012) | 4 | 1 |
| Americas | University of Saskatchewan, Saskatoon, Canada | 13 | 3 (including USA and Canada) |
| Eastern Mediterranean | National Institute of Hygiene, Ministry of Health, Morocco | 1 | - |
| European | National Reference Laboratory for Pathogenic Neisseria, Department of Laboratory Medicine, Microbiology, Örebro University Hospital, Sweden | 17 | 10 |
| South-East Asia | Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi, India | 6 | 1 |
| Western Pacific | Sydney Department of Microbiology, South Eastern Area Laboratory Services (SEALS), The Prince of Wales Hospital, Sydney, Australia | 13 | 5 |
| Total | | 54 | 20 |

4.1 Progress

The Global action plan to control the spread and impact of antimicrobial resistance in *Neisseria gonorrhoea* was launched in June 2012.⁸ Advocacy materials were developed to increase awareness of the need to support the *Global action plan*.⁹

To highlight recent trends in gonococcal AMR, a satellite symposium, 'Antimicrobial resistance in *Neisseria gonorrhoeae*: mitigating the consequences of untreatable *gonorrhoea*', was organized by the STI team during the October 2012 World Congress of the International Union against Sexually Transmitted Infections (IUSTI).

The major focus of activities towards the end of 2012 was on strengthening the GASP network and laboratory capacity of participating countries.

WHO supported the Region of the Americas to strengthen the regional GASP network in Latin America and the Caribbean, linked to a broader AMR initiative. The Argentina National Reference Center for STI has been strengthened as a regional reference laboratory. The European GASP network has been supported to expand country participation among Eastern European Countries, including Kazakhstan.

Cameroon was supported to implement a national plan for control of gonococcal AMR, and as a potential reference centre for GASP in the Central African region. The United Republic of Tanzania and Zimbabwe have been supported to strengthen their national GASP networks.

8 Available at: <http://www.who.int/reproductivehealth/publications/rtis/9789241503501/en/index.html>

9 Available at: http://www.who.int/reproductivehealth/publications/rtis/who_rhr_11_14/en/index.html

The Western Pacific and the South-East Asia regional GASP networks continue to maintain participating countries. Training of staff at national reference laboratories on gonococcal antimicrobial surveillance was conducted in the Region of the Americas (11 countries), the European Region (2 countries), the South-East Asia Region (7 countries) and the Western Pacific Region (2 countries). Greater collaboration was established between the Western Pacific regional GASP network and CDC for exchange of reference gonorrhoea cultures that have been characterized phenotypically and genotypically (WHO panels) to be used to develop new antimicrobials.

4.2 Planned activities

Surveillance:

- WHO's STI team will lead the dissemination of current data on gonococcal antimicrobial resistance (AMR), including developing maps and increasing links to the Global Health Observatory.

Support to countries:

- The global GASP network will be strengthened, with particular focus on the African and Eastern Mediterranean regional GASP networks, and linked with broader STI surveillance strengthening.

Partnerships:

- The WHO STI team will ensure regular exchange of information and technologies among the regional GASP focal points and partners.
- The STI team will organize a global meeting on gonococcal AMR to review and standardize criteria for decreased susceptibility to cephalosporins, identify research gaps, and review progress in implementation of the AMR global plan.
- Linkages with the global AMR initiative will be maintained, to support the implementation of the gonococcal AMR action plan.

5. STI Norms and Guidelines

5.1 Progress

One of WHO's core functions is to assess new evidence and innovations and translate them into concrete guidance for countries. The STI team has just released several tools on surveillance and STI laboratory diagnosis. These include:

- *Manual for laboratory diagnosis of sexually transmitted infections* (final stage of development)
- *Strategies and laboratory methods for strengthening surveillance of sexually transmitted infections*
- *Methods for surveillance and monitoring of congenital syphilis elimination within existing systems.*

The following guidance documents on cervical cancer have also been released:

- *WHO guidelines: use of cryotherapy for cervical intraepithelial neoplasia*
- *WHO technical specifications: cryosurgical equipment for the treatment of precancerous cervical lesions and prevention of cervical cancer*
- *Comprehensive cervical cancer prevention and control: a healthier future for girls and women (WHO guidance note).*

The STI team supported the development of various HIV prevention guidelines, which included STI management. These are:

- *Prevention and treatment of HIV and other sexually transmitted infections among men who have sex with men and transgender people*¹⁰
- *Guidance for the prevention and treatment of HIV and other sexually transmitted infections for sex workers in low- and middle-income countries.*¹¹

STI prevention and control guidelines

As noted in the global regional advisors meeting in July 2012, the release of new STI prevention and control guidelines should be prioritized by WHO and guidelines updated and disseminated as soon as possible. Review and update of the WHO *Guidelines for the management of sexually transmitted infections* (2003) is needed in order to incorporate recent scientific advances to strengthen STI prevention, diagnosis and treatment. It is a critical normative function of WHO to increase visibility of STIs and provide the basis for surveillance and research.

A proposal was developed to map out a process to develop STI prevention and care guidelines and for resource mobilization. Resource mobilization has been initiated, but remains a challenge. A WHO STI Steering Group, consisting of WHO staff from various relevant departments, was convened in October 2012 to discuss the scope of the guideline (STI priority areas) and define key STI questions and recommendations. Based on WHO STI steering group recommendations, a scoping document is being prepared to define priority areas, target audience, interventions, and outcomes.

5.2 Planned activities

- Current STI guidelines/tools will be disseminated and support will be provided for country adaptation, including an orientation workshop on WHO STI guidelines at the 20th Meeting of the International Society for Sexually Transmitted Diseases Research (ISSTD), and the 14th World Congress of the International Union against Sexually Transmitted Infections (IUSTI).
- Resources will be mobilized to support the development of updated STI prevention and control guidelines.
- The STI team will work with the HIV Department to develop operational tools for implementation of the guidelines on HIV/STI prevention and treatment for sex workers.

6. Cervical cancer

The WHO inter-cluster working group, led by the STI team, focuses on ensuring the availability of alternative screening technologies, such as visual inspection with acetic acid (VIA), and new vaccines against the human papillomavirus (HPV). The working group takes a life-course approach to cervical cancer prevention and control from childhood through adulthood, since HPV vaccination targets 9 to 13-year-old girls.

The work on cervical cancer has been highlighted in the *Political declaration of the high-level meeting of the General Assembly on the prevention and control of noncommunicable diseases*, and cervical cancer indicators have been included in the comprehensive global monitoring framework for the prevention and control of noncommunicable diseases.

¹⁰ Available at: http://www.who.int/hiv/pub/guidelines/msm_guidelines2011/en/

¹¹ Available at: http://www.who.int/hiv/pub/guidelines/sex_worker/en/index.html

6.1 Progress

6.1.1 Update of the Comprehensive cervical cancer control: a guide to essential practice

The Expert Steering Committee (SC) was re-established in January 2012 to provide scientific input to update the 2006 guidance in the following areas: programmatic considerations; health education and prevention; HPV vaccines; screening and management of pre-cancer (including HIV-positive populations); management of invasive cancers; and palliative care.

SC members include leading international experts who are actively involved in cervical cancer research and represent leading research organizations, members of the WHO secretariat, representatives of four different WHO regions, and of the International Agency for Research on Cancer (IARC).

To date the following has been accomplished:

- developed PICO questions for guidance on screening and treatment
- updated guidance on health education for prevention and control
- convened the second SC meeting to formulate recommendations relating to prevention, screening, treatment and health education (chapter 3 of the guidance) and to review chapters 6 and 7 overall.

In parallel, three companion guidelines have been developed:

- *WHO guidelines: use of cryotherapy for cervical intraepithelial neoplasia*¹²
- *WHO technical specifications: cryosurgical equipment for the treatment of precancerous cervical lesions and prevention of cervical cancer*¹³
- *Monitoring national cervical cancer prevention and control programmes: quality control and quality assurance for visual inspection with acetic acid*¹⁴ (VIA)-based programmes.

6.1.2 Research to improve cervical cancer prevention and control

Two key research protocols for multicountry studies have been developed and are ready for implementation with support from the GAVI Alliance:

- **Introduction and impact of the *careHPV*[™] test in cervical cancer prevention and control programmes:** This operational research will be conducted in the United Republic of Tanzania to introduce the new rapid DNA-based HPV screening test for cervical cancer (*careHPV*[™]). The United Republic of Tanzania has been previously supported to implement cervical cancer screening and treatment with VIA and cryotherapy. The field performance of *careHPV*[™] will be assessed in a variety of settings to determine reproducibility, feasibility and acceptability of *careHPV*[™], as well as overall impact and to determine if it is able to perform as intended.
- **Integration of HPV vaccines with an adolescent health package:** This study will explore the feasibility of integrating adolescent health interventions within a national HPV vaccination programme in the United Republic of Tanzania. A

¹² Available at: <http://www.who.int/reproductivehealth/publications/cancers/9789241502856/en/index.html>

¹³ Available at: <http://www.who.int/reproductivehealth/publications/cancers/9789241504560/en/index.html>

¹⁴ Available at: <http://www.who.int/reproductivehealth/publications/cancers/9789241505260/en/index.html>

situation analysis will be conducted on existing adolescent and school-based health interventions. Findings will define the potential set of adolescent health interventions with which the HPV vaccine could be packaged, and will inform the development of a further research proposal.

A literature review was conducted to identify effective, evidence-based adolescent health interventions. Based on the review, a package of interventions was identified. These interventions should be adapted to country context and could be delivered taking the opportunity of introduction of HPV vaccine. A review article has been accepted by the *Journal of Adolescent Health*.

6.2 Planned activities

Guidelines:

- The STI team will finalize and publish the updated *Comprehensive cervical cancer control: a guide to essential practice*. WHO recommendations for cervical cancer screening and treatment will also be published separately.
- An evidence-based package of sexual health interventions for adolescents (including STIs) will be developed in collaboration with other departments.

Research:

- Research will be implemented on rapid HPV screening tests and on integration of HPV vaccination with an adolescent health package.
- Collaboration will continue with IARC on the multicentre study of cervical cancer screening and triage with HPV testing (ESTAMPA) to validate the new HPV screening tests. This study will be initiated in Colombia before expanding to other regions.

Support to countries:

- Provide support to focus countries for rolling out their national HPV vaccination programmes in the South-East Asia Region (Bangladesh, Bhutan, Nepal and Timor Leste), the African Region (Cameroon, Kenya, Madagascar and the United Republic of Tanzania) and the Western Pacific Region.
- Ensure that cryotherapy equipment is included in the reproductive health commodities and priority list, and that countries can procure equipment through the WHO or UNFPA procurement system.

7. Roadmap for STI vaccine development

7.1 Progress

In collaboration with the Department for Immunization, Vaccines and Biologicals (IVB), the STI team established a new 18-month project scheduled for completion in October 2013, aimed at reviewing progress in STI vaccine development and defining WHO's role. A WHO global action plan and a roadmap for STI vaccine development and introduction will be developed through an external technical consultation, which will review the evidence base on the needs, progress and development of new STI vaccines, as well as the relevant policy and programmatic implications. An agreement has been reached with the journal *Vaccine* to publish a special issue on STI vaccines by October 2013. The special issue will be co-edited by WHO and the United States National Institutes of Health (NIH). A detailed outline of articles for this special issue has been finalized, with the agreement of the potential authors.

7.2 Planned activities

In March 2013, an international meeting with partners and international experts will be convened to identify STI vaccines to be prioritized and to develop a roadmap for international agencies to catalyse, stimulate and commit to the development of STI vaccines.

8. Future research to improve technologies, tools and interventions

Despite the availability of several interventions to combat STIs, little progress has been made. Many resource-rich countries have developed high-quality services for diagnosis and treatment of STIs, but resource-poor countries lag far behind. Yet, with renewed energy and commitment, opportunities are available to jump-start STI-control efforts in resource-poor countries and to integrate STI care into existing services for primary health care, reproductive health and HIV.

One of the most urgent needs in the developing world is for rapid point-of-care (POC) diagnostic tests, such as those available for syphilis testing and for other STIs, in order to address the much larger burden of asymptomatic STIs. These POC tests could also make integration of STI services into primary health-care, antenatal and HIV-care settings far simpler and more feasible. Several bundled rapid diagnostics are being developed and tested – for example, a single POC test to detect both syphilis and HIV.

New effective vaccines and other biomedical interventions against STIs are currently in the pipeline. Development of a vaccine for HSV-2 is in progress; this could have a dramatic impact on the spread of HIV, in addition to alleviating the suffering associated with the symptoms of genital herpes. In a recent clinical trial, a microbicide gel containing tenofovir was found to halve the risk of HSV-2 infection, and is currently being evaluated in a second trial. Active research will continue to evaluate new microbicides, including those delivered by vaginal rings, for prevention of HIV, HSV-2 and other STIs.

Given increasing reports of gonorrhoea resistance to treatment, investment in the development and validation of new drugs for the treatment of gonorrhoea is critical.

WHO will continue to advocate for and coordinate the advancement of STI vaccines, microbicides and other new technologies, including:

- new dual syphilis/HIV rapid diagnostic tests, which can support the efforts towards dual eMTCT of HIV and syphilis;
- rapid POC diagnostics for chlamydia and gonorrhoea;
- introduction of HPV vaccines to strengthen adolescent health, in collaboration with the GAVI Alliance and other WHO departments;
- vaccines and microbicides against HSV-2 that could have a dramatic impact on HSV and HIV control and may catalyse the development of vaccines for other STIs;
- multi-purpose technologies to prevent HIV, other STIs and unintended pregnancies;
- new drug regimens for treatment of gonorrhoea.

The STI team will organize a meeting in 2013 to define the priorities and plan for the mobilization of resources for these new areas of work.

Linkages between sexual and reproductive health and HIV/AIDS

Summary

Key objectives

The objective of the Department's work in this area is to strengthen linkages between sexual and reproductive health (SRH) services and HIV interventions in order to transform the broader health and development agenda and accelerate progress towards the Millennium Development Goals (MDGs) on gender equality, child health, maternal health and HIV interventions (MDGs 3–6).

Major achievements

- *Rapid assessment tool for sexual and reproductive health and HIV linkages*: This tool has been implemented in nine additional countries in 2012, bringing to 45 the number of countries that have implemented the assessment tool since 2008. A number of country case studies have also been finalized and widely disseminated through the SRH-HIV Interagency Working Group convened by RHR (srhhivlinkages.org)
- Multi-site randomized controlled trial in Zambia to develop and evaluate new models of integrated postpartum care for women (including women living with HIV): The first year of the trial has been completed.
- Assessing the expenditures and performance impact of investments in SRH from the Global Fund to Fight AIDS, Tuberculosis and Malaria: The Ethiopia country case study has been completed, highlighting ways to improve accountability.
- *Strategic Framework for preventing HIV and unintended pregnancies 2011–2015*: The Strategic Framework was finalized and published by the Interagency Task Team (IATT) on Prevention and Treatment of HIV Infection in Pregnant Women, Mothers and their Children.
- Special supplement issue of *Reproductive Health Matters*: A special supplement on 'Pregnancy decisions of women living with HIV' was launched at the International AIDS Conference in July 2012, including a range of evidence-based research papers and commentaries covering key emerging issue such as hormonal contraception and HIV.
- Events organized by PDRH:
 - the first meeting of the Steering Group for the development of WHO normative guidance on the use of topical microbicides for HIV prevention;
 - Management of the Implementation Steering Committee on Tenofovir Gel, including workshops at key HIV conferences such as the 2012 International Microbicides Conference where a strategic discussion was held on policy and regulatory processes for the introduction of new HIV-prevention technologies into national HIV-prevention policies and programmes;
 - a consultation on research prioritization with regard to multipurpose prevention technologies (MPTs) – products that address multiple threats to SRH, including unintended pregnancy, HIV and other STIs. As a result, the Department has been invited to be a Steering Committee Member of the global coalition 'Initiative for MPTs'.

Global action plan to control the spread and impact of antimicrobial resistance in Neisseria gonorrhoeae: A high-level launch was held in June 2012 in collaboration with the WHO team working on antimicrobial and the Director-General's Office of Communication. Updated information on the importance of this issue and calls for rapid action have been widely disseminated.

Integration for Impact Conference (September 12-14, 2012, Nairobi, Kenya): co-convened and funded by RHR this conference brought together key stakeholders from sub-Saharan countries with a high burden of HIV, unmet need for family planning, and high child and maternal morbidity/mortality.

1. Introduction

Over the past decade, advances in the global response to HIV have brought clear progress on many fronts and opened new horizons for policy, research and programming. Although 25 countries have seen a 50% or greater drop in new HIV infections since 2001, we need to remain mindful that the epidemic is not over: worldwide, an estimated 2.5 million people became newly infected with HIV in 2011, bringing to 34 million the estimated number of people living with HIV.

The limited integration of sexual and reproductive health (SRH) and HIV programmes continues to be an issue, as linkages between the related interventions are often inadequate and un-coordinated. Strengthening SRH-HIV linkages is therefore an essential part of formulating national strategies for making health services accessible to the people who need them most. Strengthening these linkages is also vital to maximizing developing countries' access to health resources, increasing the impact of programming in both areas, and making progress towards the United Nations Millennium Development Goals (MDGs), particularly MDGs 4, 5 and 6.

RHR continues to be actively involved in SRH-HIV linkages on many levels, within its teams and in collaboration with partners.

2. Supporting countries in assessing SRH-HIV synergies: generating the evidence

2.1 National assessments of SRH-HIV linkages

In 2009, the International Planned Parenthood Federation (IPPF), UNAIDS, UNFPA, WHO, the Global Network of People living with HIV (GNP+), the International Community of Women Living with HIV/AIDS (ICW) and Young Positives developed the *Rapid assessment tool for sexual and reproductive health and HIV linkages* to assess current national HIV and SRH bi-directional linkages, identify gaps, and contribute to the development of country-specific action plans.¹ Following the initial implementation of the assessment tool in Botswana with support from RHR, 40 countries have completed the rapid assessment process between 2008 and 2012.²

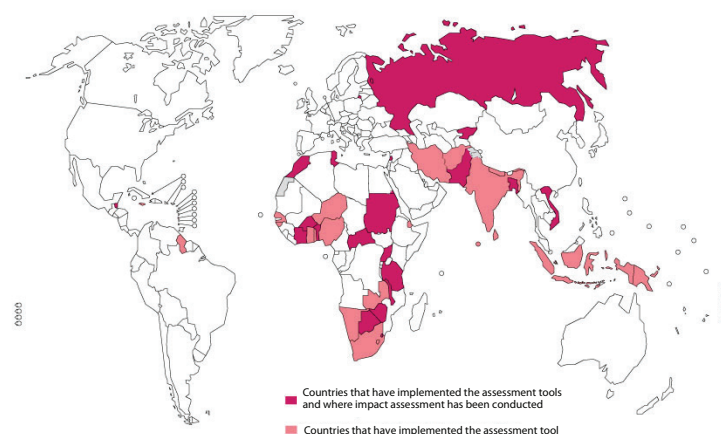
Information about the process and the results have been compiled in country case summaries for 21 countries so far. Impact assessments are currently being

1 Available at: <http://www.who.int/reproductivehealth/publications/rtis/91825/en/index.html>

2 Assessments in North Sudan conducted in different states in 2010 and 2011 counted as one assessment (2010 figures). Assessments in Nepal and South Africa were planned for 2011 but were delayed until 2012. Jamaica, Guyana and Barbados did not implement the full rapid assessment tool but some questions were used as part of a wider evaluation of the health system response to HIV and STIs.

performed to evaluate how countries are following up on the findings, gaps, recommendations and analysis from the national assessments of SRH–HIV linkages, in order to determine financial and technical support needed for national scale-up of best practices. To date, impact interviews have been completed in all 20 countries that completed the assessment between 2008 and 2010 and the findings are being evaluated.

Figure 1: Countries that have implemented the SRH–HIV assessment tool since 2008



2.2 Addressing critical gaps related to SRH–HIV linkages

WHO's systematic review in 2006 showed that linking SRH and HIV services leads to improvements in a number of outcomes, such as access to and uptake of services, condom use, knowledge and quality of services. The review also identified critical gaps, including male involvement in SRH and HIV care, postpartum care and integration of HIV and sexually transmitted infections (STIs) services. RHR has taken initial steps towards addressing these gaps.

2.2.1 Male involvement in the elimination of mother-to-child transmission of HIV (eMTCT)

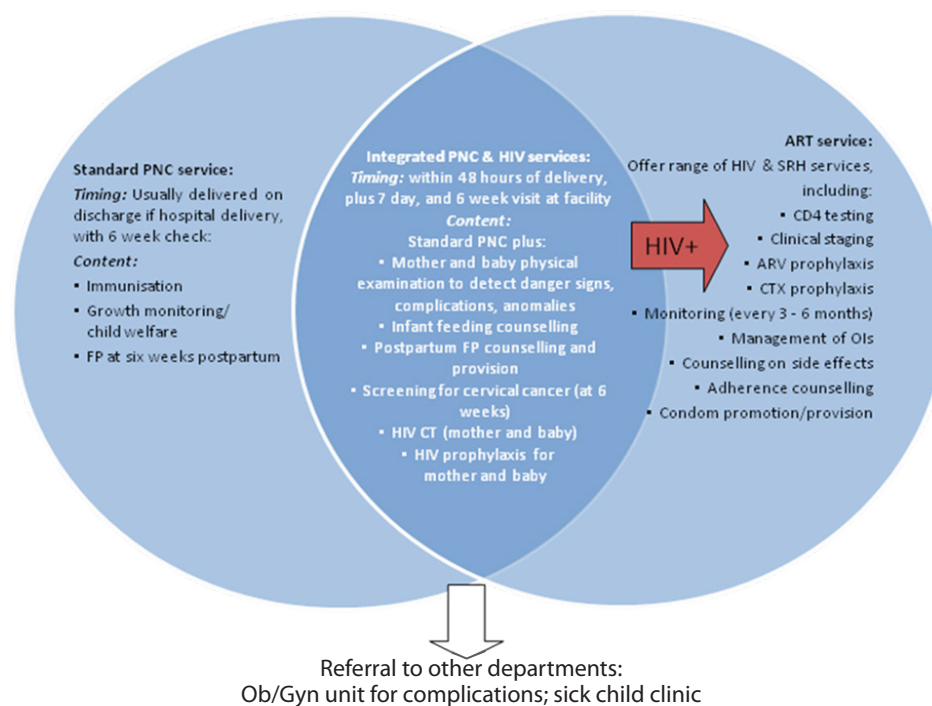
The Programme developed a background paper for the 2012 interagency task team (IATT) on the prevention of HIV infection in pregnant women, mothers and their children entitled *Male involvement in the elimination of mother-to-child transmission of HIV*. The paper was written in collaboration with UNAIDS and builds on global and regional efforts to meaningfully integrate men's participation into health services and programmes. Much of the research in this area is focused on the reproductive intentions of HIV-positive women, mainly in the context of sub-Saharan Africa. However, despite overwhelmingly positive attitudes toward eMTCT among men, their engagement in eMTCT efforts remains very low.

2.2.2 Evaluating the feasibility, acceptability, quality and effectiveness of innovative models for strengthening postpartum care and family planning, including for women living with HIV

A multi-site, cluster randomized controlled trial to determine the effectiveness of new models of integrated postpartum care in Zambia is in progress, having just completed the first year of activities (Figure 2). The study, which is due for completion in early

2014, follows cohorts of women receiving postpartum services at the intervention and control clinics over a 24-month period to measure health-care seeking behaviour and the health status of each woman and her infant. The first phase of the study assessed the effectiveness of a strengthened package of postpartum care during a six-month postpartum period, comparing it with the effectiveness of the existing standard of care, in terms of client utilization of family planning services, essential maternal and newborn health services and HIV/AIDS services.

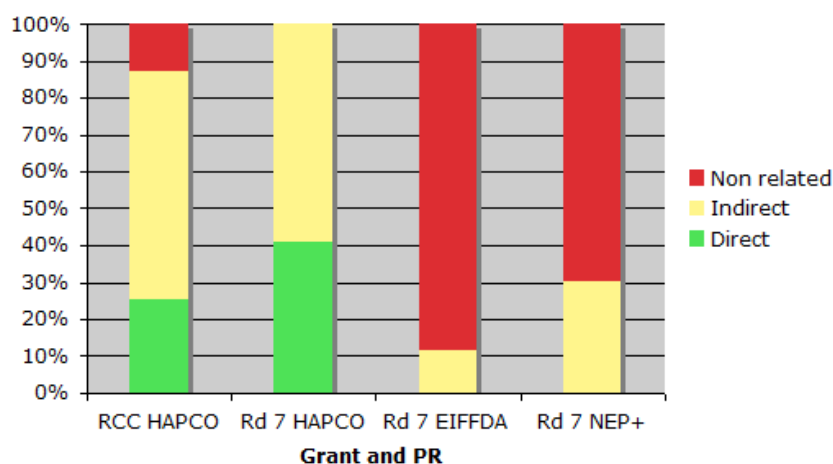
Figure 2: Integrated service delivery for postnatal care



2.2.3 Assessing the expenditures and performance impact of Global Fund investments in SRH – Ethiopia country case study

RHR has previously been involved in assessing SRH components of HIV projects receiving funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). To address the unanswered questions relating to how effective these programmes have been in creating a comprehensive service delivery platform, a study was undertaken as a means of clarifying some of these issues, including how countries prioritize their interventions after a grant proposal is approved. This study examines the extent to which Global Fund grants made to Ethiopia have supported integration of SRH activities (Figure 3). Results indicated that resource-tracking of Global Fund grants from proposal to budget to disbursement to expenditure is not a straight path. This is a reflection and effect of the flexibility that the Global Fund allows in pursuit of country-owned programmes. The study also highlighted the need for improving the transparency and availability of grant information – in particular, on the actual activities being implemented after the grant agreement has been signed. This information is currently not being adequately monitored or reported. This implies that even if SRH components are being approved for funding in the proposals, there is inadequate follow-up at the national level when it comes to implementation.

Figure 3: Distribution of HIV grant expenditures for SRH integration in Ethiopia to the principal recipients (PR) of Global Fund grants, as of June 2011



2.2.4 Preventing unintended pregnancy among women living with HIV

UNAIDS has set as a global goal the elimination of maternal-to-child transmission (eMTCT) by 2015. This is defined as a 95% reduction of new infections among children by 2015, from the 2009 baseline level. Preventing unintended pregnancy is the second of four elements ('Prong 2') for the successful implementation of PMTCT or eMTCT programmes and must be implemented simultaneously in order to meet international and national goals and targets. RHR has been involved in a number of initiatives in support of this.

The Interagency Task Team (IATT) on Prevention and Treatment of HIV Infection in Pregnant Women, Mothers and their Children published *Preventing HIV and unintended pregnancies: strategic framework 2011–2015*.³ The publication was released at the IATT meeting in April 2012. By acknowledging that progress towards a comprehensive approach to PMTCT has so far been very limited, the technical recommendations in this document have enabled RHR to catalyse the work of some of its partners. For example, an options brief, developed by FHI and partners, examines the role of family planning in PMTCT.

Over the last several years, programme implementers have noted the lack of a valid and unifying indicator to help measure progress on Prong 2. In the context of the Millennium Village Project (MVP), WHO/RHR is coordinating a pilot study to develop and test a family planning indicator for this purpose.

Reproductive Health Matters released a special supplement on 'Pregnancy decisions of women living with HIV' at the International AIDS Conference in July 2012. The issue includes a range of evidence-based research papers.⁴

2.3 Planned activities

- SRH–HIV assessments will be implemented in another four countries, rapid assessment summaries will be developed for a further 13 countries, and the impact assessment report will be completed and evaluated.

³ Available at: http://www.who.int/reproductivehealth/publications/linkages/hiv_pregnancies_2012/en/index.html

⁴ *Reproductive Health Matters*, 2012, 20(39):1–140. Available at: <http://www.rhmjournal.org/supplements>

- The postpartum study in Zambia will be completed and discussions on implementing similar studies in other countries will be initiated.
- A complete systematic review on male involvement in HIV programmes is planned, along with development of a technical brief in collaboration with the HIV Department.

3. Antiretroviral-based microbicide products

3.1 Preparation for the introduction of 1% tenofovir gel and other antiretroviral-based microbicide products

RHR ensures regular follow-up on priority activities in order to keep all stakeholders informed about progress, research and global activities related to 1% tenofovir gel. RHR provides secretariat support to the Tenofovir Gel Implementation Steering Committee, which coordinates the major funders of clinical and programmatic research and programme implementation, the licence holders and manufacturer, as well as the representatives of normative agencies, governments and users. The Steering Committee provides a structure for coordinating the complex interactions between regulatory review and approval, planning for manufacturing, supply and delivery, and determining suitable financing and delivery models. The Secretariat maintains an inventory of the regulatory process in different jurisdictions, progress in research critical to the regulatory process, development of alternative formulations to deliver tenofovir vaginally, impact and cost-effectiveness modelling, demand forecasting, developments in financing product implementation and other areas, as agreed.

In addition, the Bill & Melinda Gates Foundation supports closely related work on mapping the critical path to licensure, impact and cost-effectiveness modelling, and supporting the global policy environment for HIV prevention. Key interested parties include the product developers and licence holders of tenofovir gel (CONRAD and ProPreven) and the dapivirine ring (International Partnership for Microbicides, IPM), research teams and networks (e.g. MTN, CAPRISA, FACTS⁵), UNAIDS and international NGOs such as FHI360, Population Council, and national and regional implementation partners. Other international development and research donors, primarily in the European region, will be involved in crafting and implementing the initiative to support multipurpose prevention technologies. A workshop was convened at the 2012 International Microbicides Conference (Sydney, Australia) to discuss the regulatory and programmatic challenges of introducing tenofovir gel and the dapivirine ring into national HIV prevention programmes. This was attended by policy-makers and regulators from the Asia-Pacific region who stressed the importance of feasibility projects for oral and topical pre-exposure prophylaxis (PrEP) in order to establish the practicality, acceptability and potential impact of these new HIV-prevention technologies in a range of settings.

3.2 Development of normative guidance on topical microbicides

WHO/RHR maintained and updated the inventory of current research related to the regulatory process on tenofovir gel, kept in close contact with the Tenofovir Gel Development Group and the Tenofovir Gel Regulatory Group, supported the European

5 FACTS=Follow-on African Consortium for Tenofovir Studies

Medicines Agency in application of the Article 58 process to involve developing country regulators in the review of registration dossiers, and participated in European Medicines Agency (EMA) consultative meetings on HIV-prevention technologies. RHR has also maintained close contact with the work at WHO (led by the HIV Department) to develop and issue comprehensive guidance on new HIV-prevention technologies⁶ and oral PrEP.

In November 2012, RHR held its first guideline steering group meeting for the development of WHO guidance on the use of topical microbicides for HIV prevention. The objectives of the meeting were to discuss the development and scope of WHO normative guidance, to consider how the guidance would fit with currently available guidance on SRH and HIV prevention and guidance in development, and to map out the timeline for the process. The plan is to ensure that WHO normative guidance is available for publication soon after the first licensure decision in order to facilitate rapid expansion of tenofovir gel implementation programmes and integration with other HIV-prevention and SRH programmes and services.

3.3 Multipurpose prevention technologies

Multipurpose prevention technologies (MPTs) are products that address multiple threats to SRH, including unintended pregnancy, HIV and other STIs. WHO/RHR will support and follow closely developments on MPTs, including the development of impact and cost-effectiveness models and analyses for oral PrEP, and the progress with clinical evaluation of the dapivirine ring. All these activities have the potential to affect the timing and content of the normative guidance for 1% tenofovir gel, and must be closely monitored to exploit synergies wherever possible with the development and introduction of other new HIV-prevention technologies and the evolution of HIV prevention, treatment and care programmes. A small consultation on MPTs was convened in June 2012 to discuss the added value that WHO can bring to this field and assess the priorities for action. In connection with this, RHR collaborated with Population Council on a meeting aimed at shaping the operations research agenda for women-centred antiretroviral-based prevention products, focusing on vaginal gels and rings. RHR has been invited to play an active role in the Initiative for Multipurpose Prevention Technologies (IMPT) following collaboration on a number of activities in 2012, including participation at FIGO and in the Scientific Agenda Working Group (SAWG) of the IMPT. RHR provided support to national participants to attend the first regional consultation on MPTs in Asia (New Delhi, December 2012). Importantly, at a consultation organized by the Programme in November 2012, international experts on contraceptive research identified research on MPT as a priority for HRP.

3.4 Planned activities

- Technical consultations are planned for early 2013 to map out the introductory and marketing process for tenofovir gel in six African countries (Botswana, Kenya, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe).

6 *The strategic use of antiretrovirals for treatment and prevention of HIV infection*, Report of a WHO technical consultation (14–16 November 2011), World Health Organization, 2012 (http://www.who.int/hiv/pub/meetingreports/consultation_20111116/en/index.html).

- A regional tenofovir gel country stakeholders' meeting is to be held in the second quarter of 2013, after the VOICE study results are published (expected in March 2013 at the Conference on Retroviruses and Opportunistic Infections).
- A meeting will be held in the second quarter of 2013 to identify leading MPT products and the most efficient pathways for clinical evaluation through the existing WHO/RHR network of developing country institutions, potentially supplemented with new clinical sites.

4. Advocacy and leadership

4.1 Launch of the Global action plan to control the spread and impact of antimicrobial resistance in *Neisseria gonorrhoeae*

On World Health Day 2011 international scientific experts highlighted the global threat of antimicrobial resistance (AMR). With an estimated 88 million incident gonococcal infections globally, AMR in *Neisseria gonorrhoeae* is a public health problem in need of urgent attention and it has already been highlighted by the international media. A high-level launch of the *Global action plan*⁷ was held at the United Nations (June 2012) in collaboration with the WHO AMR team and the Director General's Office of Communication. Updated information on the importance of this issue and calls for rapid action have been widely disseminated, including through a policy brief, peer-reviewed publications, and at international conferences.



Press coverage on the global threat of antimicrobial resistance in *N. gonorrhoea*

4.2 UNAIDS becomes a member of the Policy and Coordination Committee

Following STAG 2011, where Paul de Lay, the Executive Director of UNAIDS, was invited to give a presentation on collaborative activities related to SRH–HIV linkages, UNAIDS wished to strengthen their successful and productive existing collaboration in this area and have now become a permanent member of the Policy and Coordination Committee (PCC).

7 Global action plan to control the spread and impact of antimicrobial resistance in *Neisseria gonorrhoeae*. World Health Organization, 2012 (<http://www.who.int/reproductivehealth/publications/rtis/9789241503501/en/index.html>).

4.3 The interagency working group on SRH–HIV linkages

The interagency working group (IAWG), which was convened by RHR and UNFPA, has developed an SRH–HIV linkages resource package that is designed as a 'living', adaptable set of resource materials targeted at national governments, international and national NGOs, United Nations agencies and donors. This material is updated annually prior to the International AIDS Conference and World AIDS Day, and widely disseminated through the IAWG and other partners.

4.4 International conferences

RHR has been involved in a number of international conferences in 2012 to highlight issues related to SRH–HIV linkages. Among others, these have included:

- Integration for Impact Conference (12–14 September 2012, Nairobi, Kenya) – co-convened and funded by RHR, this conference brought together key stakeholders from sub-Saharan African countries with a high burden of HIV, unmet need for family planning, and high child and maternal morbidity and mortality.
- International AIDS Conference (22–27 July 2012, Washington, DC, USA) – UNAIDS and WHO/RHR have worked closely to advocate for SRH and to host a satellite at the Conference, examining the cost considerations of SRH–HIV integration. RHR also collaborated with USAID and Population Council on a session entitled 'Combination products for women (MPTs)' and another on 'Pregnancy decisions of women living with HIV'.
- 13th International Union against STIs (IUSTI) World Congress (15–17 October 2012, Melbourne, Australia) – the Programme organized a satellite session entitled 'Antimicrobial resistance in *Neisseria gonorrhoeae* – mitigating the consequences of untreatable gonorrhoea'.

4.5 Planned activities

- RHR will continue the management of the interagency working group on SRH–HIV linkages (the next meeting may be co-hosted with UNAIDS).
- RHR will support advocacy and communication on MPTs.
- RHR will support WHO's AMR team in the implementation of the *Global action plan to control the spread and impact of antimicrobial resistance* in *Neisseria Gonorrhoeae*.
- The team will develop a supplement issue for November 2013 on AMR in *N. Gonorrhoeae* in *Sexually Transmitted Infections* (BMJ Group).
- A website will be developed for tenofovir gel microbicide activities and AMR in *N. Gonorrhoeae*.
- Sessions are planned at up-coming international conferences to continue to advocate for linkages between SRH and HIV interventions (such as the 2013 Women Deliver and IUSTI conferences).

Sexual Health, Gender and Reproductive Rights

Summary

Key objectives

The WHO Gender, Reproductive Rights, Sexual Health and Adolescence (GRR) team has continued to work on the integration of gender equality and human rights perspectives in the research, policy and programmatic work of RHR. It has also continued to work on generating evidence, developing norms and standards, and supporting policy and programme development on adolescent's sexual and reproductive health, on gender equality and human rights issues as they relate to sexual and reproductive health, particularly prevention of and response to gender-based violence and harmful practices such as female genital mutilation and on sexuality and sexual health. At a retreat in September 2012, the GRR team reaffirmed that the common thread across these topics is the need to address gender equality, human rights and sexuality as the underlying basis for improving sexual and reproductive health.

GRR envisions a world free of discrimination and violence where every woman and man, regardless of age, marital status, ethnicity, sexual orientation or any other factor, has equal access to quality information and health-care services, a world where people decide freely about their sexual and reproductive health, and where everyone's sexual and reproductive rights are respected.

Major achievements

- Interagency statement on eliminating coercive sterilization: WHO initiated the preparation of this statement, which will be endorsed by the Office of the High Commissioner for Human Rights (OHCHR) as well as by UNAIDS, UNDP, UNFPA, UN Women and WHO. The statement brings together scientific evidence and human rights standards, and reviews historical and contemporary practices. It highlights the guiding principles for the regulation and provision of sterilization services, and provides recommendations for legal, policy and service delivery actions.
- Sexual health, human rights and the law: An expert consultation on this topic took place in September 2012 and provided valuable input for finalization of the WHO report with the same title. A compendium on human rights standards related to sexuality and sexual health, and related policy briefs are also being prepared.
- 11th Revision of the International Classification of Diseases (ICD-11): Expert revision of the section on sexual disorders and sexuality-related conditions is in progress. Draft proposals for each of the categories under review by the Working Group on the Classification of Sexual Disorders and Sexual Health are in the process of peer review.
- Addressing violence against women: A meeting on health-based interventions for addressing violence against women in November 2012 concluded with an agreement to seek funds to establish an initiative on intervention research addressing violence against women; develop a *Researchers' handbook for intervention research on violence against women*; and establish a network of researchers on violence against women that will facilitate the sharing of instruments, protocols and intervention descriptions.

- Guidance on violence against women: WHO clinical and policy guidelines on responding to intimate partner violence and sexual violence against women have been approved for publication by the Guidelines Review Committee and will be published in 2013.
- Research on violence against women:
- WHO multicountry study on women's health and violence: Two papers were produced from analyses of the data: (i) the association between IPV, abortion and unintended pregnancy *International Journal of Gynaecology and Obstetrics*; and (ii) risk factors for partner violence among adolescents and young women (submitted for publication).
 - Addressing violence against sex workers in the context of HIV: what works? This WHO publication is being finalized based on three systematic reviews completed during 2012 and a technical consultation with sex work organizations.
 - Estimates of the prevalence and health burden of intimate partner violence and non-partner sexual violence. This publication is being finalized based on extensive work, including many systematic reviews, done for the Global Burden of Disease study.
- Study to update estimates of the prevalence of female genital mutilation (FGM): This study was commissioned and data are available from 28 countries. The results show that although the prevalence of FGM is decreasing in most countries, the overall number of girls and women with FGM or at risk of FGM continues to rise due to population growth. A total of 87 million women aged 15 and older have been subjected to FGM. About 14 million girls in early adolescence (age 10–14 years) have also undergone FGM, meaning that a total of 101 million girls and women aged 10 and above have undergone FGM. In addition, an estimated 50 million girls currently aged 0–14 years are at risk of FGM, with 3.3 million girls at risk annually. About 60% of all these girls and women live within the WHO African Region, and 40% in the Eastern Mediterranean Region. Four countries – Egypt, Ethiopia, Nigeria and Sudan – together account for almost 70% of all women with FGM.
- Capacity building on FGM: A 'Centre of Excellence' for research and training on FGM was established at the University of Nairobi, Kenya, through an RHR initiative, and receives ongoing technical support.
- Sexuality counselling guidelines. A guidelines development group was established and work was initiated to develop guidelines for health providers on sexuality counselling.

1. Introduction

The work of the WHO Gender, Reproductive Rights, Sexual Health and Adolescence (GRR) team has continued to focus on generating evidence, developing norms and standards, and supporting policy and programme development on adolescents' sexual and reproductive health, on gender equality and human rights issues as they relate to sexual and reproductive health, particularly prevention of and response to gender-based violence and harmful practices such as female genital mutilation and on sexuality and sexual health. The team also works with other teams in the Department on the integration of gender equality and human rights perspectives in the research, policy and programmatic work of RHR.

2. Advancing sexual and reproductive health through human rights

RHR is playing a leading role in incorporating human rights standards into norms and guidelines on sexual and reproductive health (SRH), and the GRR team is providing guidance to Member States, human rights bodies and development partners on this.

2.1 Progress

2.1.1 Development and interpretation of human rights standards

WHO is an authoritative source when it comes to the development and application of international, regional and national human rights standards.

In 2012, WHO has contributed to a general comment on SRH by the Committee on Economic, Social and Cultural Rights (CESCR), including several briefings, and also to the elaboration of a General Comment on the rights of the child to the highest attainable standard of health by the Committee on the Rights of the Child. These two committees are authorized by Member States to give interpretations to the content and meaning of the rights enshrined in their respective conventions in the form of General Comments. These General Comments specify State obligations related to issues that are highly relevant to the respect, protection and fulfilment of human rights as enshrined in the conventions. WHO, together with partner agencies, such as UNFPA and UNICEF, and partner NGOs, such as the Center for Reproductive Rights, organized briefings to the committees on specific SRH issues (such as abortion), gave comments on subsequent drafts and responded to special inquiries on particular issues.

RHR has also made a significant contribution to the elaboration and launching of *Technical guidance on the application of a human rights-based approach to the implementation of policies and programmes to reduce preventable maternal morbidity and mortality*, which was developed by United Nations Office of the High Commissioner for Human Rights (OHCHR) and its partners and presented at the 20th session of the United Nations Human Rights Council (HRC).¹ In its resolution 15/17, the HRC requested that the OHCHR compile an analytical report on effective practices in adopting a human rights-based approach to eliminating preventable maternal mortality and morbidity. The report was required to: (i) explain how such initiatives embody a human rights-based approach; (ii) identify the elements of these initiatives that have brought a reduction in maternal mortality and morbidity; and (iii) describe ways in which similar initiatives could be implemented in a way that fully reflects a human rights-based approach. WHO and other partners assisted OHCHR with the preparation of this report both technically and financially. The report was presented to the HRC in September 2012 and launched at a special session of the HRC with the participation of WHO Assistant Director-General, Family, Women and Children's Health.

WHO has provided expert advice to national legislative and judiciary processes at the request of WHO country offices and governments. For example, WHO has provided advice on development of a law on SRH in Azerbaijan, revision of regulations on abortion in Russia, and on the judiciary process in regard to violence against women in India. WHO provided assistance to PAHO in preparing technical advice on in-vitro fertilization for the Inter-American Court of Human

¹ Available at: http://www2.ohchr.org/english/issues/women/docs/A.HRC.21.22_en.pdf

Rights and also contributed to an African regional meeting on transgender health that was held in South Africa.

2.1.2 Development and dissemination of normative guidance and tools on human rights and SRH

RHR is developing tools to help countries address obstacles to the realization of sexual and reproductive rights; in particular, obstacles in the form of existing legislation, policies, health systems and services. RHR's three main projects in this area are described here.

WHO has developed a tool for examining laws, regulations and policies on sexual and reproductive health and human rights. This tool aims to assist countries to use a health and human rights framework for identifying legal, regulatory and policy barriers related to SRH. It supports a multi-stakeholder process for compiling and analysing relevant information using a human rights framework. On the basis of this analysis, the stakeholders generate recommendations and assign responsibilities for action. The tool has been field-tested in Brazil, Indonesia, Malawi, Mozambique, the Republic of Moldova, Sri Lanka, Switzerland and Tajikistan, and improvements have been made based on this process. Field-test reports from the Republic of Moldova, Sri Lanka and Tajikistan are being published nationally. The tool is being used by the Population Council as part of their 'Strengthening evidence for programming on unintended pregnancy' (STEP UP) research programme.

Sexual Health, Human Rights and the Law project

A WHO report is being prepared, entitled *Sexual health, human rights and the law*, in addition to a *Compendium on human rights standards related to sexuality and sexual health*, and related policy briefs. All of these documents will contribute to the recognition, understanding and application of international, regional and national laws and human rights standards in relation to sexuality and sexual health. Activities in 2012 included: an analysis of authoritative international, regional and national human rights and legal standards and health impact information, and a technical consultation on 'Sexual health, human rights and the law' held in September 2012, in Geneva, to gather expert input into the finalization and dissemination of the WHO report and compendium. The findings of the project contributed to other WHO initiatives related to sexual health, including the development of a WHO-led interagency statement on forced sterilization (see section 1.1.3, this chapter) and the 11th Revision of the International Classification of Diseases (ICD-11, see section 2.1.3, this chapter).

A concept note was developed for a family planning and human rights tool, which will be developed and field-tested in 2013–2014. This tool will assist a variety of stakeholders – working in policy, law, health systems and health service delivery – in their efforts to assure the provision of quality family planning information and services and to overcome barriers, in accordance with human rights principles, norms and standards.

2.1.3 Integration of human rights into SRH norms, standards and policies developed by RHR/HRP

Human rights have been comprehensively integrated into the WHO Safe abortion guidance document (second edition), and the GRR team has provided assistance

in the disseminating the guidance in the European and African Regions.² The guidance reflects the significant developments in the clinical, service delivery, and human rights aspects of safe abortion, particularly in methods of abortion, decentralization and expansion of service delivery, and in application of human rights in policy-making and legislative reform. The guidance is firmly grounded in international human rights treaties, and references a growing body of human rights standards on safe abortion. These standards are authoritative interpretations and applications of human rights in the context of abortion by international and regional human rights bodies and national courts, including the United Nations treaty monitoring bodies. The guidance cites examples of human rights standards relating to maternal mortality due to unsafe abortion, the decriminalization of abortion, and the elimination of regulatory and administrative barriers that impede women's access to safe and lawful services.

WHO initiated for the preparation of an interagency statement on eliminating forced or coercive sterilization, which will be endorsed by OHCHR, UNAIDS, UNDP, UNFPA, UN Women and WHO. The statement has been developed in collaboration with the Violence and Injury Prevention and Disability Department (VIP) following an expert consultation on the subject. This interagency statement reaffirms that laws, regulations, policies and practices should ensure that the provision of procedures resulting in sterilization is based on full, free and informed decision-making. The statement is based on scientific evidence, draws on lessons learnt from historical and contemporary practices, and refers to human rights standards regarding coercive sterilization. The statement highlights the guiding principles for the regulation and provision of sterilization services, and provides recommendations for legal, policy and service delivery actions. It aims to contribute to the elimination of coercive sterilization.

A policy brief on human rights and family planning has also been developed.

2.2 Planned activities

- WHO's contributions to the work of the United Nations human rights treaty-monitoring bodies, the Human Right Council, regional human rights bodies, United Nations special rapporteurs and national legislative bodies will continue on request as feasible.
- The following normative guidance and tools on human rights and SRH will be developed and disseminated:
 - The SRH tool will be disseminated to WHO regional offices, partners and countries.
 - The WHO report on *Sexual health, human rights and the law, the Compendium on human rights standards related to sexuality and sexual health*, and at least one policy brief on a specific sexual health issue will be published and a dissemination plan will be developed.
 - The first draft of the tool on family planning and human rights will be developed and field-testing will be initiated in two countries.
- SRH-related human rights issues will be integrated into the normative guidelines, tools, policy briefs, statements and research agendas of RHR and other relevant WHO departments. Special attention will be paid to RHR

² Available at: http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/

initiatives on family planning and the field-testing of the proposals on sexual health and sexuality related conditions for ICD-11.

- RHR will initiate the collection, analysis and dissemination of evidence on the impact of human rights and laws on different aspects of SRH (for example, the impact of regulations on conscientious objection to abortion and contraceptives, and the impact of regulations on third party authorizations for abortion and contraceptives).

3. Sexuality and sexual health

3.1 Progress

3.1.1 Sexual health definitions and conceptual framework

The WHO web page on 'Sexual health' was updated in response to a recommendation of the Gender and Rights Advisory Panel (GAP) to increase the visibility of the WHO working definitions of sexual health and sexuality.³ The definitions are also reflected in recent RHR sexual health documents.

Initiated in 2011, *Sexual Health: a conceptual framework for sexual and reproductive health programmes* has gone through internal and external review and is being finalized for publication in early 2013. The document will help to generate discussion and provide guidance on the critical elements of sexual health for national SRH policies and programmes.

3.1.2 Sexual health indicators

A working version of the *Core set of sexual health indicators* has been developed. The document recommends 15 outcome/impact indicators and determinants as well as a section of indicators to assess the legal and policy context. This covers healthy sexuality, sexual well-being, sexual dysfunction, sexual vulnerability, sexual violence, harmful practices and adolescent sexual health. Selected indicators are being integrated into current and future studies such as the Integrated Bio-Behavioural Survey (IBBS) on Sexual Behaviour (21 sites in the European Union and Eastern Europe), and the survey on syphilis and HIV among men who have sex with men (MSM) to be carried out in 2013. This will assess the validity of the indicators and the feasibility of measuring them in different contexts. Other opportunities will be considered to pilot the core set of sexual health indicators with other population groups, in other regional and country contexts. The working version of the document will be reviewed externally (by the WHO Regional Offices and main technical partners) and finalized in the first half of 2013.

3.1.3 Sexual health in the 11th Revision of the International Classification of Diseases (ICD-11)

The Working Group on the Classification of Sexual Disorders and Sexual Health was established in September 2011 and met in January and June 2012. The Working Group has reviewed available scientific evidence, clinical and policy information on use, clinical utility, and experience with the ICD-10 diagnostic categories for sexual disorders and sexual health conditions (i.e. gender identity and sexual orientation, sexual dysfunctions and paraphilias), and has developed a draft of

³ The definitions can be viewed at: http://www.who.int/reproductivehealth/topics/sexual_health/sh_definitions/en/index.html

specific proposals for revision of those categories, including the placement and organization of these categories within the overall ICD. The revised proposals for the relevant categories were presented to the Advisory Groups on Mental and Behavioural Disorders and on Genito-urinary and Reproductive Medicine. They are currently under review by an external peer review group and will then be submitted for field-testing and for public consultation, including with representative groups of stakeholders throughout 2013 and 2014.

3.1.4 Sexuality counselling guidelines for health-care providers

As recommended by the meeting of experts on sexual health in 2010, the development of sexuality counselling guidelines for health-care providers has been initiated. The scope of the guidelines has been approved by the WHO Guidelines Review Committee (GRC). An International Guidelines Development Group (GDG) was established and had its first meeting in October 2012. A preliminary systematic review of evidence identified the main informational gaps and will inform the next steps of the evidence retrieval. The systematic reviews are under way, scheduled for completion in 2013, and a first draft should be available by the end of 2013.

3.2 Planned activities

- A sexuality research agenda will be developed that can contribute to building evidence on the added value of key elements of sexual health (sexuality and sexual well-being) for SRH outcomes and to support research on sexuality and sexuality education.
- RHR plans to provide the following support to national SRH programmes:
 - support for integration of evidence-informed interventions/approaches for sexuality counselling into SRH programmes through finalization of the sexuality counselling guidelines for health-care providers;
 - - strengthening of strategic information on sexual health through better monitoring and evaluation by developing the final version of the core set of sexual health indicators and a brief training module on sexual health indicators and measurement tools, to be incorporated into the relevant post-graduate training curricula.
- RHR will undertake advocacy and communication efforts to forge global partnerships and create a critical mass of experts, decision-makers and supporters (a virtual global network) to advocate for sexual health and a favourable policy environment for evidence-informed interventions.

4. Addressing violence against women

The GRR team addresses the links between gender equality, violence against women (VAW), SRH and HIV, including conflict-related sexual violence. The team's work on VAW includes promotion of data collection and research methodologies for evidence building, as well as primary prevention and health sector responses.

4.1 Progress

4.1.1 Conducting research and building evidence for policy and programmes
RHR/GRR continues to co-lead the expert group on interpersonal violence for the Global Burden of Disease Study (GBD), with colleagues at the London School of Hygiene and Tropical Medicine (LSHTM). Six manuscripts are being finalized: prevalence of intimate partner violence (IPV), femicide, and the associations of IPV with HIV/STI, low-birth weight/prematurity, abortion and depression.

The formative research study to address violence against women in the context of antenatal care services was completed in South Africa. The findings will inform the adaptation and implementation of the randomized controlled trial at three or four sites in 2013.

A meeting was held in November 2012 to consolidate evidence and knowledge on the topic of building evidence on health-sector-based interventions for VAW, to discuss methodological issues, and to initiate the development of a practical handbook for researchers conducting interventions research in health settings on VAW.

Work on conflict-related sexual violence included the development of two survey tools for measuring experiences and perpetration, as well as a proposal with LSHTM for field-testing these survey tools in Côte d'Ivoire.

Two papers were produced from analyses of the data from the WHO multicountry study on women's health and violence: (i) the association between IPV and unintended pregnancy and abortion (published)⁴; and (ii) risk factors for partner violence among adolescents and young women (submitted for publication).

To address VAW in the context of the HIV response, three systematic reviews have been completed and two papers prepared on: (i) the prevalence and correlates of violence against sex workers; (ii) the links between violence against sex workers and HIV outcomes; and (iii) effective interventions to address violence against sex workers. A WHO publication entitled *Addressing violence against sex workers in the context of HIV: what works?* is being finalized, based on the three systematic reviews and a technical consultation with sex work organizations.

4.1.2 Developing normative guidance and tools

Clinical and policy guidelines for the health sector response to VAW have been approved by the GRC and will be published in early 2013.

A packet of information sheets on different aspects of VAW (*Understanding and addressing violence against women*) was developed in collaboration with PAHO and launched for the International Day for the Elimination of Violence against Women (25 November 2012).⁵

Based on systematic reviews and the expert meeting on psychosocial and mental health needs of survivors of sexual violence (November 2011), three policy briefs were developed on mental health and psychosocial support for survivors of sexual violence.

4 Pallitto CC et al.; WHO Multi-Country Study on Women's Health and Domestic Violence. Intimate partner violence, abortion, and unintended pregnancy: results from the WHO Multi-country Study on Women's Health and Domestic Violence. *International Journal of Gynaecology and Obstetrics*. 2013, 120(1):3–9.

5 Available at: http://www.who.int/reproductivehealth/topics/violence/vaw_series/en/index.html

A programming tool to address VAW in the context of HIV/AIDS and a framework for monitoring gender-based inequities in the HIV response have been finalized for publication. A tool to strengthen the capacity of monitoring and evaluation focal points to use the framework is under preparation.

4.1.3 Technical support and capacity strengthening for research and translating evidence and norms into policies and programmes

A global research initiative to promote good quality research on sexual violence, in low- and middle-income countries was supported in collaboration with the Sexual Violence Research Initiative (SVRI) and the Change Project in Asia and the Pacific.

Consultations were held with country teams interested in replicating the WHO multicountry study (including Cambodia, the Lao People's Democratic Republic and Mongolia) and discussions are under way on a capacity building initiative for VAW research.

Technical support was provided to teams from eight countries in sub-Saharan Africa on Prongs 1 and 2 of PMTCT, including support for integration of GBV in PMTCT programmes.

4.1.4 Partnerships and advocacy to raise visibility of VAW in SRH and HIV responses

Several key events in 2012 presented opportunities for RHR to undertake advocacy and promote the visibility of the Department's work on VAW. These events included: the sixth Biennial National Conference on Health and Domestic Violence (USA); the Expert Group Meeting on 'Prevention of violence against women and girls'; preparations for the session of the Commission on the Status of Women (CSW) in 2013; and a panel discussion with UNFPA, OHCHR and the Permanent Mission of Canada on 'Working together to end violence against women and girls' to commemorate the 16 Days of Activism against Gender Violence.

4.2 Planned activities

- RHR/GRR will continue conducting research and building evidence for policy and programmes.
 - An initiative on interventions research to prevent and respond to VAW and an international network of VAW researchers will both be established.
 - The randomized, controlled trial phase of the study to address VAW among antenatal patients in South Africa will be implemented, and formative research will be conducted in Mozambique.
 - A VAW database will be established in the WHO Global Health Observatory and regional estimates of the prevalence of intimate partner violence and other forms of violence will be published.
 - Analyses will be conducted and findings disseminated from existing databases and studies on VAW.
 - A survey will be implemented on the magnitude, risk factors and consequences of conflict-related sexual violence in one country.
- RHR/GRR will also continue developing normative guidance and tools.
 - A clinical handbook based on the WHO health sector guidelines for addressing VAW will be published, and RHR will support adaptation and dissemination of the guidelines in at least two regions.

- *A Researchers' handbook for intervention research on violence against women* will be developed, building on the meeting convened in November 2012 with researchers.
- Guidance on collection, analysis and reporting of forensic evidence in cases of sexual violence will be published and disseminated. RHR will also support the Mental Health Department in publishing an interventions guide to address the psychosocial and mental health needs of survivors of sexual violence.
- RHR will provide technical support and capacity strengthening for research and for translating evidence and norms into policies and programmes.
 - This will include strengthening the capacities of countries and partners to undertake research, programming and policy development on VAW through workshops with Partners for Prevention (P4P), collaborating centres, and other existing networks.
 - Selected countries will be supported to address VAW in their national programmes and policies through readiness assessment and national policy dialogues to raise awareness among policy-makers about the evidence and options for prevention and responses to VAW.
- RHR will engage in partnerships and advocacy to raise the visibility of VAW in SRH and HIV responses. RHR works in close partnerships with other WHO Departments and with external partners. Key activities in 2013 will include raising awareness of VAW at diverse forums such as the CSW 2013 (in March), ICPD 2013 (in June), Beijing+20, and the post-2015 Development Agenda, as well as co-sponsoring and chairing the Sexual Violence Research Initiative (SVRI) Forum 2013 (October), which will also include a focus on partner violence.

5. Female genital mutilation

RHR aims to contribute to the abandonment of all forms of female genital mutilation (FGM) and to ensure that optimal care is provided for those suffering its consequences, through generating and disseminating evidence, providing guidance and support to countries, and contributing to advocacy.

5.1 Progress

At the request of the Gender and Rights Advisory Panel (GAP) of HRP, RHR has developed a strategy identifying priorities for WHO's work on FGM for the next 5–10 years. This is being done in consultation with regional and country offices, international researchers and activists, other United Nations organizations and donors.

RHR developed a questionnaire for use in mapping and updating country facts and activities with regards to FGM and distributed it to countries in the WHO Eastern Mediterranean and African Regions. A report based on the findings will inform the finalization of the RHR strategy on FGM.

RHR has taken steps to improve the mainstreaming or integration of FGM within other SRH activities such as the fistula study, birth-care guidelines, H4+, the IMPAC guidelines revision, and the guidance on sexuality counselling. RHR has also promoted the inclusion of FGM and its subtypes in the forthcoming 11th Revision of the ICD (ICD-11).

In order to assess the numbers of women and girls who have undergone FGM, WHO commissioned a study to update the 2007 estimates for the 28 countries

for which national prevalence studies exist. The results will be published shortly. Findings indicate that although the prevalence of FGM is decreasing in most countries, the overall number of girls and women with FGM or at risk of FGM continues to rise due to population growth. Egypt, Ethiopia, Nigeria and Sudan together account for almost 70% of all women with FGM.

Three systematic reviews on the health consequences of FGM were commissioned, covering immediate, obstetric and gynaecological complications, respectively. Data collection was completed in a study investigating the association between FGM and obstetric fistula in Sierra Leone; a publication is expected in the first half of 2013. A paper looking at the correspondence between self-report and clinical assessment about types of FGM is in publication. With regard to the psychological consequences of FGM, the first, qualitative phase of a study in Nigeria is being initiated; community dialogue has begun and data collection will commence in January 2013. A parallel protocol for Ethiopia is being processed for clearance.

In terms of capacity building on FGM, RHR provided technical support for the establishment of a Center of Excellence for research and training on FGM at the University of Nairobi, and a network for Africa-based FGM researchers. In Sudan, RHR has collaborated in the design of a 5–10 year programme on FGM interventions funded by DFID (United Kingdom). RHR has facilitated a collaboration among the University of Nairobi, Moi University and the Wasso Association (the Gambia and Spain) on curriculum adaptation for health-care providers on the management of health complications in women who have undergone FGM.

5.2 Planned activities

- RHR will finalize its strategy for work on FGM with input from an expert meeting and from GAP and STAG. Priority contributions by RHR will be identified and plans for implementation developed. RHR will continue to map country activities and progress through the annual questionnaire.
- Summaries of the three systematic reviews on health consequences will be disseminated and, as a part of defining a global research agenda on FGM, RHR will support the identification of knowledge gaps and research needs. Peer-reviewed papers and research summaries will be published based on the data from the study on FGM and obstetric fistula as well as the updated assessment of the numbers of women and girls who have undergone FGM.
- The study at the Nigerian site on the psychological consequences of FGM is due to be finalized in 2013, and the results published in a report and in a peer-reviewed paper. A revised protocol for a follow-up quantitative phase of the study will be submitted for scientific and ethical approval. The study is expected to start at the site in Ethiopia in the second half of 2013.
- RHR will continue supporting capacity development at the newly established Center of Excellence in Nairobi, as well as supporting the work on adapting and updating the curricula for health professionals to be adopted by countries, starting with Kenya and Sudan. In Sudan, WHO will continue to contribute to a United Nations team working on a 5–10 year programme on FGM (supported by DFID) in which the Country Office plays a key role.
- RHR will build evidence on the optimal management of health complications related to FGM and will develop relevant tools and guidelines. A systematic

review of the management of health complications will be initiated to support the revision of health guidance and training manuals.

- RHR will conduct and support advocacy for the abandonment of FGM. A paper on interventions against FGM, reviewing what works and what doesn't, will be published. WHO continues to participate in the Donors' Working Group on FGM that includes bilateral donors, private foundations and intergovernmental organizations committed to supporting the abandonment of FGM.

6. Strengthening integration of gender equality, human rights and sexuality in SRH and HIV

RHR/GRR's mandate includes strengthening the integration of gender equality, human rights and sexuality in SRH. Central to this is the need to better understand how to change social norms related to gender. The Gender and Rights Advisory Panel (GAP) of HRP has also identified the change of social norms related to gender as a priority issue for RHR to address. The following activities are planned:

- publish a Cochrane and Campbell review on the impact of interventions to address gender norms on SRH and HIV outcomes;
- convene a technical consultation to identify research gaps, tools and methods for promoting and measuring changes in gender norms in the context of SRH and HIV programmes;
- develop guidance for RHR's work with men and boys on male involvement within a framework of gender equality and promoting equitable gender relations, in accordance with the recommendation of GAP.

Research capacity strengthening and programme development: Regional activities

Summary

Key objectives

The Department aims to strengthen research capacity in countries to enhance sexual and reproductive health (SRH) research relevant to national and regional needs, to facilitate participation of local institutions in global research, and to support development and implementation of evidence-based policies and programmes.

Major achievements

- Institutional capacity strengthening grants: In 2012, 27 institutions were awarded grants, including long-term institutional development grants, service guidance centre grants, competitive intraregional research grants and resource maintenance and capital grants.
- In the context of the capacity strengthening grant schemes, collaborating institutions completed various research activities using these grants. For example, one recipient of a long-term institutional development grant, the Afghanistan National Public Health Institute, finalized a study on increasing the use, and correct application, of the partograph in three maternity hospitals in Kabul. The results of the study indicated significant improvements in the knowledge and skills of health providers in using the partograph following an intervention including formal training and supportive supervision.
- Implementation Research Platform: Research proposals in implementation research for priority research questions were developed by national teams during workshops conducted in collaboration with the Implementation Research Platform in Ethiopia, Guinea, Nigeria and Zambia. Three projects funded through the Implementation Research Platform – in Guatemala, four Eastern Mediterranean countries and Uganda – completed the formative phases of research to supply contextual information that will inform the second phases.
- African Regional Agenda for Reproductive Health: In collaboration with the WHO Regional Office for Africa, this agenda was developed and introduced at a regional meeting for 24 countries in Ethiopia in September 2012. It will be published following its adoption by the Member States of the WHO African Region during the Regional Committee in 2013.
- Support to the Ministry of Health in Peru: Support was provided to achieve better completion of death certificates by physicians in inland areas with regard to correct identification of maternal causes of death. Support was also provided for the Ministry of Health to set up a system for tracking cases of severe maternal morbidity ('near-miss' cases).
- Introduction of evidence-based guidelines for reproductive health by the WHO–UNFPA Strategic Partnership Programme (SPP): Study results have been published on the extent to which practice has been affected by selected family

planning guidelines that were systematically introduced in the context of the Strategic Partnership Programme. The study showed that the Programme was successful in promoting the introduction of the guidelines in several Asian countries. Although limited resources were provided through the Strategic Partnership Programme mechanism, countries were able to implement updated family planning guidelines and tools in a multitude of ways, which in turn allowed them to mobilize additional resources from their respective governments and other partners.

1. Introduction

The Department's research capacity strengthening work is undertaken based on the needs of each WHO region (Africa, the Americas, Europe, Eastern Mediterranean, South-East Asia, and the Western Pacific) and aims to assist countries in:

- developing appropriate research infrastructure (research institutions) to enhance research capacity in sexual and reproductive health (SRH);
- building the research skills and confidence of researchers through training, and creating opportunities for researchers to apply their skills;
- supporting researchers to conduct studies based on national priorities in reproductive health and facilitating their participation in regional and global research;
- ensuring appropriate dissemination and utilization of research results and evidence-based guidelines and partnering with governments to strengthen the implementation of these tools to maximize the impact on SRH programmes and services;
- fostering linkages, partnerships and collaboration within in the United Nations and with other international organizations, with a view to enhancing the development of research capacity.

Area managers responsible for implementing the work on research and technical capacity strengthening in their respective regions focus on identifying and supporting institutions and individual researchers to enable them to conduct high-quality research in SRH relevant to national and regional needs and priorities.

Institutional capacity strengthening uses the following structured capacity strengthening grant mechanisms: long-term institutional development grant (LID); resource maintenance and capital grant (RMC); small supplies grant (SSG); research training grant (RTG); re-entry grant (REG); research project mentoring grant (RPM); competitive intraregional research grant (CIR); service guidance centre grant (SGC); and courses, workshops, seminars grant (CWS). Individual capacity strengthening activities support workshops, seminars and fellowships in key aspects of SRH.

The Department aims to position the collaborating institutions supported through these grant mechanisms as resources for the ministries of health that can be drawn upon when needed for formulating evidence-based policies, strengthening programmes and implementing research findings and WHO guidelines and tools. The next sections provide a summary of research capacity and programme strengthening activities undertaken by the Department in 2012 in the regions.

2. Research capacity strengthening and programme development in the WHO African Region

2.1 Progress: research capacity strengthening

2.1.1 Institutional capacity strengthening

During 2012, research capacity strengthening grants were awarded to 14 institutions. LID grants were continued for institutions in: Burkina Faso (Institut de Recherche en Sciences de la Santé, Ouagadougou), Côte d'Ivoire (Cellule de Recherche en Santé de la Reproduction en Côte d'Ivoire [CRESARCI], Abidjan), Ethiopia (University of Addis Ababa, School of Medicine, Addis Ababa), Guinea (Cellule de Recherche en Santé de la Reproduction en Guinée [CERREGUI], Conakry), Kenya (University of Nairobi), Malawi (University of Malawi, Blantyre), Nigeria (Centre for Research in Reproductive Health, Sagamu), South Africa (Effective Care Research Unit, East London), the United Republic of Tanzania (Kilimanjaro Christian Medical Centre, Moshi) and Zambia (ReproNet-Africa, Zambia Forum for Health Research [ZAMFOHR], Lusaka). A new LID grant was awarded to a centre in the Democratic Republic of the Congo (Université de Kinshasa, Faculté de Médecine Département de Gynéco-Obstétrique, Kinshasa). A centre in Kenya (University of Nairobi) received an SGC grant.

2.1.2 Research training grants

Individual research training was also supported in 2012. A CWS grant was awarded to the Reproductive Health and HIV Research Unit at the University of the Witwatersrand in Johannesburg, South Africa, which organized an international training course on research methods attended by six participants from Nigeria, nine from South Africa and two from the United Republic of Tanzania.

2.1.3 Capacity strengthening in implementation research

In collaboration with the Implementation Research Platform (IRP) – a joint initiative with the Alliance for Health Policy and Systems Research and other WHO Departments – and as follow-up to the capacity strengthening and priority-setting workshops in implementation research conducted in 2011, calls for letters of intent (LOI) in implementation research were issued in five countries followed by proposal development workshops for the selected LOIs in four countries: Ethiopia, Guinea, Nigeria and Zambia. So far, 20 research proposals in implementation research have been developed. Implementation of one proposal from each country will be supported by IRP funds.



Implementation research proposal development workshop in Zambia

Support was continued for implementation of the ongoing IRP-funded study on innovations to increase access to integrated safe delivery, PMTCT and newborn care in rural Uganda, with completion of the formative phase. Results of the formative phase included, among others:

- The level of knowledge about pregnancy and postpartum danger signs among women was low.
- Women usually prepare for birth by saving some money for emergencies, and by buying items such as baby clothes, gloves, cotton wool and razor blades for cord cutting.
- Most women delivered in health facilities, including a considerable proportion who delivered at informal private facilities with limited service quality.
- Cord care was found to be problematic, often involving the application of various substances to the umbilical cord, such as powder, ash, cow dung, herbs and lizard droppings, to “help it heal”.
- Women and their partners are willing to contribute to the transport voucher scheme, but would prefer across-the-board contributions rather than exemptions for the poor, so as to avoid problems such as stigmatization of the poor and divisions in the community.
- Supply-side challenges were noted as key constraints to facility-based births, even in the presence of vouchers. Challenges included poor attitudes and absenteeism of health-care workers, lack of supplies and medicines, long waiting times and unofficial payments.

2.2 Progress: support for programme development

2.2.1 African Regional Agenda for Reproductive Health

Following the end of the Reproductive Health Strategy for the African Region 1998–2007, in collaboration with the WHO Regional Office for Africa, the Department initiated the development of an African Regional Agenda for Reproductive Health. The Regional Agenda focuses on four thematic areas: (i) maternal and newborn health; (ii) family planning; (iii) harmful practices, including female genital mutilation (FGM) and prevention of unsafe abortion; and (iv) sexually transmitted infections (STIs), HIV/AIDS and cervical cancer. The areas of action identified for acceleration of universal access to SRH include: health information, human resources, financial resources, health service delivery, and advocacy. The finalized Regional Agenda was disseminated first to a group of 24 countries during a workshop held in Addis Ababa, Ethiopia, in September 2012. It will be published following its adoption by the Member States of the WHO African Region during the Regional Committee in 2013.

2.2.2 Support to francophone countries in improving family planning

At the G8 summit in Muskoka in June 2010, the Government of France announced an additional commitment of 500 million euros towards the achievement of Millennium Development Goals (MDGs) 4 and 5, to be spent between 2011 and 2015. WHO, UNICEF, UNFPA and UN Women jointly submitted a proposal and received funding for a project involving a common framework for the work of the four agencies. The framework follows the six building blocks of health systems strengthening, and includes one component for overall coordination, monitoring and evaluation. RHR is responsible for implementing the family planning part of

the grant allocated to WHO. The planned activities in Burkina Faso, Côte d'Ivoire, the Democratic Republic of the Congo, Guinea, Haiti, Mali, Senegal and Togo involve normative work to support implementation leading to greater demand for services, better access to services, and meeting unmet needs. Interagency team missions were undertaken in 2012 to Guinea, Senegal, Côte d'Ivoire and the Democratic Republic of the Congo to assist in finalizing the country implementation plans and to support implementation. The interagency technical committee met to work on the monitoring and evaluation framework based on the recommendations of the Commission on Information and Accountability (COIA) and aligned with the implementation plan for the recommendations. HRP collaborating institutions in countries will be used as resource centres for the monitoring and evaluation activities, starting in the second year of implementation (2013).

2.3 Planned activities

Activities planned for 2013–2015 in the African Region are within the following main areas of work:

- RHR will promote and further strengthen regional reproductive health research and training networks. A network of research institutions (Repronet) is functional in Anglophone Africa; the establishment of a similar network for francophone countries will be initiated.
- There will be increased efforts to institutionalize strengthening of implementation research capacity in the Region. This will be done through inclusion of implementation research in LID grant activities and the establishment of a pilot centre for capacity building in implementation research will be considered. The School of Public Health at the University of Makerere in Uganda could be a good candidate to host the centre. One implementation research proposal will be funded under the IRP and implemented in each of the four countries that have conducted proposal development workshops, namely, Ethiopia, Guinea, Nigeria and Zambia. Support for research institutions through LID and other types of grants will continue in Burkina Faso, Côte d'Ivoire, the Democratic Republic of the Congo, Ethiopia, Guinea, Kenya, Malawi, Nigeria, South Africa, the United Republic of Tanzania and Zambia.
- Implementation of the regional agenda for SRH will be supported with more guidance to countries, in collaboration with the WHO Regional Office for Africa.
- RHR will introduce and support the adaptation of WHO guidelines in SRH, especially in the area of family planning in countries with a high level of unmet need.
- Implementation of the French Muskoka initiative will be continued, to strengthen the family planning programmes in francophone Africa.

3. Research capacity strengthening and programme development in the WHO Region of the Americas

3.1 Progress: research capacity strengthening

As part of research and technical capacity strengthening activities and strengthening SRH programmes through the introduction of research findings and evidence-based guidelines, collaboration continued with 16 groups and

institutions involved in research, academic and/or programmatic activities in different areas of SRH in 13 countries in the WHO Region of the Americas.

3.1.1 Institutional capacity strengthening

In 2012, substantial progress was made by the two institutions that hold LID grants: the Centre for Population Studies (CEPEP), Asunción, Paraguay, and the Centre for Research in Development Sciences (CIDES) of San Andrés University, La Paz, Plurinational State of Bolivia. Both institutions advanced on their workplans as they entered the final year of their first five-year LID grant cycle.

CEPEP initiated the first phase of their qualitative study on intimate partner violence and reproductive coercion against women. After training of interviewers in the sensitive application of in-depth interview guides, 16 clients from CEPEP's clinics were initially screened for interviews, four of whom declined. The second phase of the project entails supplementary interviews, analysis, reporting and dissemination of results.

Through an RPM grant for South–South collaboration, the Centre for Population Studies (CENEP) in Argentina conducted training for CEPEP researchers on qualitative research analysis and scientific report writing. Thanks to this assistance, CEPEP was able to have two articles accepted for publication (one on fertility decline published in the *Pan American Journal of Public Health*, and another on condom use published in a national scientific journal). Finally, a presentation of the key results of their first study on intimate partner violence was accepted at a regional seminar on 'Youth and violence in developing countries' in Paraguay in May 2012, attended by 81 participants from Argentina, Brazil, the Plurinational State of Bolivia, Mexico and Paraguay. The risk factors analysed in this study included women not in a stable union, living in urban areas, having witnessed violence against their mothers when they were children, and currently working. These results were also presented at an international conference on 'Youth and Violence' in New Delhi, India, in October 2012.

CENEP also assisted CEPEP staff to prepare manuscripts based on previously completed research. Two other articles were prepared and submitted for publication: (i) 'Are all births in Paraguay timely and desired?', submitted to the *Revista Pan Americana de Salud*, and (ii) 'Characteristics of women with foetal loss: an analysis based on four national surveys in Paraguay', submitted to the online journal of the Paraguay National Institute of Health.

During 2012, the results of a study on maternal haemoglobin and pregnancy outcomes at different altitudes in Peru by the Institute for Altitude Research



Results from study on maternal haemoglobin and pregnancy outcomes being prevented in Peru

at Cayetano Heredia University (UPCH) in Lima, Peru, supported by a past CIR grant, were further disseminated. The results were presented at the Peruvian National Institute of Health (INS) in April 2012 (see photo), and at the IX World Congress of the International Society for Mountain Medicine in Taipei, Taiwan.

Through this grant, the Institute for Altitude Research was able to develop a robust dataset using data from the Perinatal Information System (SIP) developed by the Latin American Center for Perinatology and Human Development (CLAP) at the Pan American Health Organization (PAHO), containing data on risk factors and outcomes for more than 360 000 births nationally over a 10-year period. With this database, RHR has commissioned the Institute for Altitude Research to conduct more key studies relevant to sexual and reproductive health. For example, a study was recently completed on syphilis screening and treatment during antenatal care and the results are being analysed by the United States CDC and WHO. Preliminary results support previous indications of the negative effects of syphilis (including its incomplete treatment) on birth weight and other outcomes; they also show that the treatment is mainly provided at birth or postpartum – too late to prevent perinatal complications.

Using data from the same database, another study is finding that the rate of caesarean sections has increased in 10 years, from an average 25% in 2000 to 30% in 2010, and that caesarean sections, after controlling for several factors, are associated with a fourfold increase in the risk of maternal death. These results will soon be published and disseminated to the Ministry of Health of Peru to inform policy-making.

3.1.2 Research training grants

Research training grants (RTGs) were awarded through the Latin American Programme for Training in Sexual and Reproductive Health Research (PLISSER) administered by the Institute of Biology and Experimental Medicine (IByME) in Argentina.

Table 1 summarizes the overall number of grants awarded in 2012 with HRP funds for the Region. A total of 16 fellows were awarded grants for courses or practical training of six months or less. The average duration of training was 3.2 months. Of all the fellows, 63% were women, and 12 of the 16 training visits/courses were carried out at centres located in Latin America. The remaining four grants were awarded, for the first time, for students to take an online course by the Geneva Foundation of Medical Education and Research (GFMER) on research methods in sexual and reproductive health.¹

Table 1. Number of trainees supported by HRP grants in 2012

| Type of research training activity | Men | Women | Total |
|------------------------------------|-----|-------|-------|
| Biomedical / basic sciences | 4 | 5 | 9 |
| Clinical | 1 | 2 | 3 |
| Epidemiology | 1 | 3 | 4 |
| Total | 6 | 10 | 16 |

3.1.3 Impact of research training grants

During 2011 an evaluation was made of the impact of the RTG programme in terms of human resources. A total of 39 people were contacted who had received an RTG between 2005 and 2010. Of the 37 who returned the questionnaire, 81% have published scientific reports (64% specifically related to the topic for which

¹ Course details are available at: <http://www.gfmer.ch/SRH-Course-2012/index.htm>

they had received the RTG), and 97% rated the programme as “excellent” and all of them would recommend it to another colleague. One common view on the impact of the training was that the short visit or course (four to six months on average) enhanced their qualifications towards either a master’s or a doctorate degree later on. Respondents also said that the training allowed them to stay on in their laboratory or helped them to integrate with other teams. The Director of Centro Rosarino de Estudios Perinatales (CREP) in Argentina also provided feedback: he explained that he was a former RTG recipient many years ago and that without this grant he and the centre would not be in the well-reputed position they are at present, coordinating global studies for WHO.

3.2 Progress: support for programme development

3.2.1 Capacity strengthening in monitoring and evaluation

Support was provided to staff of the ministries of health from three Central American countries (El Salvador, Guatemala and Honduras) and Colombia, in collaboration with the Maternal, Newborn, Child and Adolescent Health (MCA) Department. The aim was to strengthen their capacity to define indicators and frameworks, develop questionnaires and assessment tools, conduct surveys and evaluations, analyse data and write appropriate reports, relating to maternal and neonatal health at the district level. This training forms part of a diploma in Health Promotion and Empowerment for Maternal and Newborn Health offered at the University of Antioquia, Colombia.

Furthermore, the Director of Epidemiology at the MoH of Peru has requested assistance from the RHR Department for better completion of death certificates by physicians in inland areas, in terms of correct identification of maternal causes of deaths. Assistance is being provided in carrying out a review of death certificates for cases of incorrect and sub-registration of deaths, in addition to assistance in setting up systems to start tracking cases of severe maternal morbidity (‘near-miss’ cases), which could become a model for other countries.

3.2.2 Conferences, seminars and workshops

Supported centres have carried out their own seminars and conferences according to their identified needs. For example, the IByME centre in Argentina has reported organizing or coordinating 12 scientific activities, 9 national-level presentations and 8 international presentations, and carrying out collaborations with 10 national laboratories and 6 international laboratories. Finally, between 2011 and 2012, they have published in excess of 12 scientific papers. Other centres also remain active in terms of presentations and publications.

3.3 Planned activities

3.3.1 Strengthening institutional research capacity

A meeting of the Regional Advisory Panel (RAP) for the Americas will be held in January 2013 to review progress and agree on the research capacity strengthening grants and related initiatives. The centres in the Plurinational State of Bolivia and Paraguay are finalizing their first cycle of LID grants and they are expected to continue into the second five-year cycle of support, with an increased emphasis on self-support and sustainability. Depending on the availability of funds, research

capacity strengthening activities will be initiated in Central America, spearheaded by Guatemala.

3.3.2 Strengthening human resources for research



The PLISSER programme will continue to offer young research fellows from collaborating institutions four- to six-month grants to develop specific training objectives; renewed efforts will be made to ensure that there are applicants and awardees in the areas of Social Sciences and Epidemiology.

In November 2013, the Latin American Association of Researchers in Human Reproductive (ALIRH) will celebrate its 50th Anniversary at its XXIII Biennial Meeting, in Cancún, México. The ALIRH meeting has long been sponsored by the Department and has been recognized as a unique opportunity for young researchers in SRH

The ALIRH is sponsored by the Department

to present their research projects, meet experienced regional investigators and receive feedback and career advice. This support will continue in 2013.

3.3.3 Technical support to programmes in selected countries

Collaboration will continue with countries in the Region as they work to improve reproductive health services through dissemination of WHO guidelines. Based on requests from countries, support will also be provided for improving the monitoring of maternal deaths and severe maternal morbidity, as in Peru.

4. Research capacity strengthening and programme development in the WHO Eastern Mediterranean and European Regions

4.1 Progress: research capacity strengthening

4.1.1 Institutional capacity strengthening

In 2012, collaborative activities continued at three institutions in three countries in the Eastern Mediterranean Region – Afghanistan, Tunisia and Yemen. The research department of the Afghanistan National Public Health Institute (ANPHI) has developed institutional capacity to provide technical input to partners and the Ministry of Public Health (MoPH) on the design of research projects. Afghanistan was among the 25 countries that participated in the WHO multicountry survey on maternal and newborn health. The ANPHI had the coordinating responsibility for the Afghanistan Mortality Survey, which has provided updated data on national indicators such as maternal mortality ratio, infant mortality rate, under-five mortality rate and adult mortality. The ANPHI has also completed a study on increasing use and correct application of the partograph in three maternity hospitals in Kabul. The results, which are now being prepared for publication, show significant improvements in correct knowledge and skills of the health providers on use of the partograph following interventions such as formal training and supportive supervision, suggesting that these interventions were effective. The

following recommendation was made: Training on use of the partograph should be part of the curriculum at medical schools in Afghanistan.

The ANPHI submitted an application for another LID grant for 2012–2013, with the aim of enlarging the capacity building activities by conducting a series of research methodology training courses in different provinces in Afghanistan during the grant period. The RAP was satisfied with the progress made and approved the LID grant for 2012–2013.

Technical support was provided to the WHO collaborating centre in Tunisia to assess progress in 2009–2011 and to plan for activities in 2012–2013. The activities in 2012 included the preparation of two research proposals submitted to the RAP for funding, which were both approved: (i) Evaluation of screening and management of high-risk pregnancies in Tunisia; and (ii) Determinants of the use of postnatal consultations in Tunisia.

In Yemen, plans were made for developing the national health research policy. Support was provided to the Department of Community Health at the University of Sana'a for preparing an LID grant application in collaboration with the Ministry of Public Health and Population (MoPHP) for capacity strengthening in reproductive health and research.

In 2012, Iran completed the national survey of policies on the management of the third stage of labour, surveying 129 maternity units. The results, which were presented at the 2012 FIGO World Congress in Rome, indicated a considerable degree of variation in the pattern of care for the third stage of labour in Iran. The discrepancy between the stated rate of active management of the third stage of labour and the incidence of each component of the package may indicate a level of ambiguity about the terminology of 'active management' and 'physiological management' among respondents. The following recommendation was made: There is a need for improved practice, education and policy development in the management of the third stage of labour.

In 2012, in Europe and in the Central Asian republics, HRP initiated collaboration with and supported the National Scientific Research Institute of Obstetrics, Gynaecology and Perinatology of the Ministry of Health of the Republic of Tajikistan to develop an application for an institutional developmental grant. The first version of the application was submitted to the European Region RAP, which advised that the application should be revised. HRP will continue to support the centre to revise the grant application.

4.1.2 Research training grants and workshops

No individual training grants were awarded in 2012. Instead, support was provided to the following group training activities.

Three research methodology workshops were held:

- In Afghanistan, there were 55 participants from tertiary hospitals (the majority from the maternity, obstetrics and gynaecology department of Kabul Medical University) and from the Ministry of Public Health. The participants developed 11 research proposals and received a diploma in research methodology. The trainers were from the Afghanistan National Public Health institute (ANPHI).
- In Tajikistan, the workshop was held in Dushanbe, at the National Scientific Research Institute of Obstetrics, Gynaecology and Perinatology of the Ministry of Health of the Republic of Tajikistan. The 30 workshop participants developed

five operations research project proposals. The training facilitators were representatives of the Human Reproductive Health Research Centre of the Lithuanian University of Health Sciences.

- An online postgraduate course was delivered by the Geneva Foundation for Medical Education and Research (GFMER, a WHO collaborating centre) in English. A total of 239 students (health professionals) from 42 countries were enrolled in this course in 2012. The majority of them were from developing countries.

A training course on gender and reproductive rights was held in Pajsher district in Afghanistan in October 2012, organized by the Afghanistan Ministry of Public Health in collaboration with WHO. The one-week workshop was attended by 28 participants (13 women and 15 men). The aim was to raise awareness about gender, reproductive health and rights, and specifically to build the capacity of programme managers and policy-makers with regards to gender-sensitive management of health-related data, policies and services, and also to develop participants' understanding of the links between reproductive rights and health.

The Department continued to disseminate information on reproductive health issues through the telemedicine network Réseau d'Afrique Francophone pour la Télémédecine (RAFT), which was developed in 2000 by Geneva University Hospital in Switzerland. An interactive course of lectures on reproductive health topics was conducted by live webcast of the lectures. The goal of the course was to update the audience on recent research findings and new SRH guidelines. In 2011, a modular style was adopted with one module each on family planning, adolescent reproductive health, gender and psychosocial problems. In 2012, a new module on midwifery training was included. A total of 18 sessions were webcast in 2012; 11 in French and 7 in English.

A regional workshop on improving access to safe abortion care and related reproductive health services in the European Region was held in Riga, Latvia, in May 2012. The aims of the workshop were to share country experiences and results after applying *The WHO Strategic Approach to strengthening sexual and reproductive health policies and programmes* to safe abortion, to introduce participants to WHO's new guidelines (2012) on the provision of safe abortion, and to develop recommendations for concerted action to improve access to comprehensive safe abortion care.

4.1.3 Implementation research

An implementation research project that is being coordinated by the Department is entitled 'Assessing the acceptability, feasibility and effectiveness of a strategy for improving the quality and safety of maternal/neonatal health care in the health service contexts of four Middle Eastern countries'. This project is one of seven that have been granted funds by the Implementation Research Platform (IRP). The study has two aims: (i) to explore health system factors affecting the management of maternal and neonatal 'near-miss' cases through research on the health system and in each of four public hospitals, in Egypt, Lebanon, the Occupied Palestinian Territories and Syria (formative stage); and (ii) to test the feasibility and effectiveness of a multifaceted strategy of clinical audits, feedback and engagement of opinion leaders at these hospitals to address the identified

quality-of-care problems (intervention stage). The main outcome of interest is the management of near-miss cases. The formative stage has been completed and the intervention stage will start soon.

The findings from the formative stage of the project indicate that institutionalization of clinical audits varies across the four hospital settings. Morbidity and mortality meetings are often irregular and have a punitive/blame culture leading to negative responses to individual behaviour. Other common barriers to implementing best practices included fear of litigation, understaffing, high turnover of staff, and lack of basic equipment. Based on the preliminary findings, the researchers identified the following major challenges: there is a need to create a learning environment – avoiding the punitive/blame culture – in order to facilitate improvements in quality of care, and broader health system barriers also need to be addressed, in addition to clinical practices.

4.2 Progress: support for programme development

4.2.1 Policy and programme support to 'Countries of Strategic Focus' in the Eastern Mediterranean Region

As agreed by STAG and PCC in 2011, in consultation with the WHO Regional Office for the Eastern Mediterranean, the Department selected Afghanistan, Pakistan and Yemen as the Countries of Strategic Focus.

In addition to support in strengthening research, support was also provided for policy and programme development to Afghanistan and Yemen. For example, as part of H4+ partnership (which includes WHO, UNFPA, UNICEF, UNAIDS, UN Women and the World Bank), the Department supported the development of a joint plan to accelerate progress towards achievement of MDGs 4 and 5 in Afghanistan. The plan was submitted to the Ministry of Public Health as one of the national priority plans in March 2012.

Nineteen conferences and workshops were conducted during 2012 in the WHO Eastern Mediterranean and European Regions, including online courses on sexual and reproductive health administered by the Geneva Foundation for Medical Education and research (GFMER), an international conference on FGM in Nairobi and one on safe pregnancy in Tehran, regional workshops (e.g. one on improving access to safe abortion in Europe in Riga, Latvia), a FIGO meeting on prevention of unsafe abortion in Turkey, a workshop on infertility in Cotonou, Benin, and several WHO meetings for technical groups advancing various SRH topics.

4.3 Planned activities

Activities are planned for 2012–2013 in the WHO Eastern Mediterranean and European Regions within the following main areas of work.

- RHR will work to improve the research and technical capacity in reproductive health in selected countries including the three Countries of Strategic Focus in the Eastern Mediterranean Region (Afghanistan, Pakistan and Yemen) while linking these efforts with work on strengthening reproductive health policy and programmes.
- RHR will continue to support the National Scientific Research Institute of Obstetrics, Gynaecology and Perinatology of the Ministry of Health of the Republic of Tajikistan in revising their application for an LID grant.

- Operations research capacity in reproductive health will be strengthened in collaboration with the WHO Regional Offices for the Eastern Mediterranean and Europe.
- RHR will support the implementation of monitoring and evaluation frameworks in countries and improvements in maternal mortality surveillance. In the Eastern Mediterranean Region, RHR will also collaborate with the National Collaborative Perinatal Neonatal Network (NCPNN) in Lebanon for expansion and strengthening of the maternal and neonatal health surveillance system that was introduced to other countries in the Region (Abu Dhabi, Bahrain, Jordan, Palestine, Saudi Arabia and Yemen).

5. Research capacity strengthening and programme development in the South-East Asia and Western Pacific Regions

5.1 Progress: research capacity strengthening

Strengthening the research capacity of investigators from low- and middle-income countries remains a priority for the Department. At the institutional level, the focus is on upgrading infrastructural support mechanisms, meanwhile at the individual level, the emphasis is on building a critical mass of competent individuals able to conduct reproductive health research in accordance with the highest scientific and ethical standards.

5.1.1 Strengthening institutions for research

Support is mainly aimed at institutions in least developed countries, particularly those that have not yet received grants from the Department. In 2012, LID grants were awarded to institutions in Bhutan (the Research and Epidemiology Unit of the Ministry of Health), Cambodia (the National Institute of Public Health) and Myanmar (the Department of Medical Research in Upper Myanmar). RMC grants or SSGs were awarded to institutions in the Lao People's Democratic Republic (Maternal and Child Health Centre), Mongolia (the State Research Centre on Maternal and Child Health), Sri Lanka (the University of Colombo) and Viet Nam (Hung Vuong Hospital, Ho Chi Minh City), as well as three institutions in China (the Sichuan Family Planning Research Institute in Chengdu, the Shanghai Institute of Planned Parenthood Research, and the Tianjin Family Planning institute). In 2012, despite the financial constraints on funding, institutions continued to hold training workshops and to publish scientific articles.

Continued support was provided for several research proposals from grant recipient institutions. For example, CIR grant support continued for Myanmar and Viet Nam for the project on 'Improving the quality of sexual and reproductive health through linking RTI/STI services to reproductive health services at the primary health care level'. Three WHO collaborating centres in China (Chengdu, Shanghai and Tianjin) continue to get support for ongoing research on 'Improving sexual and reproductive health of young migrants through peer education and services'.

Furthermore, support was initiated in 2012 to projects on various SRH issues in Bhutan, Myanmar, Sri Lanka, Thailand, the Lao People's Democratic Republic and Viet Nam, including a new research proposal from Myanmar on male involvement in reproductive health.

5.1.2 Strengthening human resources for research

Based on the recommendations of the South-East Asia and Western Pacific Regional Advisory Panels and due to financial constraints, support for short-term grants for individual training was proposed instead of sponsorship for longer-term training, as has been provided in the past. Although three RTGs were approved, because of personal and other constraints of two nominees, only one was awarded to a mid-level researcher from Myanmar in 2012 for a course at the Prince of Songkla University in advanced epidemiology. Two other candidates from Cambodia and Myanmar completed their training in 2012 and a training grant recipient from Myanmar received the 'best student' award for the master's degree programme in Population and Reproductive Health at the Institute for Population and Social Research (IPSR) at Mahidol University in Bangkok, Thailand.

5.2 Progress: support for programme development

5.2.1 Introduction, adaptation and implementation of WHO evidence-based guidelines and tools at the country level

In follow-up to the WHO–UNFPA Strategic Partnership Programme (SPP) for implementation of guidelines and tools on family planning, RTIs and STIs, an evaluation study was conducted to assess the extent to which selected guideline recommendations have affected practice in the focus regions of the SPP.

As a result of the SPP, family planning guidance was used extensively to: formulate and update reproductive health policy; update standards and guidelines; improve training curricula; conduct training activities; develop advocacy and communication materials; and promote improvements in service. The study, which was recently published,² showed that the SPP was successful in promoting the introduction of evidence-based guidelines for reproductive health in several Asian countries. For example, Myanmar developed a simplified version of the *Decision-making tool for family planning clients and providers* (DMT) that is widely used by midwives. In India, the *Medical eligibility criteria for family planning* (MEC) and the *Selected practice recommendations for contraceptive use* (SPR) were utilized to update the national guidelines for intrauterine devices, pills and condoms. The countries that adapted the WHO family planning guidance observed an increase in demand for contraceptive commodities. It was noted that although limited resources were provided through the SPP mechanism, countries were able to implement updated family planning guidelines and tools in a multitude of ways, which in turn allowed



Medical Eligibility Criteria Wheel has been translated into many languages

2 Mody SK, Ba-Thike K, Gaffield ME. The World Health Organization-United Nations Population Fund Strategic Partnership Programme's implementation of family planning guidelines and tools in Asia-Pacific countries. *Journal of Obstetrics and Gynaecology Research*, 2013, 39(4):825-30. Epub 2012 Nov 20.

them to mobilize additional resources from their respective governments and other partners. The other advantages that emerged from the partnership included using limited resources in a strategic way to disseminate the guidance and evidence-based technical interventions. Building on complementary strengths and avoiding duplication of efforts by involving other stakeholders working in the same field was an additional benefit.

In 2012, UNFPA, in partnership with RHR/HRP, began a collaborative project on strengthening advocacy efforts for promoting family planning and improving counselling skills among Member States in the South-East Asia and Western Pacific Regions.

In line with this three-year technical collaboration, the first technical training workshop was held in Jaipur, India (15–19 October 2012), with the overall objective of facilitating a high-level dialogue to promote strategic thinking on addressing the unmet need for family planning, with a focus on quality of care issues in Afghanistan, Bangladesh, India, Myanmar and Nepal.

This workshop brought together governments, United Nations partners and key nongovernmental organizations (NGOs). The specific objectives were: (i) to bring together senior policy-makers and other partners to jointly plan measures to address the various dimensions of unmet need for family planning, focusing on improving uptake, removing barriers and increasing acceptability of family planning; and (ii) to conduct a training of trainers for technical directors at ministries of health on improving family planning counselling skills and to introduce the updated and revised WHO family planning guidelines such as the *Medical Eligibility Criteria Wheel*.

5.2.2 Training workshops

Based on the South-East Asia and Western Pacific RAP recommendations, HRP supports training workshops at HRP collaborating centres in Member countries, in addition to sponsoring international seminars with the aim of moving forward with the work on SRH.



Course on improving skills in research management and leadership, Myanmar

In 2012, research capacity strengthening workshops in the regions included:

- two workshops on research project development and scientific paper writing in Myanmar;
- two workshops on operational research and strengthening collaboration on maternal and child health in Mongolia;
- a training workshop on qualitative software in Cambodia; and
- two workshops on research capacity strengthening and project development in Sri Lanka.
- Additional workshops which have been funded in 2012 are planned for late 2012/ early 2013 in Bhutan (Qualitative Workshop and a workshop on the development of a national research strategy), Vietnam (a Dissemination Workshop introducing the RHL and Cochrane library, systematic review and measurement of effect, and Lao PDR (research proposal and data management and analysis)

In 2012, HRP co-sponsored the following international seminars/workshops organized by RHR/HRP collaborating centres in Asia and Pacific regions:

- ‘Increasing Use of Reproductive Health Services through Community-based Programmes and Conditional cash transfers: impact and sustainability’, in Bangkok, Thailand, 23–25 August 2012;
- ‘International conference on Millennium Development Goals related to reproductive health: status, challenges and future directions’, in Mumbai, India, 18–21 March, 2012;
- ‘Reproductive health with emphasis on strategies for family planning’, in New Delhi, India, 19–21 February 2012.

5.3 Planned activities

- Activities are planned for 2012–2013 in the WHO South-East Asia and Western Pacific Regions within the following main areas of work.
- HRP will provide support to institutions and investigators currently collaborating with the Department through existing grant mechanisms for the development and implementation of research projects, with a view to enabling partner institutes to undertake new research projects relevant to reproductive health needs and priorities of their respective countries and regions.
- RHR will collaborate with other partners (such as United Nations agencies and international NGOs) in capacity building activities in the two regions, setting joint priorities to focus efforts on areas that are instrumental in making progress towards the targets set for MDGs 4 and 5.
- RHR will strengthen South–South collaboration efforts, especially with institutions that are receiving resource maintenance grants. WHO collaborating centres in Thailand will continue to contribute to the global research effort and will be supported to continue their role as mentors to encourage South–South collaboration.

- RHR will work to improve the research and technical capacity in reproductive health in countries of strategic focus in the South-East Asia Region (Bangladesh, Myanmar and Nepal) and in the Western Pacific Regions (Cambodia, the Lao People's Democratic Republic and Viet Nam), through the provision of focused training workshops responding to country-level needs and by identifying institutes that may benefit from national capacity strengthening.
- There will be increasing efforts to institutionalize strengthening of implementation research capacity in the South-East Asia and Western Pacific Regions. These efforts will move the focus from the efficacy of interventions to a focus on issues of effectiveness and efficiency and evidence-based scale-up.
- RHR will develop a comprehensive database for both Regions to track and monitor activities, including allocation of human and monetary resources.
- RHR will support the finalization and implementation of the regional agenda for sexual and reproductive health.

Knowledge exchange for policy and programme development

Summary

Key objectives

Knowledge exchange and transfer occurs in the context of dissemination of products and tools developed by RHR's teams for each thematic area of work. A number of cross-cutting tools and approaches are also developed and used for knowledge exchange as part of the work in strengthening reproductive health policy and programmes. The centrepiece of this work is the WHO *Reproductive Health Library* (RHL). Additional and country-specific work on policy and programmatic development is also carried out through the support to capacity strengthening in the use of evidence as a basis for policies and programmes, and through provision of technical assistance and implementation of research using various knowledge exchange approaches, such as *The WHO Strategic Approach to strengthening sexual and reproductive health policies and programmes*.

Major achievements

- Development of the WHO Reproductive Health Library (RHL):
 - Updated RHL content: Throughout 2012, RHL continued to be updated monthly on a basis with two to three new or updated reviews, guidelines and expert commentaries (<http://apps.who.int/rhl/en/>). Added Cochrane reviews included topics on education for contraceptive use after child-birth, mobile phones for promoting adherence to antiretroviral treatments and non-clinical interventions for reducing caesarean section rates. On 31 December 2012, RHL content stood at 223 Cochrane reviews and corresponding commentaries
 - RHL applications and videos: New RHL applications (apps) were launched that enable users to download content from RHL onto computers and mobile devices, and a new YouTube channel was created to promote videos in RHL.
- Cluster randomized trial to evaluate the effectiveness of courses on evidence-based medicine using RHL: RHR contributed to this trial, comparing a clinician-facilitated e-learning programme to a self-directed-learning course model. The findings in seven countries (Argentina, Brazil, the Democratic Republic of the Congo, India, the Philippines, South Africa and Thailand) showed that clinician-facilitated e-learning led to a higher level of knowledge and skills (*Journal of the American Medical Association*).
- Working with the Ukraine Ministry of Health on contraception, unintended pregnancies and unsafe abortions: In follow-up to the technical assistance being provided to the Ministry of Health, a scaling-up strategy was developed in Kyiv in October 2012, by more than 40 stakeholders and partners brought together.

1. Introduction

Knowledge exchange and transfer is an important part of the Department's work in the context of technical cooperation with countries for more effective policy and programme action. Among various knowledge exchange activities carried out by the thematic teams of the Department, the cross-cutting online review journal, the WHO Reproductive Health Library (RHL), is the centrepiece of this work.¹ The contents of RHL have been used in various capacity strengthening activities including educational projects and scientific writing workshops, with the aim of supporting evidence-based decision-making for policies and programmes.

More specific work on policy and programmatic development relates to the provision of technical assistance and implementation of research to support the delivery of sexual and reproductive health (SRH) services, with an emphasis on the utilization of various knowledge exchange approaches, including *The WHO Strategic Approach to strengthening sexual and reproductive health policies and programmes*, and the related work with ExpandNet on scaling up health innovations. This work has been carried out in collaboration with staff from different thematic areas in the Department, albeit at a slower pace during 2012, due to the departure of the relevant technical staff members.

2. The WHO Reproductive Health Library

2.1 Progress

Throughout 2012, RHL continued to be updated monthly with two to three new or updated reviews, guidelines and expert commentaries. On 31 December 2012, RHL content stood at 223 Cochrane reviews and corresponding commentaries and 8 WHO guidelines. RHL continued to maintain its high ranking within the family of WHO web sites: of the 211 unique WHO web addresses, RHL remained close to fifteenth position in terms of number of sessions per month.

From 1 January to 15 December 2012, there were 1 963 585 visits to the RHL web site and 13 484 800 page views. The pilot RHL page on the Facebook social networking site remains active, with some 700 current followers. Encouraged by the response to the pilot Facebook page, RHR is working to further extend the reach of RHL based on a new social media strategy. The four key components of the strategy are as follows:

- make the key RHL content more user-friendly and accessible;
- improve content and focus through continuous learning from the community of users;

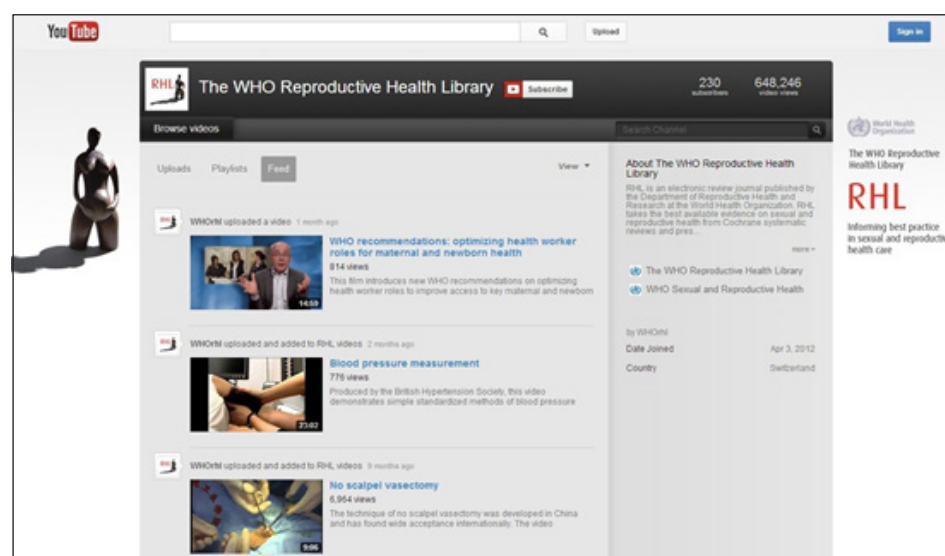


¹ RHL is available at: <http://apps.who.int/rhl/en/>

- develop RHL content using crowdsourcing techniques to obtain input from the community of professionals who use RHL (e.g. inviting comments and commentaries from interested scientists);
- provide WHO guidelines and recommendations in formats that are easy to access and share.

A key development was the creation and launch of RHL applications (apps) that enable users to download content from RHL onto computers and mobile telephones. Furthermore, a new YouTube channel was created to promote videos in RHL; this channel has already helped to vastly increase the number of views of the RHL videos, with 620 000 views since April 2012.

RHL YouTube channel



RHL continues to be translated into Chinese, French, Russian, Spanish and Vietnamese.

2.1.1 Knowledge translation research

A cluster randomized trial to evaluate the effectiveness of using RHL to learn about evidence-based medicine was completed. The trial compared a clinician-facilitated e-learning programme to a self-directed-learning course model. The participants were postgraduate trainees in obstetrics and gynaecology in seven countries (Argentina, Brazil, the Democratic Republic of the Congo, India, the Philippines, South Africa and Thailand) and the study was conducted between April 2009 and November 2010. Each training unit was randomized to either: (i) an experimental clinically integrated course consisting of clinician-facilitated e-modules using RHL for learning activities and trainees' assessments (experimental intervention: 31 clusters, 123 participants), or (ii) a control standard self-directed course incorporating the use of RHL (control intervention: 29 clusters, 81 participants). The findings of this trial showed that clinician-facilitated learning led to a higher level of knowledge and skills on evidence-based medicine. The findings were published in *JAMA* in January 2013.²

2 Kulier R et al. Effectiveness of a clinically integrated e-learning course in evidence-based medicine for reproductive health training: a randomized trial. *The Journal of the American Medical Association*, 2012, 308(21):2218–2225 (<http://jama.jamanetwork.com/article.aspx?articleid=1475183>).

2.2 Planned activities

- RHL will continue to be updated monthly and published in six languages. The social media strategy will be finalized and implemented in 2013. The online use of RHL will continue to be monitored, including the types and extent of information searches being conducted using RHL.

3. Capacity strengthening

3.1 Progress

3.1.1 AfricaBuild

In 2011, the Department and seven other partners received a grant from the European Commission to promote health research, education and health-care practice in Africa. The seven partners included Universidad Politecnica de Madrid in Spain (Coordinator), the Ministry of Communication and Information Technology of Egypt, Université de Bamako in Mali, Université de Genève in Switzerland, Prince Leopold Institut Voor Tropische Geneeskunde in Belgium, Université de Yaoundé in Cameroon and the University of Ghana. The grant is being used to create centres of excellence in Africa, with an initial focus on the area of SRH and HIV/AIDS. The project uses information technology (IT) to deliver e-learning courses and enable knowledge-sharing through web-based virtual communities. The courses will continue, with the longer-term aim of creating sustainable South–South knowledge-sharing groups involving African researchers.

The Department's role in this project is largely limited to work on information dissemination. One of its roles is to provide to the project coordinator in Madrid the international-standard e-learning courses to be used by African institutions to provide training in SRH. In this regard, among other courses, the Department provided an evidence-based medicine course based on RHL to the partners of AfricaBuild. The Department is also helping to disseminate information about the project through WHO channels. Staff from the Department participated in a meeting of AfricaBuild partners at the Geneva University Hospital in Geneva, Switzerland (15–16 October 2012) to develop workplans and pilot e-learning courses.

3.1.2 Workshops on scientific writing

Capacity to publish research papers in peer-reviewed journals is a vital aim of research capacity strengthening. HRP has conducted scientific writing workshops at collaborating research institutions since the early 1990s. In 2012, five scientific writing workshops were conducted at partner institutions. These included two at the Institute of Tropical Medicine in Antwerp, Belgium, one in Gaborone, Botswana, for researchers at the Centers for Disease Control, Botswana, and one each at collaborating centres in Chengdu and Shanghai, China. All workshops were fully funded by the inviting institutions and more than 150 researchers received training at these workshops.

3.2 Planned activities

- The Department will continue to fulfil its role as a partner in the AfricaBuild project through supporting the development of the e-learning courses using the guidelines, norms and tools developed by the Department.

4. The Strategic Approach and ExpandNet

4.1 Progress

Work on *The WHO Strategic Approach to strengthening sexual and reproductive health policies and programmes* and on ExpandNet continued in 2012. Previously initiated activities were followed up with further actions in collaboration with the regional offices, especially the Regional Office for Europe

In 2006, the Ministry of Health (MoH) of Ukraine requested support from the Department to analyse the current situation with regards to contraception, unintended pregnancies and unsafe abortions. Based on the success of the pilot phase of the project (Phase I), which initiated comprehensive services at three consultation centres, and the recommendations and priority actions identified and reported on in the previous STAG report, the Ukraine MoH agreed that it would be important to scale up the CCUP approach in Ukraine. A workshop dedicated to developing a scale-up strategy was organized in Kyiv in October 2012 and brought together more than 40 representatives from government and nongovernmental institutions, international partner organizations, representatives of scientific and research institutions, stakeholders and partners from the regions of Ukraine. More details on this work can be found in chapter V on prevention of unsafe abortion.

4.2 Planned activities

- Phase II of the scaling-up project in Ukraine will run from 2012 to 2014. The project will also include new activities to increase the capacity of medical personnel who provide services for second trimester abortions at the perinatal centres.
- The work on the Strategic Approach and ExpandNet will continue in the context of the specific thematic areas, according to the recent reorganization of the work of the Department, and in collaboration with regional offices.

Health systems research

Summary

Key objectives

The Department's Health Systems and Implementation Research team seeks to build the evidence base on the effects of changes in health system elements and also on various implementation strategies for improving the access to and use of high-quality reproductive health services. HRP conducts and supports implementation research and evaluations on key issues within the health system. This area of RHR's work also: (i) fosters the development and validation of innovations that focus on improving sexual and reproductive health in populations with the greatest need; (ii) develops and supports mechanisms that improve the use of health system innovations; and (iii) supports research that aims to understand and overcome barriers to scaling up innovations.

Major achievements

- Strengthened capacity in implementation research:
 - RHR has provided ongoing support for the implementation of three research projects in Guatemala, Uganda and four countries in the WHO Eastern Mediterranean Region, and the formative phases have been finalized.
 - RHR has convened and supported implementation research proposal-writing workshops in the Democratic Republic of the Congo, Ethiopia, Guinea, Nigeria and Zambia.
- **Strengthening the capacity of civil society organizations to promote reproductive health in the new aid environment:** An evaluation of this project was carried out during 2008–2011 and completed in 2012. The evaluation report indicated an increased profile of sexual and reproductive health in the four project countries in the second phase of the project, supported by the development of advocacy action plans and the direct engagement of civil society organizations in budgetary processes in both the Philippines and Uganda.
- **mHealth and ICT Framework for RMNCH:** The team has developed this Framework as a way of cataloguing and charting the value of 'mobile health' (mHealth) in terms of health systems strengthening, along the continuum of care for reproductive, maternal, newborn and child health (RMNCH).
- **mTERG:** The WHO mHealth Technical and Evidence Review Group for RMNCH (mTERG) was launched by the Department in 2012. This Group was formerly known as mTAG, (WHO mHealth Technical Advisory Group on Evidence, Impact and Scale for reproductive, maternal, newborn and child health).
- **Dristhi:** The Department has successfully developed the 'Dristhi' Smart Registries mHealth platform to support the daily work of rural health workers in India, with a focus on reproductive, maternal, newborn and child health interventions.
- **Study results published:** The Department completed and published the results of a three-year study in Myanmar evaluating the impact of a large network of

private-sector providers on the health-care market. The results indicated that the network's quality improvement measures have had a positive effect on patient satisfaction.

- **Publications and working papers:** The Department has produced publications providing evidence on mHealth initiatives and on the role of registries in reproductive, maternal, newborn and child health, as well as working papers on mHealth classification, evaluation, indicators and evidence grading.

1. Introduction

The key objective of the Health Systems and Implementation Research area of work is to build the evidence base on the effects of the changes in health system elements and also on various implementation strategies for improving the access to and use of high-quality reproductive health services. This area of RHR's work also: (i) fosters the development and validation of innovations that focus on improving sexual and reproductive health (SRH) in populations with the greatest need; (ii) develops and supports mechanisms that improve the use of health system innovations; and (iii) supports research that aims to understand and overcome barriers that prevent innovations from achieving sustainable impact at scale.

HRP conducts and supports implementation research and evaluations on key issues within the health system. During 2012, research and capacity strengthening activities have focused primarily on the work carried out as part of the Implementation Research Platform (IRP).¹ The IRP is hosted by the Alliance for Health Policy and Systems Research (Alliance HPSR) and includes synergistic activities among HRP, the Special Programme for Research and Training in Tropical Diseases (TDR) and the Department of Maternal, Newborn, Child and Adolescent Health (MCA). Work on innovations has focused on the development and testing of two innovations: scaling up mature RMNCH mHealth projects and synthesizing research evidence demonstrating the value of mHealth in terms of strengthening health systems.

2. Implementation Research Platform activities

2.1 Progress

2.1.1 Implementation research studies

During 2012, support continued for the implementation of three research projects funded through IRP. The projects carried out in Guatemala, Uganda and four Middle Eastern countries all developed during a 'formative' research phase, focusing on strategies to improve access to and coverage of effective interventions, and test their effectiveness. Progress and preliminary results from the formative phases of these projects are reported as part of the regional activities in the African, Americas, and Eastern Mediterranean Regions.

2.1.2 Leveraging Funds Initiative

The IRP Leveraging Funds Initiative is a country-level activity bringing together policy-makers, technical experts, programme personnel and researchers in the countries to engage in a research priority-setting and proposal-writing exercise on

¹ See: <http://www.implementationresearchplatform.org/>

strategies to reduce maternal and infant mortality and morbidity. In 2011, priority-setting exercises were carried out in five selected countries (the Democratic Republic of the Congo, Ethiopia, Guinea, Nigeria and Zambia) and in 2012 the results of these exercises were synthesized with those of seven other countries supported by other WHO departments.

The general conclusions from the synthesis and the priority-setting exercises in all 12 countries include the following.

- Facility-level quality of care seems to be a cross-cutting research priority.
- Focus is also needed on improving access to care through community action and engagement to improve health seeking behaviour.
- There is general concern about improving access to health facilities without improving the quality of care.
- Capacity strengthening is needed in the area of formulating questions for implementation research.

In 2012, in all five of the RHR-supported countries, research teams were supported to develop implementation research proposals responding to the research questions that had been identified as national priorities. The best proposal from each country will be selected for implementation in 2013 and will receive technical and financial support.

2.1.3 Identification of implementation research proposals for support in 2013

In 2012, the Department worked to identify the focus of the next call for proposals for IRP support, and to select the best applications to receive support. Of the three themes identified, HRP was tasked with leading the selection of proposals on 'strategies to facilitate the integration of services to result in improved health outcomes and greater efficiencies', and supporting their implementation.

The HRP technical team reviewed 150 proposals that were submitted. Twenty-six proposals were short-listed for evaluation by an external selection committee, and six proposals were supported for further development at a workshop for investigators convened in January 2013. HRP will continue to support the finalization of the six study protocols and their implementation.

2.2 Planned activities

Further implementation research activities will be carried out in the context of the IRP.

- Support will continue for implementation of the three research projects in Uganda, Guatemala and Middle Eastern countries. These projects constitute the first wave of projects funded by the IRP.
- In follow-up to the national proposal-writing workshops for implementation research studies, support will be provided for implementation of one study in each country.
- Support will be provided for finalization of the six implementation research study protocols that were selected for funding in 2013, and for their implementation.

3. Health system evaluations

3.1 Progress

3.1.1 Effectiveness evaluations: working with the private sector and demand-side financing

This activity aims to develop the evidence base on private sector provision of SRH. This evidence will form a basis for providing better advice to Member States on effective public–private partnerships. The research is particularly focused on social franchise networks and demand-side financing.

The Department completed and published the results of a three-year study in Myanmar that was carried out jointly with Population Services International. The study evaluated the impact of a large network of private sector health-care providers. The results indicate that such networks can expand the coverage of reproductive health services, notably family planning, through an increase in the number of clients being served by member physicians. The network's quality-improvement measures led to an increase in patient satisfaction among this select group of health-care providers. Furthermore, approximately half of the providers in the network reported that their earnings had increased since joining the network, indicating that non-members face increased out-of-pocket payments for health-care services that are subject to price control for those who become members of the network.

Two new effectiveness evaluation studies were initiated in 2012. In Kenya, an evaluation was conducted to assess whether married women of reproductive age living in the catchment areas of a private sector franchised network were more likely to have begun using a modern family planning method than women living in areas not covered by this network. In Pakistan, an evaluation was conducted to assess the comparative effectiveness and impact of single-purpose versus multi-purpose vouchers for SRH services.

3.1.2 Strengthening the capacity of civil society organizations to promote reproductive health in the new aid environment

An external evaluation was carried out during 2008–2011 of the project 'Strengthening the capacity of civil society organizations (CSOs) to promote reproductive health in the new aid environment' and this was completed in 2012. The project had the overall goal of ensuring that government funding is increased and sufficient resources are available for reproductive health in the new aid environment of sector-wide planning processes, pooled-funding mechanisms and performance-based budgeting. The evaluation concluded that:

- The curriculum and materials that were developed for the project 'Strengthening capacity of UNFPA and WHO to advocate for the integration of sexual and reproductive health issues into national development planning processes' were successfully adapted for the CSO audience.
- 269 CSOs received initial training through workshops in East Africa, West Africa, South Asia and South-East Asia to enhance their understanding of the recent rapid changes in the global aid environment as relates to SRH.

- The second phase of the project, focusing on capacity development through support to advocacy action plans in four countries, was successful, as indicated by the increased profile of SRH in each country studied, the direct engagement of CSOs in budgetary processes in both Uganda and the Philippines, and the increasing influence of CSOs with regards to national-level policies.

3.2 Planned activities

- The two evaluation studies developed in 2012 (see section 3.1.1, this chapter) will be implemented.
- Further work by the Department in the area of health systems research will be developed as part of each thematic areas of focus, in line with the recent reorganization of the work of the Department.

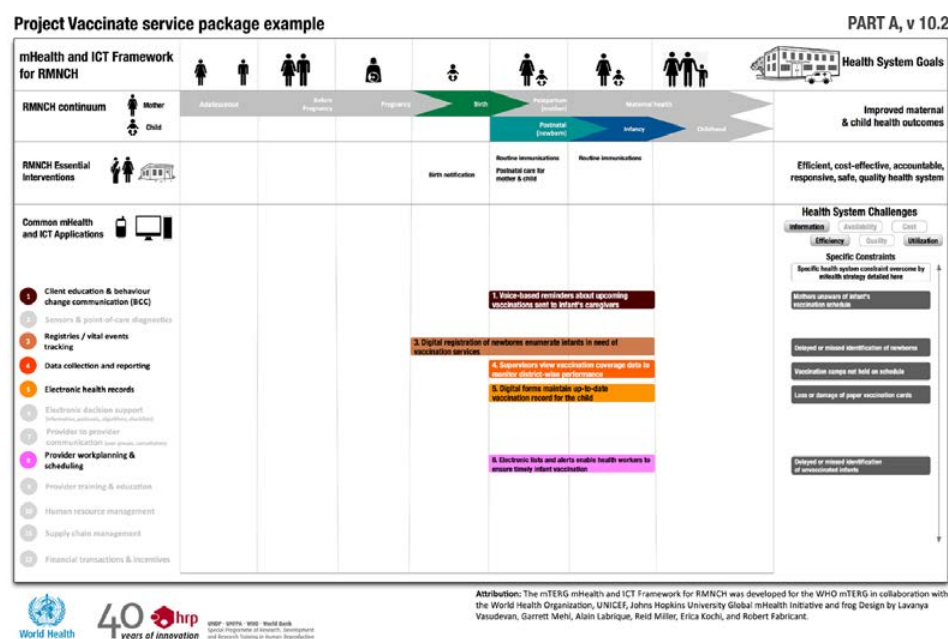
4. mHealth: health system strengthening strategies for delivering validated RMNCH interventions

4.1 Progress

In partnership with Johns Hopkins University Global mHealth Initiative (JHU-Gmi) and WHO IRP, RHR has led the work to redefine mHealth as a health systems strengthening strategy, demonstrating that mHealth can be a mechanism to overcome health system constraints and achieve effective coverage of existing, validated RMNCH interventions. The description of mHealth as a 'health systems catalyst' aids innovators' in communicating the concept of mHealth to stakeholders, including government decision-makers. There is a considerable gap in understanding within the health community, and particularly among decision-makers, in when it comes to grasping the diversity of mHealth approaches; many view mHealth purely as the use of mobile phones to disseminate health messages. Articulating the diversity of mHealth strategies in a simple and effective manner has been a challenge for the public health community.

Therefore, RHR developed the mHealth and ICT Framework for RMNCH that is now used to catalogue specific mHealth projects and strategies and to explain how specific mHealth strategies are critical for strengthening particular WHO-recommended essential RMNCH interventions along the continuum of care. The Framework can also aid in achieving health system goals: it has already been effectively applied to explain many mHealth projects and strategies to ministries of health (see Figure 1). This framework, and the accompanying taxonomy used to create it, will form the basis of an effort by the WHO RHR mTERG (see section 4.1.2, this chapter) to describe strategies and catalogue evidence in support of mHealth strategies, and will also be a useful reference in the development of a web site and database in collaboration with the USAID initiative, K4Health.

Figure 1: Example of the mHealth and ICT Framework for RMNCH applied to a hypothetical “Project Vaccinate” Project.



4.1.1 Catalytic grants for maternal and child mHealth

HRP's Innovations Catalyst Programme focuses on strengthening the capacity for innovations to generate and use evidence to realize positive effects on women's and children's health at scale, while becoming financially sustainable. The United Nations Innovation Working Group's (IWG's) catalytic grant programme for mHealth is a grant-making and technical assistance partnership between the mHealth Alliance and WHO's RHR Department that began in June 2012 in support of the United Nations Secretary General's Global Strategy for Women's and Children's Health and the 'Every Woman Every Child' movement. Through this initiative, 16 maternal and child mHealth projects have received grants from the mHealth Alliance and technical assistance from WHO RHR in support of their efforts to move to scale up their successful pilot projects and find sustainable solutions. Through targeted technical assistance and implementation research, RHR aims to facilitate scale-up of these mHealth innovations across one or more countries.

WHO convened three workshops on mHealth in 2012. The first was held in Cape Town, South Africa, with the first cohort of eight IWG mHealth project grantees. The second and third workshops were held with the first and second cohorts of grantees in Airlie, Virginia.

During 2012, WHO also provided technical assistance to the first cohort of IWG grantees on: approaches to improve research rigor; costing of projects; engagement with the private sector; developing a scale-up plan; developing a business model; and process documentation. These efforts are generously supported by the United Nations Fund for International Partnerships (UNFIP) and the Norwegian Agency for Development Cooperation (Norad).

4.1.2 WHO Technical and Evidence Review Group on mHealth for Reproductive, Maternal, Newborn and Child Health (mTERG)

Convened by RHR, the mTERG is group of 20 recognized global experts in research and programme implementation at the intersection of mHealth and RMNCH.

The mTERG aims to address the needs of government officials, decision-makers and mHealth programme managers as they strive to understand which mHealth innovations to adopt in relation to the RMNCH continuum of care. The WHO RHR mTERG was convened in December 2012 to establish methodologies and build consensus on how to identify effective mHealth strategies for RMNCH. Subsequent mTERG meetings (at least once a year) will focus on reviewing and synthesizing available information, and developing policy- and programme-related guidance on the role and application of mHealth strategies for health system strengthening across the RMNCH continuum of care.

4.1.3 Dristhi and mCheck innovations

Known as the 'Dristhi project', this mHealth project funded by the Wellcome Trust is officially entitled 'Development and impact assessment of an mHealth package for rural India'. Since the project began in October 2011, WHO RHR, Earth Institute of Columbia University (USA) and the Foundation for Research in Health Systems (FRHS, India) project partners have engaged in stakeholder research with intended users and beneficiaries of the mHealth package, to understand their needs and to define the core technical and health content areas of the mHealth system, in Karnataka, India.

The Dristhi Smart Registry platform mHealth package focuses on supporting the work of auxiliary nurse midwives (ANMs), who are severely burdened with work responsibilities, including ensuring that clients receive appropriate reproductive, maternal and child health (RMCH) services, which are provided through the National Rural Health Mission (NRHM). Eight health areas are targeted for strategic focus in Dristhi, due to their health importance along the continuum of care and because of the potential to affect those areas using mHealth strategies in India. Using the Android platform for mobile devices, in combination with existing mHealth technologies (e.g. MOTECH Suite, FormHub, HTML5), the project partners developed an mHealth package for Android Tablets that reflects the current flow of work and information handled by ANMs, as well as the paper-based registries, the 'Thayi' card, periodic reporting, and linkages with the Mother and Child Tracking System (MCTS). The Dristhi Smart Registries application is already fully functional, but is going through refinements to simplify the product and its usage. The application includes the following features: work planning, checklists, client registries, protocols to support decision-making and to highlight clients who are at risk, reminders, and automated reporting. The mobile technology used for the Dristhi application emphasizes ease of use for low-literacy individuals and is provided free of charge. ANMs have been using the Dristhi application on Android mobile devices since October 2012. This three-year research project is now in its second year as it looks at the health system improvements resulting from ANMs' use of the Dristhi phone application. In this phase, the application is still being refined to ensure usability and effectiveness prior to launching a cluster randomized controlled trial to assess health system and health outcome benefits resulting from use of the Dristhi application with a new population of ANMs.

The mCheck project received funding from the Bill & Melinda Gates Foundation to develop and test the mCheck tools in India. The mCheck package aims to help new mothers and their family members identify danger signs and encourage them to seek appropriate care within the first week after giving birth – a time of high risk for both mother and infant. mCheck empowers mothers to reliably identify potential complications – in themselves and in their newborns – before they become fatal. The 7-day mCheck tool comprises a paper-based instrument and a complementary mobile phone system consisting of a registration process, multi-media content explaining the checklist, and pre-recorded audio message reminders to empower mothers to recognize and respond to twelve critical danger signs, as defined by WHO. The paper checklist and the reminder audio content have been developed and pretested in preparation for a research study to be initiated in 2013 to assess the effectiveness of the package in terms of women's ability to recognize and respond to danger signs.

4.2 Planned activities

Work to support innovations to catalyse health systems strengthening will continue.

- The IWG's catalytic grant mechanism will enter its second year, with the new cohort of eight RMNCH mHealth projects receiving additional research and technical support to strengthen their ability to achieve sustainability and impact at scale.
- Impact assessment phases will start in the mCheck and Dristhi research projects, focused respectively on the use of checklists and mobile technology in support of health workers across the continuum of care.
- The mTERG mechanism aims to develop a documents summarizing the state of evidence on mHealth related to one or more area of strategic focus: family planning, adolescents, maternal health, or strengthening the effectiveness of front-line RMNCH health workers.

Monitoring and evaluation

Summary

Key objectives

The monitoring and evaluation team supports the monitoring of progress towards achieving the goals and targets related to sexual and reproductive health (SRH) and the implementation of the Global Reproductive Health Strategy. The main areas of work in monitoring and evaluation are:

- monitoring progress towards the achievement of global goals and targets related to SRH, particularly those indicators related to MDG 5 Target 5A and relevant elements and targets of the International Conference on Population and Development (ICPD);
- conducting and coordinating systematic reviews on the epidemiology of SRH;
- supporting measurement and tracking of SRH indicators by developing relevant standards and tools, including indicators, as well as capacity strengthening in application of the tools.

Major achievements

- *The WHO application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD MM*: This 2012 document is primarily intended to assist health-care providers who complete death certification by clarifying the application of the ICD-10 and standardizing the identification of direct and indirect maternal deaths.
- *Trends in maternal mortality: 1990 to 2010. WHO, UNICEF, UNFPA and the World Bank estimates*: This 2012 report provides updated estimates of maternal mortality in 1990, 1995, 2000, 2005 and 2010. Globally, maternal mortality fell by 47% between 1990 and 2010, representing an annual decline of 3.1%.
- *Estimates of preterm birth rates*: Global, regional and the first country-level estimates of preterm birth have been published in *The Lancet*. In 2010, there were an estimated 14.9 million preterm births; 60% of these occurred in Southern Asia and sub-Saharan Africa.
- *World Health Statistics 2012*: The WHO's annual compilation of health-related data for its Member States includes updates of the global databases of births attended by a skilled health professional (MDG 5.2), antenatal care coverage (MDG 5.5), caesarean section rates, facility deliveries, and postnatal care.
- *Working Group on Maternal Morbidity*: The Working Group was established and two meetings were held. A draft definition for maternal morbidity was elaborated and a framework for measurement was developed.

1. Introduction

The Department's monitoring and evaluation area of work responds to the need to monitor progress in the achievement of global goals and targets related to sexual and reproductive health (SRH) – including the related Millennium Development Goals (MDGs) and those set at the International Conference on Population and Development (ICPD) – and progress in the implementation of the WHO Global

Reproductive Health Strategy. In addition, support is provided to regions and countries in the measurement and monitoring of SRH indicators, via development of relevant standards and tools as well as capacity strengthening in their use.

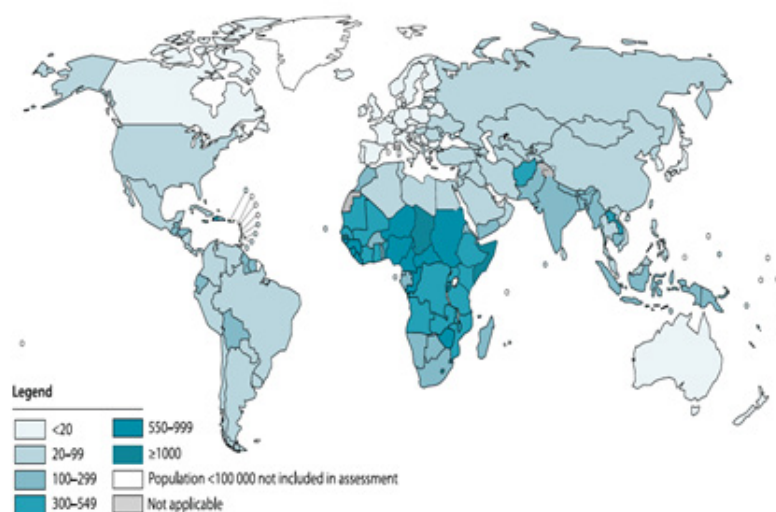
1. Monitoring of sexual and reproductive health related indicators

2.1 Progress

2.1.1 Maternal mortality estimates

The Department leads the collaborative effort with UNICEF, UNFPA and the World Bank to provide up-to-date estimates of global maternal mortality levels as part of monitoring progress towards MDG 5 Target 5A (reducing the maternal mortality ratio by 75% between 1990 and 2015). In May 2012, the latest estimates resulting from a rigorous and comprehensive analysis were published in a report entitled *Trends in maternal mortality: 1990 to 2010*.¹ The Maternal Mortality Estimation Inter-agency Group (MMEIG), led by the Department, collaborated with scientists from the University of California at Berkeley to update the analysis, which was overseen by a technical advisory group (TAG) of external experts from Harvard University, Johns Hopkins University and the University of Texas (USA), the University of Aberdeen (United Kingdom) and Umeå University (Sweden), and Statistics Norway. Levels of maternal mortality for five-yearly intervals from 1990 to 2010 were analysed for each country using methodologies first described in 2010. As is usual, a consultation with countries was carried out to enable countries to review the preliminary estimates, data sources and methods, to provide feedback, and to obtain additional data sources that may not have been used in the analysis. The results show that, globally, the maternal mortality ratio (MMR) fell by 47% between 1990 and 2010, representing an annual decline of 3.1%. The biggest declines in the MMR were seen in eastern Asia and northern Africa (69% and 66%, respectively). Figure 1 shows maternal mortality levels in the countries.

Figure 1. Levels of maternal mortality in 2010



¹ Available at: <http://www.who.int/reproductivehealth/publications/monitoring/9789241503631/en/index.html>

In order to maintain complete transparency regarding the input data and estimation process, all underlying data, methods and statistical programmes used to generate these estimates were made available on a publicly accessible web site,² linked to the Global Health Observatory (GHO).³

2.1.2 Updates of global databases of maternal and perinatal health-care coverage indicators

Annual updates of a range of global databases were continued and updated figures were published in *World Health Statistics* 2012, the WHO's annual compilation of health-related data for its Member States.⁴ These databases include births attended by a skilled health professional (MDG 5.2), antenatal care coverage (MDG 5.5), caesarean section rates and facility deliveries. A new indicator, coverage of postnatal care, was added in 2012.

2.1.3 Systematic reviews of epidemiological data on reproductive health conditions

To further understand the magnitude of priority reproductive health conditions, the Department conducts epidemiological systematic reviews. In 2012, the first ever country-level estimates of preterm birth were published based on the work of the Department.⁵ The findings show a global incidence of preterm birth in 2010 of 14.9 million preterm births, which represents 11.1% all live births. Sixty per cent of these preterm births occur in southern Asia and sub-Saharan Africa. As with maternal mortality estimation, a consultation with countries was carried out to provide an opportunity for them to review the preliminary estimates, data sources and methods, to give feedback, and to obtain additional data sources that may not have been used in the analysis.

Also, in 2012, an updated analysis of the systematic review of causes of maternal deaths was carried out using the methodology developed by the Child Health Epidemiology Reference Group (CHERG) for calculating causes of child deaths. The methodology, which has received substantial feedback from external statistical reviewers, was updated during a technical consultation in December 2012 before being revised for publication.

Finally, a systematic review of the incidence of pre-eclampsia was conducted. It has been submitted for publication and is currently under review.

2.2 Planned activities

- Annual updates of maternal and perinatal health databases for publication in *World Health Statistics* will continue. Additional work will be carried out on provision of age-disaggregated data, with particular attention to the adolescent age group.
- An MMEIG/TAG meeting will be convened to review the feedback to the maternal mortality estimates published in 2012, to discuss methodological issues and the need for further methodological work (including sub-analyses,

2 Available at: <http://www.who.int/reproductivehealth/publications/monitoring/9789241503631/en/index.html>

3 Available at: http://www.who.int/gho/mdg/maternal_health/situation_trends_maternal_mortality/en/index.html

4 Available at: http://www.who.int/gho/publications/world_health_statistics/2012/en/index.html

5 Blencowe H et al. National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications. *The Lancet*, 2012, 379(9832):2162–2172 ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)60820-4/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)60820-4/fulltext)).

such as MMR in specific populations and age groups), and to determine the timeline for the new round of estimates.

- A systematic review on the distribution of causes of maternal deaths will be published.
- The databases for stillbirth and preterm birth estimates will be updated.

3. Norms, tools and standards

3.1 Progress

3.1.1 Maternal morbidity

With evidence of substantial reductions in maternal mortality, increased emphasis is being placed in maternal morbidity, but there is no common definition of what constitutes maternal morbidity. Accurate and routine measurement of maternal morbidity is needed to inform policy and programme decisions and allocation of resources. The Department received a grant from the Bill & Melinda Gates Foundation for a project that aims to address this challenge and to improve the scientific basis for defining, estimating and monitoring the magnitude of maternal morbidity. In 2012, a Working Group on Maternal Morbidity was established and two meetings were held. During the first meeting (April 2012), the working group proposed a draft definition for maternal morbidity as “any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman’s well-being” and initiated a framework to identify and classify maternal morbidities. The framework builds upon the work for ‘near-miss’ identification criteria and is in line with *ICD-10 International Statistical Classification of Diseases and Related Health Problems* and *The WHO application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD MM*.

3.1.2 Classification system for identification of causes of maternal deaths: ICD-MM

The WHO application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD MM was published in 2012.⁶ The document was developed through a consultative process with external stakeholders and in collaboration with the ICD Secretariat and it builds on current ICD-10 codes.

The ICD-MM (where MM stands for maternal mortality) represents an effort to standardize the use of the ICD codes to describe causes of maternal death and subsequent analyses undertaken at country, regional and global levels. The ICD-MM was presented in a plenary session at the XX FIGO World Congress of Gynecology and Obstetrics in Rome, Italy, in October 2012, during a discussion on the need for high-quality country-level data and the ICD-11 revision process (see section 3.1.3). At the request of WHO regional offices, the ICD-MM has been translated into Russian and Spanish.

6 Available at: <http://www.who.int/reproductivehealth/publications/monitoring/9789241548458/en/>

3.1.3 ICD revisions

The ICD is a key instrument of the WHO. It was initially developed for coding causes of death, and has continuously evolved to include coding of morbidity, as well as recording specific diseases, injuries, signs, symptoms, complaints, social circumstances, reasons for presentation to medical examination, and external causes of both injury and disease.

The Department serves as the Secretariat to coordinate the efforts to revise Chapters 14 (Diseases of the genitourinary system), 15 (Pregnancy, childbirth and the puerperium) and 16 (Certain conditions originating in the perinatal period) for the 11th Revision of the ICD. The Department also coordinates a Topic Advisory Group (TAG) to support the revision process. A meeting of this Genito-Urinary and Reproductive Medicine (GURM) TAG was convened in November 2012 to review progress and initiate activities towards formulation of definitions with statistical impact. A description of this work was published as an article in the journal *Gynecologic and Obstetric Investigation*.⁷

3.1.4 Harmonized reproductive registries

Currently, efforts to measure progress on MDGs and other reproductive health indicators have been limited by data availability and inconsistencies in data collection and aggregation at the country level. This gap between data collection and its use is a well-understood phenomenon. A number of initiatives to undertake public health surveillance and improve data collection via innovative technologies have been developed. One particular goal of the United Nations Secretary General's *Global Strategy on Women's and Children's Health* (2010) is to strengthen health systems, including monitoring and evaluation systems. In response to that call, many countries are developing or improving their civil registration processes, including basic registration of births and deaths, and often including information on the causes of death. Unfortunately, these initiatives are not in harmony with each other, leading to duplicative efforts and inability to aggregate data, and they do not necessarily improve data quality and usability, especially at the international level.

In 2012, the Norwegian Institute of Public Health and WHO agreed to collaborate on the development of a harmonized Reproductive Health Registries (hRHR) framework. This hRHR framework will draw from existing registry systems in the African, South-East Asia, and Americas Regions to inform and respond to the needs of new reproductive health registries as well as to harmonize existing registries so that they can be incorporated into a network of registries that can be used for a number of global public health purposes as well as for research.

3.2 Planned activities

- The maternal morbidity framework will be completed.
- Revision of the SRH-related chapters and topics for the 11th Revision of the ICD will continue.
- A technical meeting will be convened to discuss the hRHR.

7 Chou D et al.; Genito-Urinary Reproductive Medicine TAG. Steps through the revision process of reproductive health sections of ICD-11. *Gynecologic and Obstetric Investigation*, 2012, 74(3):228–232 (<http://www.ncbi.nlm.nih.gov/pubmed/23146952>).

4. Monitoring progress in achievement of universal access to reproductive health care

4.1 Progress

4.1.1 Delivering on the promise of universal access to reproductive health care

In collaboration with the Aspen Institute, RHR hosts the Geneva Policy Dialogue Series on Reproductive Health that awards the Resolve Awards to honour innovative and scalable approaches to accelerating progress toward universal access to reproductive health care. In 2012, applications for the Resolve Awards were received from countries describing how they overcame challenges of financing, service delivery and policy to accelerate the expansion of access to reproductive health care. The second meeting of this series, held at the time of the World Health Assembly in May 2012, highlighted the role of reproductive health in achieving health goals overall and awarded Resolve Awards to Ethiopia, Malawi, Nepal and Rwanda, with special mention to Yemen for their achievements in reproductive health, especially in family planning.

4.2 Planned activities

- The 2013 Geneva Policy Dialogue Series on Reproductive Health will be held and support will be provided in the selection of the new Resolve Award winners.

5. Support to regions and countries in monitoring and evaluation

5.1 Progress

5.1.1 Capacity building in estimation of maternal mortality

Due to the limited availability of reliable data on maternal mortality and the variety of sources from which they are generated, the analysis of maternal mortality levels and trends relies on statistical modelling and adjustments to allow for international comparability. During 2012, support was provided at a regional workshop on MDG indicators, convened by the Economic Commission for Eastern and Southern Asia (ESCAP) and the United Nations Statistics Division in Bangkok, Thailand. The aims of this workshop were to discuss the 2012 publication of maternal mortality estimates, to review data and methods used for analysing the estimates, to make comparisons with other estimates and to reconcile national monitoring of maternal mortality with international estimates.

5.1.2 Initiative for strengthening monitoring of reproductive health indicators

To support countries in aligning reproductive health programmes towards achieving universal access to reproductive health, this initiative focuses on indicators relating to promotion of family planning, access to abortion (where legal), prevention of unsafe abortion and post-abortion contraception, as recommended by the WHO reproductive health monitoring framework. Support was provided to African countries to review existing programme indicators, incorporate additional indicators according to identified needs and priorities, and strengthen their monitoring and evaluation systems. A first workshop was

held in Kenya in November 2012 to introduce the standard reproductive health programme monitoring indicators related to family planning and preventing unsafe abortion as well as to evaluate the feasibility of adopting indicators and developing action plans to strengthen routine measurement of priority indicators. The countries present in the workshop were Ethiopia, Ghana, Kenya, Nigeria, Sierra Leone, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. During the workshop, each country team of three discussed and reported on the existing indicators, possible other indicators from the framework to be introduced in the country setting, potential barriers, and strategies for improving the implementation and monitoring of the current and possible new indicators.

5.2 Planned activities

- Country teams that participated in the workshop in Kenya were invited to submit concept notes for their plans of action. In follow-up, selected proposals will be supported, including support for preparation and implementation of the full proposals relating to strengthening of reproductive health monitoring. During future workshops, countries will initiate and formulate action plans in the course of the workshop.

6. Support to other initiatives

6.1 Progress

6.1.1 Commission on Information and Accountability for Women's and Children's Health: maternal death surveillance reviews

The Department collaborates with other WHO departments on activities related to the implementation of the recommendations of the Commission on Information and Accountability for Women's and Children's Health. RHR's work on ICD-MM is important within the scope of efforts to improve vital registration and surveillance of maternal deaths.

Partnerships including the Implementing Best Practices Initiative

Summary

Key objectives

The Department works with partners to harmonize approaches and increase efficiency, especially in the provision of support to and technical cooperation with countries for strengthening policies and programmes aimed at improving sexual and reproductive health (SRH). The Implementing Best Practices (IBP) Consortium is a partnership that has been hosted by the Department since 2000. It aims to foster collaboration, reduce duplication and harmonize approaches to support the identification, implementation and scaling-up of effective practices to improve reproductive health in general, and family planning in particular.

Another key partnership the Department is engaged in is the United Nations Health 4+ group (H4+), which comprises WHO, UNFPA, UNICEF, UNAIDS, UN Women and the World Bank. H4+ aims to provide joint support to countries with the highest maternal and infant mortality levels, to support accelerated country actions to improve reproductive, maternal, newborn and child health (RMNCH) and in particular in support for implementation of the United Nations Secretary General's Global Strategy for Women's and Children's Health.

Major achievements

- New IBP website: The new website has been launched (www.ibpinitiative.org).
- IBP Knowledge Gateway: In 2012, the IBP Knowledge Gateway (<http://knowledge-gateway.org>) hosted six Global Discussion Forums reaching over 5000 people across most countries of the world. The objectives of each forum varied, ranging from presenting new research and findings, discussing issues and concerns in the field, and disseminating tools. Participants represented international and local NGOs, family planning/reproductive health providers and research institutions, among others.
- *Guide for fostering change to scale up effective health services*: The guide was updated to incorporate the WHO/ExpandNet's *Nine steps for developing a scaling-up strategy*. The guide is being tested by partners and will be finalized in June 2013.
- IBP and the East, Central and Southern African Health Community (ECSA-HC): IBP had a prominent place in ECAS-HC's Best Practices Forum. As a result of this high-profile forum, ECSA-HC in the United Republic of Tanzania was able to leverage significant funding from USAID (East Africa), which will contribute to ECSA-HC becoming a regional hub for IBP.
- United Nations Health 4+ group (H4+):
 - Five countries (Burkina Faso, the Democratic Republic of the Congo, Sierra Leone, Zambia and Zimbabwe) were supported to implement accelerated action plans for achieving Millennium Development Goals (MDGs) 4 and 5 within the framework of the H4+ and Canadian International Development Agency (CIDA) grant agreement.

- An H4+ proposal to the Swedish International Development Cooperation Agency (SIDA) was developed in support of six countries (Cameroon, Côte d'Ivoire, Ethiopia, Guinea-Bissau, Liberia and Zimbabwe) and funding was approved for the improvement of reproductive health and children's health.
- A mapping exercise was carried out and country profiles were developed for the 53 H4+ priority countries, documenting progress and gaps in the key areas within the H4+ scope of work.

1. Introduction

The Department works with partners to harmonize approaches and increase efficiency, especially in the provision of support to and technical cooperation with countries for strengthening policies and programmes aimed at improving sexual and reproductive health (SRH).

The Implementing Best Practices (IBP) Consortium is a partnership hosted by the Department, that aims to foster collaboration, reduce duplication and harmonize approaches to support the identification, implementation and scaling-up of effective practices to improve reproductive health in general, and family planning in particular.¹ During 2012, a key output of the IBP Consortium was an updated strategy aiming to: (i) increase the number of effective reproductive health practices scaled up in countries; (ii) support sustained collaboration at the country level with a focus on demonstrating outcomes in five countries; and (iii) enhance knowledge sharing.

The Department is also engaged in other partnerships:

- The United Nations Health 4+ group (H4+) comprises WHO, UNFPA, UNICEF, UNAIDS, UN Women and the World Bank. H4+ aims to provide joint support to countries with the highest maternal and infant mortality levels, to support accelerated country actions to improve reproductive, maternal, newborn and child health (RMNCH), and in particular in support for implementation of the United Nations Secretary General's Global Strategy for Women's and Children's Health.
- Roll Back Malaria is a global partnership for a malaria-free world. Within this partnership, the Malaria in Pregnancy Working Group aims to strengthen synergies between national reproductive health and malaria programmes to support harmonized policies and programmes to reduce the burden of malaria in pregnancy.

2. Implementing Best Practices (IBP)

2.1 Progress

2.1.1 Working with countries to foster change and scale up effective practices

At the heart of IBP's work in implementation and scale-up of effective practices are the principles of managing change. What has often been missing in change efforts – and what the related IBP *Guide for fostering change to scale up effective*

¹ Additional information available at: www.ibpinitiative.org

health services was designed to reinforce – is the synergy between using proven change management practices and the introduction, adaptation, use and scale-up of clinical or programme practices. In addition, it is a basic principle underlying IBP that the work of the Consortium must capitalize on past experiences. Good documentation of programmes and their essential practices is an essential first step in this process. The Guide was updated to incorporate the WHO/ExpandNet's *Nine steps for developing a scaling-up strategy*.

In March 2012, a joint visit to Zambia was made with the East, Central and Southern African Health Community (ECSA-HC -HC) to discuss with the Ministry of Health their desire for Zambia to become an IBP focus country. The idea of having focus countries has emerged as a primary objective under the new IBP strategy for 2011–2016. IBP partners believe it is important to focus attention on demonstrating the effectiveness of the IBP initiative at the country level. With Zambia as an IBP focus country, the IBP Secretariat and partners will support a process to identify, document and scale up effective practices in reproductive health, with a focus on family planning, and will reinforce existing coordination mechanisms and capture 'the Zambia experience' as a case study for learning, which can then be disseminated nationally, regionally and globally.

In November, 2012, a plan of action was developed, focusing on strengthening the Family Planning Technical Working Group (FPTWG). Zambia has made a commitment to the London Summit on Family Planning to expand access to family planning, so in follow up, a new Family Planning Strategy was developed. IBP will support the FPTWG in their role in the Family Planning Strategy.

2.1.2 Results from countries using the 'Guide for fostering change to scale up effective health services'

The nursing student project in Zimbabwe, which was the result of their participation in the 2009 'Fostering change' workshop with ECSA-HC -HC, continued in 2012. The programme of youth-friendly SRH services within the main nursing school in Harare has resulted in a decrease in unwanted pregnancies and subsequent nursing student drop-outs. In 2009, 21 unwanted pregnancies and drop-outs occurred while none have occurred in 2012. The programme is being spread by the student champions to other nursing schools in Zimbabwe, and scale-up is under way to the other 22 nursing schools. Plans are also being prepared to scale up to medical schools and universities.

2.1.3 Prominent role for IBP at ECSA-HC Best Practices Forum

During the August 2012 Best Practices Forum in Arusha, United Republic of Tanzania, participants from ECSA-HC's 10 member states presented effective practices that had been submitted in response to an open call for papers. IBP partners played a role in reviewing abstracts and developing the agenda for the meeting. In addition, a four-person panel was organized focusing on the value of coordination and collaboration among partners to achieve results. This forum provides an opportunity for giving input on the resolutions that are made as a result of the discussions. These resolutions are then presented for adoption to the Ministers at the annual Health Ministers' Conference. This year, examples of resolutions related to reproductive health included calls for countries to:

- develop and/or strengthen high-quality client-centred service delivery models that respond to the needs of the population, within the cultural and social context of each community;

- implement the call for action on Delivering Maternal and Child Health, including the Survive and Thrive initiative;
- strengthen maternal mortality audits, and adopt the new WHO maternal 'near-miss' assessment tool for the assessment and improvement of maternal and perinatal quality of care;
- integrate gender-based violence (GBV) and child sexual abuse (CSA) screening into SRH and HIV and AIDS services.

The resolutions also provide an indication of what type of support ECSA-HC should offer to member states.

2.1.4. IBP Knowledge Gateway

The IBP Knowledge Gateway is an electronic communication platform that connects people working in health and development through virtual networks and online discussions to facilitate knowledge sharing and exchange and improved access to and use of information, resource materials and tools. The technology platform that powers the IBP Knowledge Gateway is reaching over 350 000 people worldwide. The technology is being shared with other organizations and agencies, enabling them to own, customize and manage their own communities of practice. Of the 5500 members of the IBP global reproductive health community, the largest group is from the USA (31%), although significant numbers of participants are from the developing world.

Distribution of IBP Knowledge Gateway members



IBP Knowledge Gateway hosts Global Discussion Forums and facilitates the formation of 'knowledge networks' across organizations. In 2012, the following results were achieved:

- A forum on 'Healthy timing and spacing of pregnancy' was organized in January 2012 by K4Health in collaboration with USAID, World Vision and the Evidence to Action project. It involved a total of 452 participants from 43 countries.
- Three forums were conducted through the Postpartum Family Planning Community of Practice: 'Postpartum use of progestin-only contraceptive methods' (March 2012), 'Postpartum tubal ligation' (June 2012), and 'Return to fertility and pregnancy risk after delivery' (September 2012). Each forum

reached 1084 persons from 82 countries who are members of this Community of Practice.

- A webinar on 'Measuring success' (September 2012) was conducted through the Urban Reproductive Health Community of Practice. Forty participants from nine countries took part in the discussions.

2.2. Planned activities

- In follow-up to regional training courses on 'fostering change', selected countries in the ECSA-HC region, already trained in the first two phases of 'fostering change', will now be supported in the process of scaling up. Lesotho, Swaziland, the United Republic of Tanzania, Uganda, and Zimbabwe will take part in the ECSA-HC -HC's training scheduled for early 2013. The possibility of South-South exchanges among regions will be explored, such as Latin America and Africa.
- The documentation process for Zambia as an IBP focus country will take place in early 2013, in close collaboration with the FPTWG and the Ministry of Health and the Ministry of Community Development and Maternal and Child Health. Once completed, a dissemination workshop will be conducted and best practices identified for scale-up. Other activities identified in the IBP plan will include mapping of partners' activities in order to identify gaps in types of services and geographical coverage, continued strengthening of the FPTWG, and capacity building related to the 'fostering change' and scale-up process. Although the focus in Zambia is on family planning (due to the Government's intention to meet the commitments made after the London Summit on Family Planning), organizations working on other reproductive health issues may be included in capacity building sessions.
- Senegal may also be supported as an IBP focus country. Now that Senegal has developed a comprehensive plan for family planning with all stakeholders, IBP is exploring ways of supporting this effort with capacity building for scaling up effective practices in conjunction with the RHR's project under the Muskoka grant from the French government.
- Having identified IBP focus countries in Africa, the next step will be to identify focus countries in other regions. Criteria for the selection of focus countries have been developed. As in Zambia, it will be essential to have country engagement in order to begin activities.
- The Department will work with ECSA-HC on the Best Practices Forum. During the previous Best Practices Forum, the USAID-East Africa office met with ECSA-HC -HC and the IBP Secretariat to discuss how to better support ECSA-HC in carrying out IBP knowledge sharing and scale-up activities. As a result, ECSA-HC is receiving additional funding to carry out specific activities with their member states, to assist in documentation, sharing and scaling up effective practices in reproductive, maternal and child health. The IBP partners will support ECSA-HC in carrying out these activities to increase the capacity of member states to scale up effective services in their respective countries and to contribute effectively to the next ECSA-HC Best Practices Forum to be held in July/August 2013.
- The IBP Knowledge Gateway will continue to be improved to more efficiently serve its wide range of users. The system will continue to be supported by the IBP Secretariat and the Johns Hopkins University Knowledge for Health project.

In 2013 the IBP global community will incorporate up to an additional 30 000 participants who are currently in separate reproductive health communities. This will allow for easier exchange and knowledge sharing among reproductive health communities. Organizations wishing to set up new communities related to key issues in reproductive health will now have the ability to immediately send information about discussion forums or new materials to a wider range of interested parties.

3. Other partnership activities

3.1 Progress

3.1.1 H4+: joint support to countries advancing Millennium Development Goals 4 and 5

During 2012, the Department worked as part of H4+ in supporting five countries (Burkina Faso, the Democratic Republic of the Congo, Sierra Leone, Zambia and Zimbabwe) to implement accelerated actions to improve their reproductive, maternal and newborn health programmes with support from the Canadian International Development Agency (CIDA). The Department specifically provided capacity strengthening support to these five countries in the area of programme monitoring and evaluation, and led the development of a common monitoring and evaluation framework.

In Burkina Faso, the grant has (i) contributed to improving the quality of maternal, newborn and child health services, through the provision of emergency obstetric and newborn care (EmONC), technical materials and commodities, and (ii) supported capacity building, including the training-of-trainers in prevention of mother-to-child transmission of HIV (PMTCT), EmONC and management of obstetric fistula.

In the Democratic Republic of the Congo, the grant has (i) supported capacity development activities with community leaders in the field of radio broadcasting in order to improve sensitization about maternal health issues, including EmONC, family planning, gender-based violence and obstetric fistula, and (ii) provided technical support for the revision of the pre-service midwifery training curriculum offered by the Ministry of Higher Education and the Ministry of Public Health.

In Zimbabwe the grant has (i) supported development and finalization of maternal death audit guidelines and tools, which are currently being pre-tested in three provinces, and (ii) provided technical assistance for the development of a training package in the field of basic EmONC aimed at creating a pool of trainers to further disseminate the knowledge and skills.



In Sierra Leone the grant has (i) contributed to strengthening the capacity and quality of teaching at the midwifery schools, (ii) provided on-the-job refresher training in EmONC to health-care providers at district hospitals and basic EmONC centres, and (iii) enabled a partnership with an international nongovernmental organization to convert a maternity hospital into a fully functional comprehensive EmONC hospital.

In Zambia the grant has (i) supported a scale-up plan for the mobile health (mHealth) system using mobile phone technology to remind pregnant women and new mothers to come for follow-up services through community health workers, and (ii) contributed to the training of health-care workers about the importance of postpartum and postnatal health checks, thus improving the quality of care.

Additionally, a mapping exercise was carried out and country profiles were developed for the 53 H4+ priority countries to document progress and gaps in the key areas of the H4+ scope of work, including programme planning, service delivery, human resources, addressing root causes of maternal mortality, monitoring and evaluation, and advocacy (http://www.who.int/reproductivehealth/global_strategy_women_children/WHO_H4-report_tables.pdf). The main interventions addressed by the country plans were selected with national counterparts and H4+ country teams on the basis of country's commitments towards the implementation of the United Nations Secretary General's Global Strategy for Women's and Children's Health (UNSG's Global Strategy), the 'Every Woman Every Child' (EWEC) global movement, and in line with national strategic prioritization processes.

Finally, the Department supported the development of a proposal to the Swedish International Development Cooperation Agency (SIDA) to provide support for implementation of the UNSG's Global Strategy in the following six countries: Cameroon, Côte d'Ivoire, Ethiopia, Guinea-Bissau, Liberia and Zimbabwe. The project goal is to accelerate progress towards achieving MDGs 4 and 5 by supporting the implementation of the national RMNCH plans. It focuses on three aspects of the continuum of care: (i) maternal and perinatal health, (ii) newborn and child health, and (iii) sexual and reproductive health through strengthening health systems. The countries are in the process of developing their workplans, including details of project activities. A total of US\$ 52 million was granted to the project, which will be initiated in 2013.

The work of H4+ addresses key issues in selected high-burden countries, as described in the Countdown to 2015 report entitled *Building a future for women and children: the 2012 report*.²

3.1.2 Roll Back Malaria: Malaria in Pregnancy Working Group

The Department is actively involved in the Malaria in Pregnancy Working Group of the Roll Back Malaria 'global partnership for a malaria-free world'.³ The working group supports provision of evidence-based guidance for prevention and treatment of malaria during pregnancy as an integrated component of SRH within a platform of focused antenatal care services.

In 2012, the Department has worked closely with the Global Malaria Programme to develop a new WHO policy recommendation for intermittent preventive treatment

2 Available at: <http://www.countdown2015mnch.org/reports-and-articles/2012-report>

3 More information available at: <http://www.rbm.who.int/mechanisms/mpwg.html>

during pregnancy (IPTp). The new evidence-based policy reiterates that in areas of moderate-to-high malaria transmission, IPTp is recommended for all pregnant women at each of their regularly scheduled antenatal care visits. The first IPTp dose should be administered as early as possible during the second trimester of gestation.

3.2 Planned activities

- In 2013, the Department will continue to support country implementation plans for both the CIDA and SIDA grants, as part of H4+. The Department's role will continue to focus on family planning, maternal health and adolescent reproductive health issues, as well as monitoring and evaluation.
- The mapping report of progress and gaps in 53 countries will be finalized and published.
- Support will be provided for dissemination of the new IPTp policy and document in addition to support for addressing challenges and finding solutions for implementing the new recommendations.

Biostatistics and data management

Summary

Key objectives

The Biostatistics and Data Management team provides statistical and data management support for the Department's research projects, supports research capacity strengthening in biostatistics and data management, and provides informatics support for the Department.

Major achievements

- Support in statistics, data management, research coordination and monitoring was provided for more than 18 clinical trials and epidemiological studies during 2012.
- The team conducted on-site research training of staff at eight collaborating centres participating in HRP projects.
- The team participated in research capacity strengthening activities for researchers from developing countries. This included activities organized by the Geneva Foundation for Medical Education and Research, as well as activities conducted in the context of the Research Capacity Strengthening area of work (see chapter IX) and the Implementation Research Platform (see chapter XI).
- The team provided informatics support to the Department.

1. Introduction

The services of the Biostatistics and Data Management team contribute to the quality of the Department's research projects. The work is carried out in two streams: (i) technical support for research projects, and (ii) capacity building for collaborating institutions in developing countries. In addition, the team provides information technology (IT) support to the whole Department, including software support (installation, and management of licences), and hardware support (including updating of desktop computers following the WHO migration to a new version of the internal Global Synergy).

2. Support for research activities

The Biostatistics and Data Management team provides technical support in biostatistics for protocol development and review, including:

- advice on study design
- computation of sample size estimates
- writing of interim and final statistical analysis plans
- data analysis and preparation of statistical reports
- participation in the writing of scientific papers resulting from the projects.

For all projects, the team also develops and deploys a comprehensive monitoring and data quality assurance programme, and trains research teams in these areas in the context of research projects.

2.1 Progress

2.1.1 Technical support for clinical trials and epidemiological studies

During 2012, support was provided to 18 departmental projects. In most cases this involved data management and statistics support for trials and surveys, while in some cases the support related to statistical modelling for global monitoring of key reproductive health indicators (see Annex 1 for a comprehensive list of projects receiving statistical and data management support). Selected research studies that have received statistics and data management support are described in this section.

The team provided support to the multicentre randomized clinical trial of two implantable contraceptives for women, Jadelle® and Implanon®. The coordination of this trial, which was initially outsourced, was moved back to the Department in late 2010 because an audit revealed serious problems with data management procedures. The transfer was completed successfully and a set of rigorous data cleaning procedures was put in place. A first paper from the study, reporting the baseline data, has been submitted and accepted for publication.

A prospective, open-label, single arm, multicentre study on pericoital oral contraception with levonorgestrel is under way, to evaluate efficacy, safety and acceptability. Study initiation visits were conducted during 2012 at four sites (Brazil, Hungary, Singapore and Thailand). The research teams from these four sites have been trained in data management and use of the OpenClinica web-based data management (DM) system. During the year, the Biostatistics and Data Management team also conducted monitoring visits to Hungary (two trips) and Singapore (one trip). The first interim data analysis report was released for the Data and Safety Monitoring Board (DSMB) meeting held in July 2012.

In November 2012, data collection began in a demonstration project for the implementation of the WHO antenatal care (ANC) model in Mozambique. This project is aimed at increasing the delivery of evidence-based practices included in the ANC package by midwives, and also promotes the integration of key interventions into routine ANC. It is a cluster randomized controlled trial that will be conducted in 10 hospitals in Mozambique. The final sample size will be approximately 80 000 records with about 40 data items in each record. The online database for this study has been set up for participating hospitals using the OpenClinica DM system. The country research team in Maputo has been trained in data management and in applying the OpenClinica DM system for data entry and query management for the project.

Data collection and management activities are in progress for the study on non-inferiority of short-term catheterization following fistula repair surgery. Preliminary results related to recruitment rates, adverse events and some other key trial variables were presented and discussed at a study meeting in December 2012. The DSMB meeting is planned for March 2013.

A study on the feasibility, safety and preliminary efficacy of a new device (Odón device) for assisted vaginal delivery has started in Buenos Aires, Argentina, with Phase I (safety and feasibility testing). The OpenClinica DM system was set up to manage data for this study. The research team from CEMIC (Centro de Educación Médica e Investigaciones Clínicas) in Buenos Aires has been trained and is able to manage the study data using the OpenClinica DM system. The study is being

expanded to three more countries – Monaco, South Africa and Switzerland – and also Hong Kong, a special administrative region of China.

As part of the statistics support for research conducted by the Department, the members of the team contributed to the writing of eight papers published in 2012 (see Annex 2). The Unit also continued updating the projects repository by contributing protocols, forms, databases, and other relevant information.

2.1.2 Research capacity strengthening in biostatistics and data management

The team has a strong commitment to support research capacity strengthening activities at the country level. In 2012, on-site training was provided to staff participating in research projects in Argentina, Brazil, Hungary, Mozambique, Sierra Leone, Singapore, South Africa and Thailand, which helped these sites to improve their compliance with Good Clinical Practice (GCP) and to improve the quality of the data collected and of the corresponding statistical analyses. In seven of these centres, the training, attended by 31 local staff, involved the application of the OpenClinica DM system. As in previous years, several training activities were conducted with the use of Internet technologies to deliver web-based, remote training sessions.

Additionally, the members of the Unit contributed to three capacity strengthening workshops on implementation research, supporting related issues of study design (including sample size calculation and cluster effects), methodology and analysis (including appropriate statistical methods for qualitative and quantitative data), and proposal writing. These workshops were conducted in Ethiopia, Guinea and Zambia, as part of the Department's activities in the context of the Implementation Research Platform (see chapter XI).

Other capacity strengthening work included giving lectures at the course 'From research to practice: training course in sexual and reproductive health research', which was organized by the Geneva Foundation for Medical Education and Research in August 2012.

2.2 Planned activities

- The team aims to consolidate the crucial data management and statistics support provided to the Department's research projects, and at the same time (as recommended by previous STAG meetings) to have specific 'products'; methodological papers, in particular.
- The team plans to carry out work on statistical methodologies in addition to its service-provision tasks. A network of experts and/or centres will be created and maintained to provide support for the implementation of some of the data management and statistics activities.
- During 2013, the team will work on at least two important trials for which data management will be centralized in Geneva; all other trials will have decentralized data management. Data management activities for one of these trials outsourced since mid-2012, are expected to continue into 2014.

ANNEX 2

RHR/HRP publications in 2012 to which the Biostatistics and Data Management team contributed

1. Meirik O, Huong NTM, Piaggio G, Bergel E, von Hertzen H; WHO Research Group on Postovulatory Methods of Fertility Regulation. Complications of first-trimester abortion by vacuum aspiration after cervical preparation with and without misoprostol: a multicentre randomised trial. *The Lancet*, 2012, 379:1817–1824.
2. Gulmezoglu, AM; Lumbiganon, P; Landoulsi, S; Widmer, M; Abdel-Aleem, H; Festin, M; Carroli, G; Qureshi, Z; Souza, JP; Bergel, E; Piaggio, G; Goudar, SS; Yeh, J; Armbruster, D; Singata, M; Pelaez-Crisologo, C; Althabe, F; Sekweyama, P; Hofmeyr, J; Stanton, ME; Derman, R; Elbourne, D. Active management of the third stage of labour with and without controlled cord traction: a randomised, controlled, non-inferiority trial. *The Lancet*, 2012, 379(9827):1721–1727.
3. Rodriguez M, Seuc A, Sokal D. Comparative efficacy of postpartum sterilisation with the titanium clip versus partial salpingectomy: a randomised controlled trial. *BJOG*, 2013 120(1):108–112. [ePUB 2012] Aug 24.
4. Barone MA, Frajzyngier V, Arrowsmith S, Ruminjo J, Seuc A, Landry E, Beattie K, Barry TH, Lewis A, Muleta M, Nembunzu D, Olupot R, Sunday-Adeoye I, Wakasiaka WK, Widmer M, Gülmezoglu AM. Non-inferiority of short-term urethral catheterization following fistula repair surgery: study protocol for a randomized controlled trial. *BMC Women's Health*, 2012, 12:5.
5. Rodriguez M, Seuc A, Kapp N, von Hertzen H, Huong N, Wojdyla D, Mittal S, Arustamyan K, Shah R; the World Health Organization Research Group on Post-Ovulatory Methods of Fertility Regulation. Acceptability of misoprostol-only medical termination of pregnancy compared with vacuum aspiration: an international, multicentre trial. *BJOG*, 2012, 119(7):817–823.
6. Vogel JP, Betrán AP, Widmer M, Souza JP, Gülmezoglu AM, Seuc A, Torloni MR, Mengestu TK, Merialdi M. Role of faith-based and nongovernment organizations in the provision of obstetric services in 3 African countries. *American Journal of Obstetrics and Gynecology*, 2012, 207:495.e1–7.
7. The Kesho Bora Study Group. Maternal HIV-1 disease progression 18–24 months postdelivery according to antiretroviral prophylaxis regimen (triple-antiretroviral prophylaxis during pregnancy and breastfeeding vs zidovudine/ single-dose nevirapine prophylaxis): the Kesho Bora randomized controlled trial. *Clinical Infectious Diseases*, 2012, 55(3):449–460.
8. Meirik O, Brache V, Orawan K, Habib NA, Schmidt J, Ortayli N, Culwell K, Jackson E, Ali M; the WHO study group on contraceptive implants for women. A multicenter randomized clinical trial of one-rod etonogestrel and two-rod levonorgestrel contraceptive implants with nonrandomized copper-IUD controls: methodology and insertion data. *Contraception*, 2013, 87(1):113–120. [ePUB 2012, Oct 10]

Research Project Review and Ethics

Summary

Key objectives

The Research Project Review Panel (RP2) has a mandate to cover the scientific, technical, financial and ethical review of new proposals and multiyear projects on behalf of HRP. The RP2 currently undertakes the review of research projects at varying stages of development. The ethics focal point oversees the consistency of the ethical recommendations to research projects made through RP2, and provides support for ethics capacity strengthening associated with the Department's activities, upon request from external collaborators or RHR regional managers.

Major achievements

- Reviews by RP2 in 2012:
 - Successful, cost-effective and efficient reviews of 58 projects were accomplished – including first submissions, resubmissions and continuing reviews – with 16 in active review.
 - Eighteen RP2 members were involved in committee review meetings (face-to-face, video or teleconferencing), with half of these being able to provide continuous and repeated assessments of the same protocols in the context of subsequent committee reviews.
 - Twenty-one RP2 members and three ad hoc external specialists were involved in reviews by electronic means for research projects that are continuing from previous years.
- Ethics in sexual and reproductive health in 2012: A multi-disciplinary committee was convened, which initiated discussions aimed at determining the best mechanisms to accomplish support, develop tools and provide an evidence base for national-level ethical, legal and social implications discussions in the area of sexual and reproductive health.

1. Introduction

The Research Project Review Panel (RP2) and its Secretariat assists the Department and its collaborators in fostering recognition of universal ethical principles and scientific principles of good research practice through the development and implementation of research studies. Additionally, an ethics focal point assists the Department to provide oversight and address ethics, legal and social implications of introducing best practice recommendations and guidance. The purpose of these two activities is to assist in protecting the health and rights of individuals in different social and cultural settings, as acknowledged and supported by World Health Resolution 41.9 specific to the field of reproductive health and research.

2. Research Project Review Panel

The RP2 is an independent body whose members include multi-disciplinary external experts in the field of sexual and reproductive health (SRH) with proven capacity to address research proposals and evaluate protocols with regard to scientific, technical, financial and ethical considerations. No compensation is provided to these experts for their contributions to these review efforts, and any conflict-of-interest, if declared, will negate the ability for the expert to participate in any decision-making on the outcome of a project review.

RP2 was formed by HRP in 2010, through the consolidation of the five Specialist Panels and the former Scientific and Ethical Review Group (SERG), which performed reviews of research concept notes and projects. RP2 thus currently reviews research projects at various stages of development. All projects submitted electronically to the RP2 Secretariat were reviewed by members of the Panel – for new projects this was done through a face-to-face meeting, while for approved multi-year projects requesting annual assessment (continuing review), review was completed electronically (see Table 1).

The average length of time for a new project to obtain an RP2 assessment following a review meeting was 15 days. The time it took for researchers to provide responses to a conditional approval (i.e. by resubmitting the revised project to RP2 for final approval) varied widely – from 7 days to 5 months. Finally, on average it took approximately an additional 20 days for a revised project to reach final approval, although this was also, highly variable, ranging from 3 days to 4 months, depending on the responses and requests from the principal investigator when addressing the points raised by the RP2 review. Therefore, for new projects, the average amount of time to complete the full process of HRP review was approximately 3–4 months, with some projects completing within 25 days.

The time for multi-year approved projects to complete the continuing review process varied between 48 hours and 3 months. Information on the additional time for HRP projects to complete either new project or continuing review through the ethics body at WHO headquarters, the WHO Ethics Review Committee (ERC), as well as any required local ethics review, is not yet available.

3. Ethics in sexual and reproductive health

Due to funding constraints, neither RP2 members nor RHR area managers have been able to conduct or support regional or national research ethics capacity strengthening workshops in 2012. However, the new HRP research project review application form includes a section with detailed requests regarding research ethics considerations, which has stimulated discussion and deliberations during regional research proposal development workshops.

RP2 members, together with the ethics focal point were able to secure a small amount of external funding in 2012 for research studies on ethics, to be initiated in 2013: (i) addressing ethical issues associated with the ethical concept of vulnerability and reproductive medicine; and (ii) addressing ethical considerations associated with implementation research versus quality improvement of systems in the area of reproductive health. The ethics focal point, representing RHR and HRP, was invited and externally supported to participate in three SRH-related ethics activities, including two regional symposia (on reproductive medicine,

synthetic biological solutions and associated ethical considerations) and one international symposium (on neonatal ethical considerations).

Bioethics committees, opinion leaders, religious spokespersons, scientists, political parties and others provide teachings, recommendations and indications on choices and decision-making relating to human reproduction. These various teachings, recommendations and indications often reflect different points of view on the same subject; however, they are rarely presented at the same time or in an unbiased manner. In addition, in the context of debates and discussions on issues related to human reproduction, points of view and positions might be inaccurately portrayed and/or inaccurately attributed to individuals, organizations, religions, political parties or others. Only an independent, multidisciplinary and fully comprehensive and representative body could accurately describe, from relevant points of view, the multiple critical issues on the basis of which decisions involving human reproduction are made. Currently there is no such body, but HRP proposes to establish such a body and has convened a meeting of external experts who have begun discussions to develop mechanisms by which HRP can formulate a harmonized, working model for nations to address the ethical, legal and social implications (ELSI) of implementing RHR evidence-based technical guidelines.

Table 1. New and multi-year HRP proposals reviewed either in consensus or via interim review by RP2 in 2012

| Type of review | Project numbers | <u>Outcome of RP2 consensus meetings and interim/continuing review</u> | | | | |
|-----------------------------|-----------------|--|--------------------------------------|---|----------------------------------|---------------------|
| | | Full approval | Conditional approval with amendments | Conditional approval with amendments and clarifications | Deferment/re-submission required | Disapproval/stopped |
| RP2 end-June/July | 6 + 1* | 0 | 0 | 3 | 3 | 0 |
| RP2 November | 13 | 0 | 0 | 9 | 4 | 0 |
| Interim / continuing review | 38 | 27 | 4 | 0 | 6 | 1 |
| Totals | 58* | 27 | 4 | 12 | 13 | 1 |

* One project assessed and determined to be 'exempted' from the need for RP2 review. At the time of writing, there were 11 projects in the process of RP2 interim review and 5 projects in RP2 continuing review.

Advocacy and communications for sexual and reproductive health and for HRP/RHR

Summary

Key objectives

Through its advocacy and communications work, the Department aims to promote uptake of its evidence-based outputs, to build awareness of key issues in sexual and reproductive health (SRH), and to raise funds and ensure the continued commitment and engagement of Member States, WHO and other agencies.

Major achievements

- **HRP's 40th anniversary in 2012:** HRP celebrated by highlighting its achievements in numerous events, publications, articles and multimedia activities.
- **Technical publications:** Forty-four new technical publications in English were produced and distributed.
- **Translations:** Fourteen publications from the Department were translated into official languages of the United Nations.
- **Publications in the scientific press:** HRP results were published in 80 articles.
- **RHR's electronic newsletter:** *Reproductive Health Update* was embraced by readers and subscriptions increased sharply during 2012.
- **RHR websites:** There were 3.3 million visits to the HRP, Reproductive Health and RHL web sites, and almost 17.5 million page views – both significant increases from 2011.

1. Introduction

A Departmental Advocacy Working Group, established in 2008, supports advocacy and communications, drawing on expertise from across all teams in RHR. Advocacy efforts in RHR are still led by teams, and advocacy budgets are controlled by each team. In developing its work in the area of advocacy, the Department takes three strategic approaches.

- i. advocacy aimed at increasing the uptake of its evidence-based outputs (e.g. evidence-based approaches, strategies, research findings, clinical and scientific guides and norms, and other departmental outputs);
- ii. contributions to high-level advocacy and awareness-building for key issues in sexual and reproductive health (SRH) – this involves the initiation of or contribution to international or regional partnerships, and engagement with the international development community (e.g. International Health Partnership [IHP+], UN H4+);
- iii. promotion of the work of the Department and HRP, in order to raise funds and ensure the continued commitment and engagement of Member States, WHO and other agencies.

Although the work of the Department covers all three of the above areas, based on the guidance of STAG in 2010 the focus during 2012 was on selected high-

impact activities under (i) and (iii). The RHR Programme Management Team (PMR) supports key aspects of advocacy and communications in the Department, including document editing and production, multimedia development, creation of display materials, graphic design, web development, dissemination of information products, and conference and workshop site support. PMR also acts as Secretariat of the RHR Documents Committee, which meets several times a year to review all proposals for new publications from the Department and aims to: rationalize the issuing of documents; improve planning for document production within RHR; ensure that the documents produced reflect the overall strategies of RHR; and enhance the impact of RHR's work at the country level.

2. Achievements in advocacy and communications

2.1 Advocating for uptake of evidence-based outputs

The Department produces and disseminates serial and non-serial documents and information materials for a variety of target audiences, including researchers, policy-makers and health-care programme managers. In 2012, 44 new technical publications in English were produced and distributed. Fourteen publications were translated into official languages of the United Nations, and requests by external partners to translate RHR publications into non-official languages were managed. RHR guidelines and tools were introduced and demonstrated at 39 workshops, with participants including ministry of health staff, programme managers, and health-care providers.

Publication of HRP's research output in peer-reviewed scientific journals remains a primary channel for dissemination of HRP's research findings. In 2012, HRP results were published in 80 articles in the scientific press, and numerous others have been submitted or are presently in the process of preparation or revision.

In order to reduce costs, printed copies were kept to a minimum, and dissemination was primarily by electronic means. However, the complete contents of the Department's web site were made available on CD-ROM, allowing those without good Internet services to access all the Department's materials in a searchable electronic form. It is worth noting that at least 8% of users accessing the RHR web sites are still using dial-up networks.

Increasingly in 2012, documents were issued as shorter 'policy briefs', focusing on key research findings and their implications for planners and policy-makers. A set of six policy briefs was issued on family planning in July, coinciding with the London Summit on Family Planning.

2.1.1 Newsletters

Two electronic newsletters – *WHO Reproductive Health Update* and *HRP/RHR e-news* – were also produced. Reproductive Health Update, launched in July 2012, is a monthly email bulletin highlighting recently published research from the Department, notable events, and new RHR publications.¹ The number of subscribers has increased sharply since its launch, and is now over 2300. Anyone with an interest in the work of the Department can subscribe. Link-monitoring software shows a high click-through rate from the e-bulletin to the RHR web site and to download electronic copies of publications, as well as high interest in

1 Subscriptions at: <http://www.who.int/reproductivehealth/RHUpdate/en/index.html>

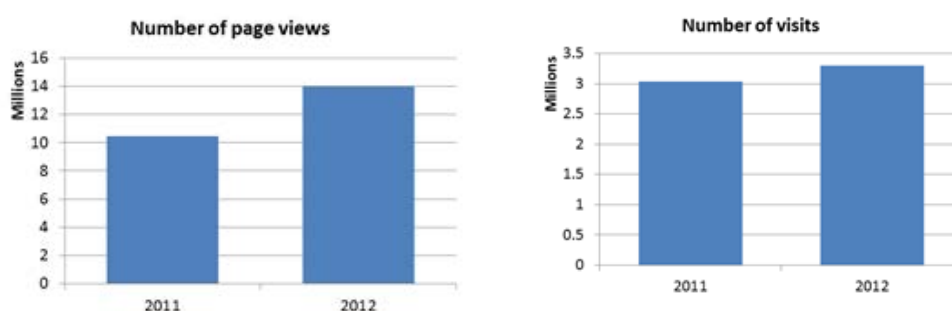
externally published research articles from the Department. The *HRP/RHR e-news* newsletter is a periodic newsletter that seeks to strengthen communication with partners about our work.

2.1.2 Web sites

The RHR web site continues to be updated daily and its 'What's new?' section,² which includes the latest publications, research articles and events, is regularly promoted in *WHO Reproductive Health Update*. The RHR and HRP web sites are among the few WHO web sites available in multiple languages. We continue to build on this and during 2012 work was undertaken in preparation for the launch of an expanded Russian site in January 2013. Also during 2012, the two thematic areas, 'adolescent sexual and reproductive health' and 'sexual health', were redesigned, updated and published.

The RHR web sites remain among the most visited technical sites of WHO. During 2012, there were 3.3 million visits to the combined web sites of HRP, Reproductive Health and RHL, an increase of 9% over 2011, with the number of page views reaching 17 427 738, an increase of 28% over 2011. Additionally, in April 2012 a YouTube video channel was launched and received over 600 000 views by the end of the year. In combination, these figures make SRH the most visited health topic after 'Global alert and response'.

Figure 1. Number of page views and visits 2011 and 2012



The web sites continue to be RHR's major channel for dissemination of information and publications. WHO's *Medical eligibility criteria for contraceptive use*, for example, continued to be a very popular download, clocking up some 5000 downloads in English and over 4000 in other languages. Likewise the *WHO laboratory manual for the examination and processing of human semen* was downloaded more than 5000 times in English and almost 3000 times in other languages. For people who may have difficulty in accessing material through the Internet, however, we continue to produce a CD-ROM of our materials.

2.2 High-level advocacy and awareness

2.2.1 HRP at 40

HRP celebrated its 40th anniversary in 2012 by highlighting its achievements in numerous events, publications, articles and multimedia activities. A special web page was posted to highlight the key events and outputs, including a publication

² Available at: <http://www.who.int/reproductivehealth/news/en/>

in *The Lancet* on HRP's record of achievements, the publication of the special topic issue of *Gynecologic and Obstetric Investigation* entitled '40 years of reproductive research at the WHO,³ and a video of the United Nations Secretary-General Ban Ki-moon addressing the 25th meeting of the HRP Policy and Coordination Committee (PCC), among others.

2.2.2 International conferences and events

Alongside presentations and speeches by Department staff, RHR materials were actively disseminated at 23 major international conferences and events in 2012. A wide variety of advocacy materials for use at events was produced, including exhibits, posters, flyers and logo designs.

During the XX FIGO World Congress of Gynecology and Obstetrics in Rome, 7–12 October 2012, HRP and the Department were present throughout the week at a stand in the exhibition hall. This stand is an important outreach tool at conferences like FIGO and was very well received. The design of the stand, using cubes and bright colours, attracted a lot of people and we received many positive comments. During the FIGO Congress there was high demand for our products and for information about our work. It was a key opportunity to distribute recent publications, such as *Safe abortion: technical and policy guidance for health systems*⁴ and the 'hot-off-the-press' *WHO recommendations* for the prevention and treatment of postpartum haemorrhage,⁵ as well as other guidelines, estimates, tools and policy briefs. Additionally, 1500 copies of a CD-ROM containing the entire collection of publications were distributed. The stand also served as a meeting place for staff to interact with delegates and to highlight new activities, such as those relating to the Odón device.

2.3 Fundraising

Fundraising and donor relations remain vital in the changing global fiscal climate and as RHR adapts under the umbrella of WHO organizational reforms. During 2012, emphasis was placed on partnership development in order to maximize comparative advantages based on mutual strategic interests. RHR also sought to re-engage former donors and to invite now contributors into the RHR donor community.

In 2012, two donors returned, three new donors joined RHR and many donors increased their contributions. The returning donors were the United Nations Fund for International Partnerships (UNFIP) and PATH. The new donors were L'Institut National du Cancer, an anonymous donor and UNICEF as a cosponsor to HRP. Among the many donors that increased their contributions were the governments of Flanders, the Netherlands, Norway and the USA (via USAID). Donor and partner communications outreach efforts continue to grow, especially for e-communications as noted above.

A list of all donors to HRP and PDRH is available in the financial report (document RHR/STAG(30)/2013/11.1).

3 Gynecologic and Obstetric Investigation, 2012, 74(3). Available at: <http://www.karger.com/Book/Home/257453>

4 Available at: http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/

5 Available at: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9789241548502/en/index.html

3. Planned activities

- With regard to the uptake of evidence-based outputs, the Department will continue to produce and disseminate technical publications and guidelines in English and other languages. There are currently over 20 materials in production, with many others in various stages of planning and writing. These publications will complement articles published in peer-reviewed journals.
- The Reproductive Health Library will be redesigned and launched on social media. Beginning with Facebook, RHL will make increasing use of the different social media to reach out to its target audiences with key information and also to engage in dialogue with stakeholders.
- It is intended to substantially increase the number of videos in different languages available through the HRP YouTube channel. The aim is to upload some 40 new videos throughout the year.
- The reproductive health and HRP web sites will continue to be updated on a daily basis. A redesign of the publication pages will be undertaken to better organize the growing number of publications and to help users find relevant publications more easily.
- Throughout 2013, an extensive programme of high-level, targeted events and activities is planned including active participation at Women Deliver, the STI World Congress (IUSTI), the 9th International Conference of the African Organisation for Research and Training in Cancer (AORTIC) and other similar events relating to sexual and reproductive health
- Fundraising plans for 2013 include introducing new RHR leadership to core and principal donors, and reviewing and confirming mutual strategic interests. This will strengthen the donor infrastructure and help to gain further leverage and to build on the successes of 2012. Invitation of new donors to HRP/RHR will continue as opportunities are sought out and cultivated. Likewise, RHR/HRP will continue to count on long-term donor partners to reach out to new potential partners on our behalf; this will be one function of the newly formed Resource Mobilization Subcommittee within the PCC. Stewardship and achieving a high level of responsiveness in communications will continue to be mainstays of donor relations.

Abbreviations

| | | | |
|---------------|--|----------------|---|
| ALIRH | Asociación Latino Americana de Investigadores en Reproducción Humana [Latin American Association of Researchers in Human Reproduction] | CHERG | Child Health Epidemiology Reference Group |
| Alliance HPSR | Alliance for Health Policy and Systems Research | CHNRI | Child Health and Nutrition Research Initiative |
| AMR | antimicrobial resistance | CIDA | Canadian International Development Agency |
| AMRO | WHO Regional Office for the Americas | CIDES | Centre for Research in Development Sciences, Plurinational State of Bolivia |
| AMTSL | active management of the third stage of labour | CIR | competitive intra-regional research (grant) |
| AN | auxiliary nurse | CIRE | Continuous Identification of Research Evidence |
| ANC | antenatal care | CLAP | Centro Latinoamericano de Perinatología [Latin American Centre for Perinatology and Human Development] |
| ANM | auxiliary nurse midwife | COC | combined oral contraceptive |
| ANPHI | Afghanistan National Public Health Institute | COIA | Commission on Information and Accountability |
| ARV | antiretroviral (drug) | CPD | Commission on Population and Development |
| ASRH | adolescent sexual and reproductive health | CPNN | Collaborative Perinatal Neonatal Network |
| ASRM | American Society of Reproductive Medicine | CREP | Centro Rosarino de Estudios Perinatales [Centre for Perinatal Studies, Argentina] |
| BD | Becton, Dickinson and Company | CRESARCI | Cellule de Recherche en Santé de la Reproduction en Côte d'Ivoire [Reproductive Research Health Unit] |
| CAP | Calcium and Pre-eclampsia (CAP study) | CSO | civil society organization |
| CAPRISA | Centre for the AIDS Programme of Research in South Africa | CSW | Commission on the Status of Women |
| CCUP | Comprehensive care for unwanted pregnancies | CWS | courses, workshops, seminars (grant) |
| CDC | United States Centers for Disease Control and Prevention | D&E | dilatation and evacuation |
| CEMIC | Centro de Educación Médica e Investigaciones Clínicas, Argentina | DECIDE project | Developing and Evaluating Communication Strategies to Support Informed Decisions and Practice Based on Evidence |
| CENEP | Centre for Population Studies, Argentina | DFID | Department for International Development, United Kingdom |
| CEPEP | Centre for Population Studies, Paraguay | DM | data management |
| CERREGUI | Cellule de Recherche en Santé de la Reproduction en Guinée | DMPA | depot medroxyprogesterone acetate |
| CESCR | Committee on Economic, Social and Cultural Rights | DMT | Decision making tool for family planning clients and providers |
| CHC | combined hormonal contraceptive | | |

| | | | |
|---------------|--|--------|---|
| DSMB | Data and Safety Monitoring Board | GDG | Guidelines Development Group |
| EC | emergency contraception | GFMER | Geneva Foundation for Medical Education and Research |
| ECOSOC | United Nations Economic and Social Council | GHO | Global Health Observatory |
| ECSA-HC | East, Central and Southern Africa Health Community | GNP+ | Global Network of People living with HIV |
| EFCNI | European Foundation for the Care of the Newborn Infants | GRADE | Grades of Recommendation Assessment, Development and Evaluation |
| ELSI | ethical and legal and social implications | GRC | Guidelines Review Committee |
| EmONC | Emergency Obstetric and Newborn Care | GREAT | Guidelines, Research priorities, Evidence synthesis, Applicability of evidence, Transfer of knowledge |
| EMRO | Eastern Mediterranean Regional Office | GRR | RHR Gender, Reproductive Rights, Sexual Health and Adolescence Team |
| eMTCT | Elimination of mother-to-child transmission | GURM | Genito-Urinary and Reproductive Medicine |
| ERC | | H4+ | see UNH4+ |
| ESCAP | UN Economic and Social Commission for Asia and the Pacific | HIV | human immunodeficiency virus |
| ESHRE | European Society of Human Reproduction and Embryology | HPV | human papillomavirus |
| EU | European Union | hRHR | harmonized Reproductive Health Registries |
| EWEC | Every Woman Every Child | HRP | UNDP/UNFPA/UNICEF/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction |
| FACTS | Follow-on African Consortium for Tenofovir Studies | HSV | herpes simplex virus |
| FBO | faith-based organization | IAS | International AIDS Society |
| FGM | female genital mutilation | IATT | Interagency Task Team |
| FHI360 | formerly Family Health International | IAWG | interagency working group |
| FIGO | International Federation of Gynecology and Obstetrics | IBBS | Integrated Bio-Behavioural Survey |
| FP | family planning | IBP | Implementing Best Practice initiative (also IBP Consortium) |
| FRHS | Foundation for Research in Health Systems, India | IByME | Instituto de Biología y Medicina Experimental, Argentina [Institute of Biology and Experimental Medicine] |
| GAP | Gender and Rights Advisory Panel | ICBDSR | International Clearinghouse for Birth Defect Surveillance and Research |
| GARPR | Global AIDS Response Progress Reporting | ICD | International Classification of Diseases |
| GASP | Gonococcal Antimicrobial Surveillance Programme | | |
| GAVI Alliance | Global Alliance for Vaccines and Immunisation | | |
| GBD | Global Burden of Diseases | | |
| GBV | gender-based violence | | |
| GCP | Good Clinical Practice | | |
| GCSP | Global Congenital Syphilis Partnership | | |

| | | | |
|---------|--|---------|--|
| ICD-MM | ICD applied to maternal mortality | mHealth | mobile health |
| ICPD | International Conference on Population and Development | MMEIG | Maternal Mortality Estimation Inter-agency Group |
| ICW | International Community of Women Living with HIV/AIDS | MMR | maternal mortality ratio |
| IHP+ | International Health Partnership and related initiatives | MoH | ministry of health |
| IMPT | Initiative for Multipurpose Prevention Technologies | MoPH | ministry of public health |
| IPPF | International Planned Parenthood Federation | MPH | RHR Improving Maternal and Perinatal Health Team |
| IPSR | Institute for Population and Social Research, Mahidol University, Thailand | MPT | Multipurpose prevention technologies |
| IPTp | intermittent preventive treatment during pregnancy (for malaria) | MSM | men who have sex with men |
| IPV | intimate partner violence | mTAG | WHO mHealth Technical Advisory Group |
| IRP | Implementation Research Platform | MTCT | mother-to-child transmission |
| ISSTD | International Society for Sexually Transmitted Diseases Research | MTN | Microbicide Trials Network |
| IT | information technology | MVA | manual vacuum aspiration |
| IUD | intrauterine device | NCPNN | National Collaborative Perinatal Neonatal Network, Lebanon |
| IUI | intrauterine insemination | NGO | nongovernmental organization |
| IUSTI | International Union against Sexually Transmitted Infections | NICE | National Institute for Health and Clinical Excellence, of the United Kingdom's National Health Service |
| IVB | WHO Department for Immunization, Vaccines and Biologicals | NIH | National Institutes of Health, United States |
| IVF | in vitro fertilization | OHCHR | Office of the High Commissioner for Human Rights |
| JHU-GmI | Johns Hopkins University Global mHealth Initiative | ONDa | Osservatorio Nazionale sulla Salute de la Donna [National Observatory for Women's Health] |
| LHW | lay health worker | P4P | Partners for Prevention |
| LID | long-term institutional development (grant) | PAHO | Pan American Health Organization |
| LNG | levonorgestrel | PATH | (formerly) Program for Appropriate Technology in Health |
| LOI | letter of intent | PCC | Policy and Coordination Committee |
| LSHTM | London School of Hygiene and Tropical Medicine | PCOS | polycystic ovary syndrome |
| MCA | Department of Maternal, Newborn, Child and Adolescent Health | PDRH | Programme Development in Reproductive Health (PDRH), component of RHR |
| MDG | Millennium Development Goal | PFP | RHR Promoting Family Planning Team |
| MEC | Medical eligibility criteria for contraceptive use | PICO | population, intervention, comparison, outcome(s) |

| | | | |
|---------|---|---------|--|
| PITC | provider-initiated testing and counseling | SPR | Selected practice recommendations for contraceptive use |
| PLISSER | Latin American Programme for Training in Sexual and Reproductive Health Research | SRH | sexual and reproductive health |
| PLOS | Publisher of peer-reviewed, open-access online journals (e.g. PLOS ONE and PLOS Medicine) | STAG | Scientific and Technical Advisory Group |
| PMR | RHR Programme Management Team | STI | sexually transmitted infection |
| PMTCT | Prevention of mother-to-child transmission | SVRI | Sexual Violence Research Initiative |
| POC | point of care | SWAp | sector-wide approach |
| POCs | progestin-only contraceptives | TAG | technical advisory group or Topic Advisory Group |
| PREBIC | International Preterm Birth Collaborative | TDR | Special Programme for Research and Training in Tropical Diseases |
| PrEP | pre-exposure prophylaxis | UAL | University of the Arts London |
| RAFT | Réseau d'Afrique Francophone pour la télémédecine | UN | United Nations |
| RAP | Regional Advisory Panel | UNAIDS | Joint United Nations Programme on HIV/AIDS |
| REG | re-entry grant | UNDP | United Nations Development Programme |
| RHL | The WHO Reproductive Health Library | UNFIP | United Nations Fund for International Partnerships |
| RHR | WHO Department of Reproductive Health and Research | UNFPA | United Nations Population Fund |
| RMC | resource maintenance and capital grant | UNH4+ | WHO, UNFPA, UNICEF, UNAIDS, UN Women and the World Bank |
| RMNCH | reproductive, maternal, neonatal and child health | UNICEF | United Nations Children's Fund |
| RP2 | Research Project Review Panel | UPCH | Cayetano Heredia University, Peru |
| RPM | research project mentoring (grant) | USAID | United States Agency for International Development |
| RTG | research training grant | VAW | violence against women |
| RTI | reproductive tract infection | VIA | visual inspection with acetic acid |
| SDC | Swiss Agency for Development and Cooperation | VIP | WHO Department of Violence and Injury Prevention and Disability |
| SERG | Scientific and Ethical Review Group | WHA | World Health Assembly |
| SGC | service guidance centre grant | WHO CC | WHO Collaborating Centre for Reproductive Health |
| SIDA | Swedish International Development Cooperation Agency | WHS | World Health Statistics |
| SIFPO | Support for International Family Planning Organizations | ZAMFOHR | Zambia Forum for Health Research |
| SIP | Perinatal Information System | | |
| SSG | small supplies grant | | |
| SPP | Strategic Partnership Programme | | |