

Research issues in

SEXUAL and REPRODUCTIVE HEALTH for low- and middle-income countries



Andres de Francisco
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**Research Issues in Sexual and Reproductive Health
for Low- and Middle-Income Countries**

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Preface

The purpose of this paper is to outline a conceptual framework and a number of thematic and cross-cutting research issues in sexual and reproductive health as a first step in a consultative process towards the identification of gaps and priorities for research in this field. The information contained here depicts the complexity of the field of sexual and reproductive health and proposes that research in this area needs to be tackled using a multidisciplinary spectrum of approaches encompassing basic – biomedical, epidemiological, social – science, behavioural and policy and health systems research.

The intended audience of this document are those who will be engaged in this collective process of formulating a global priority research agenda, such as representatives of international health and development agencies; government health, education and planning ministries; foundations; non-governmental organizations; research institutes and researchers; academic programs; the private sector; and international and national health research networks, many of whom are already familiar with most of the policy, programmatic, and research issues raised here.

The themes of social equity, poverty, and gender addressed in this paper are of particular relevance to the field of sexual and reproductive health. So, too, are the challenges of collaborating with in-country partners to identify context-specific research priorities that address the many and varied dimensions of sexual and reproductive health and its determinants and correlates in order to build the evidence base and put policy and programmatic evidence into practice in low-resource settings.

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CHAPTER 1

Global Commitments:
The Sexual and
Reproductive Health Agenda

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 1

Global Commitments: The Sexual and Reproductive Health Agenda

Twelve years have passed since representatives of 184 governments agreed to a remarkable Programme of Action at the International Conference on Population and Development (ICPD) in Cairo in September 1994.¹ Seeking new ways to balance population and development processes, the Cairo consensus represented a paradigm shift from a focus on controlling excessive population growth through vertically structured family planning programmes to a focus on promoting sexual and reproductive health for all through horizontally integrated primary health-care and family planning services. ICPD recommended parallel efforts to be directed towards achieving poverty eradication, sustainable economic development, education (especially for girls), gender equity and equality, food security, human resources development, and guarantees of fundamental human rights.²

The Cairo agenda has been reaffirmed in a number of international forums such as the Fourth World Conference on Women held in Beijing in 1995;³ the United Nations (UN) reviews of progress towards implementation of the Cairo and Beijing agreements;⁴ a Declaration of World Leaders in support of ICPD issued in 2004;⁵ and the adoption of a global Reproductive Health Strategy by the World Health Assembly in 2004.⁶ Moreover, three of the eight Millennium Development Goals (MDGs) selected by the UN in 2001—improving maternal health, reducing child mortality, and combating HIV/AIDS—are components of sexual and reproductive health, while others—promoting gender equality and empowering women, achieving universal primary education, and eradicating extreme poverty—are highly related.⁷

The 2005 report of the UN Millennium Project cites “expanding access to sexual and reproductive health information and services, including family planning” as a “quick win” in the MDG poverty reduction strategy.⁸

Also in 2005, the World Summit of the UN General Assembly renewed its commitment to the ICPD goal of achieving universal access to reproductive health by the year 2015.^{9, 10}

The vision: sexual and reproductive health for all

Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed

and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, *reproductive health care* is defined as the constellation of methods, techniques and services that contribute to reproductive health and well-being by preventing and solving reproductive health problems. It also includes *sexual health*, the purpose of which is the enhancement of life and personal relations, and not merely counselling and care related to reproduction and sexually transmitted diseases [emphases added].

ICPD Programme of Action, 1994, paragraph 7.2.

The definition of reproductive health agreed to at ICPD, which is rooted in principles of human rights and gender equality, remains highly salient to the global research agenda on sexual and reproductive health. Also salient are the ICPD descriptions of essential sexual and *reproductive health services* to be provided in primary health-care and family planning facilities and through referrals. The basic package constitutes a continuum of care that includes:

- acceptable, affordable and accessible family planning counselling, information, education, communication, supplies and clinical and community-based services;
- prevention and treatment of male and female infertility;
- prevention of abortion through effective contraception, safe abortion provided to the full extent of the law and management of the consequences of unsafe abortion;
- education and skilled services for prenatal care, safe delivery, essential obstetric care, postpartum and neonatal care, and the promotion of breastfeeding;
- prevention and treatment of reproductive tract infections (RTIs) and of sexually transmitted infections (STIs) including HIV/AIDS;
- prevention and management of non-infectious conditions of the reproductive system, such as obstetric fistula and uterine prolapse and of reproductive cancers;
- sexuality and sexual health information, education and services for adolescents combined with the promotion of gender equality, mutual respect and responsible parenthood;
- elimination of harmful practices such as female genital mutilation (FGM), early marriage and sexual and gender-based violence.

Significant improvements in sexual and reproductive health clearly cannot be achieved by the health sector alone.

Sexual and reproductive health affects, and is affected by, people's personal experiences and relationships and by the broader context of their lives, including their economic circumstances, education, employment opportunities, living conditions, family structures and political, social, religious and legal environments.

Recognizing these interconnections, the Cairo and Beijing agreements, the MDGs and the WHO Global Reproductive Health Strategy propose a multilevel and multisectoral approach to improving *all* aspects of people's lives, including but not limited to their sexual and reproductive health and related human rights.

Much has been achieved in the years since ICPD at the level of international policy dialogue and at policy and programmatic levels within countries. Concepts have been clarified; indicators selected; data compiled; programmes designed and evaluated; population-based analyses undertaken and priorities set; technologies expanded and improved; best practices identified and adopted; international and government agencies and non-governmental organizations (NGOs) activated.¹¹ Evidence has been compiled in selected country settings on the cost-benefit ratios of investing in key aspects of sexual and reproductive health education and services.¹² Nevertheless, much remains to be done in all of these areas if the vision of ICPD is to be realized and if the targets set by the ICPD five-year review and the MDGs are to be met.

The reality: persistent problems, persistent inequalities

The WHO Global Reproductive Health Strategy identifies the five core aspects of reproductive and sexual health services, all of which need accelerated progress:

- improving antenatal, perinatal, postpartum and newborn care;
- providing high-quality services for family planning, including infertility services;
- eliminating unsafe abortion;
- combating sexually transmitted infections including HIV, reproductive tract infections, cervical cancer and other gynaecological morbidities;
- promoting sexual health.¹³

The global statistics are compelling. Some eight million of the 210 million women who become pregnant each year suffer life-threatening complications of pregnancy leading to long-term morbidity, for example.¹⁴

An estimated 529 000 women died during pregnancy and childbirth in the year 2000, mainly from preventable causes and almost all in developing countries. Global figures conceal sharp contrasts in the risk profiles of populations and subgroups across and within low- and middle-income countries as well.

A woman's lifetime risk of dying from pregnancy-related causes ranges from one in six or seven in countries such as Afghanistan, Malawi and Niger, for example, to one in 1300 or less in Cuba, Mauritius, and Uruguay.¹⁵ Proportions of adults aged 15-49 living with HIV/AIDS range from under 1% up to 35% or more, even within sub-Saharan Africa where the epidemic is rapidly becoming feminized among young adults.¹⁶ Within-country contrasts across wealth quintiles in these and other indicators of sexual and reproductive health, including knowledge and access to care, are equally dramatic.¹⁷

Inequalities in the type, severity and distribution within the population of sexual and reproductive ill-health (e.g., according to gender, poverty status, stages of adolescence and adulthood) can be attributed to four main sources, each of which incorporates a research agenda and is amenable to positive interventions:

- physiological, behavioural and environmental risk factors and limitations on information and resources that predispose some individuals and groups to poorer health in general (such as malnutrition, infectious diseases) and to more sexual and reproductive health *problems* in particular;
- social, economic, cultural, and personal factors such as young age, stigma associated with sexual matters, restrictions on physical mobility of women and girls, minority group status, disabled populations, inability to pay or experiences or fears of poor treatment affecting people's *utilization* of formal-sector health services in general, and of sexual and reproductive health services in particular;
- development resources and political priorities affecting the quality, quantity and geographical distribution of basic preventive and curative health care in general, and of sexual and reproductive health *information and services* (public and private) in primary-level care and referral systems in particular;
- biomedical and technical tools which affect the ability of sexual and reproductive health programmes to deliver effectively services for specific subgroups of the population, such as contraceptives, vaccines which use (or not) the cold chain, multidose medicines, HIV tests which use saliva and do not require blood testing.

The success of interventions in each of these areas requires international and national coordination of activities directed to strengthening health-system capacities and to improving information for priority setting, mobilizing political will, creating supportive legislative and regulatory frameworks, and strengthening monitoring, evaluation and accountability.¹⁸ Public- and private- sector institutions, NGOs and the international donor community make crucial contributions to these efforts. Progress also depends on maintaining the visibility in national and international development agendas—in particular the MDGs—of sexual and reproductive health as a holistic concept and as a coordinated package of essential information and health services.¹⁹

Vertical approaches to individual components of the whole, such as HIV/AIDS, threaten to fragment the sexual and reproductive health-care agenda; to ignore its common biological and behavioural foundations and health-care requirements; and to draw critically needed resources away from basic sexual and reproductive health-care services rather than strengthening each country's capacity to provide them.²⁰

Research plays an essential role in identifying and overcoming social and economic inequalities and health-system deficiencies that stand in the way of achieving the highest attainable standard of sexual and reproductive health for all. Pragmatic investigations are needed that will lead to significant improvements in the sexual and reproductive health of those who are identified across and within countries as carrying a disproportionately large—and largely avoidable—burden of death, disability, disease and despair due to sexual and reproductive causes.²¹ A number of such investigations are identified in the review of research issues and gaps in this paper. Chapter 2 introduces a framework for tracking the sexual and reproductive health concerns and needs of individuals and groups in diverse contexts and environments as they pass through the life course. Chapters 3 through 6 present evidence and research gaps that pertain to each of the five core aspects of sexual and reproductive health: healthy sexuality; prevention and control of STIs/HIV; contraceptive choice and quality of care; safe abortion; and safe pregnancy, delivery and postpartum care for the mother and newborn. Emphasis in these chapters is placed on the perceptions and care-seeking behaviours of potential clients and on interconnected health-system requirements specific to each substantive area. The final chapter lays out a number of cross-cutting research issues relating to the design of policies and programmes for reducing inequalities of sexual and reproductive health across and within populations and ensuring universal access to high-quality care. Some of these apply to sexual and reproductive health in particular, while others—such as financing and health equity—apply to health-care delivery more generally and have been widely discussed elsewhere.

The present document attempts to capture some of the gaps and issues in sexual and reproductive health expressed by a variety of players in the field. The decisions on which of these gaps should become priorities for research, and should be funded, will be left to further consultation with groups of stakeholders.

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CHAPTER 2

Individual Situations,
Interpersonal Relationships and
Life-Course Events: A Conceptual Framework

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 2

Individual Situations, Interpersonal Relationships and Life-Course Events: A Conceptual Framework

Women [in Nigeria] have internalized the ethic of nobility in suffering such that pain and discomforts emanating from their reproductive and sexual roles are accepted as the very essence of womanhood... Social stigma and hence the culture of silence [are] attached to sexual and reproductive problems, the geneses of which are invariably perceived to be women.

Mere N. Kisekka¹

More so than most illnesses or disabilities, sexual and reproductive health problems experienced by women and men—young and old—tend to be cloaked in embarrassment, secrecy and shame.² Conditions such as vaginal or urethral discharge, irregular menses, erectile dysfunction, infection from clandestine abortion, and infertility involve private parts of the body as well as intimate interpersonal relationships. Cultural taboos, beliefs that such conditions must be endured, feelings of anxiety or depression, and lack of information and resources for dealing with them contribute to the relative invisibility of many sexual and reproductive health problems not only to policy-makers and health-care providers but also to family members, sexual partners and even individuals themselves. As a consequence:

- people are often reluctant to talk about their problems or to seek help;
- many problems remain untreated, or people turn to folk remedies, traditional healers or self-medication rather than to formal health-care providers;
- health-care workers themselves may lack adequate training in these areas and feel uncomfortable talking about clients' special needs and concerns;³
- health-care and family-planning policies, programmes and facilities typically do not offer a coordinated package of services for meeting the sexual and reproductive health needs of women, men and couples at different stages of their lives, and may not even recognize the need to do so;
- sexual and reproductive ill-health—including its physical, social and emotional dimensions and its underlying basis in gender differences—is not adequately reflected in estimates of the global burden of disease as measured by disability-adjusted life years (DALYs), which often serve as a basis for resource allocations.⁴

Although a wealth of evidence has been gathered on the distribution of selected sexual and reproductive health problems across and within populations,⁵ additional research is needed to *make the invisible visible* by filling gaps in our knowledge of such problems as they are experienced physically and emotionally by men, women and adolescent girls and boys through the life course. Successful initiatives depend on the development of culturally appropriate and adaptable analytical tools, research instruments and clinical, epidemiological and social-science methodologies for

obtaining valid information on sensitive topics as well as age-specific and sex-specific data from understudied populations.⁶ The purpose is to expand the evidence base regarding the causes and consequences of sexual and reproductive problems and their interconnections; how these vary across individuals and groups living within very different socioeconomic and cultural environments; and how health-care systems and providers at different levels can respond to their needs more effectively.

Placing the health and rights of individual women and men at the centre

International agreements affirm that everyone has a right to the highest attainable standard of health, including sexual and reproductive health.⁷ Individuals also have the right to decide freely and responsibly on matters relating to their sexuality and reproduction, including their sexual and reproductive health, free of discrimination, coercion and violence.⁸ These rights derive from internationally, regionally and nationally recognized human rights such as the right to self-determination, to liberty and security of the person, to non-discrimination and equal treatment under the law, and the right to be free from cruel, inhumane or degrading treatment.⁹

Situating the individual at the centre of a “conceptual map” of reproductive health,¹⁰ a rights-based approach assesses the extent to which a person is able to exercise his or her *right to sexual and reproductive health* and to make free, informed and responsible decisions. These include the capacity to:

- obtain, understand and act on information pertaining to sexual and reproductive functions, variations in forms of sexual expression and identities, life course changes, and personal rights and responsibilities, among other issues;
- recognize potential violations of one’s human rights related to sexuality and sexual health, and protect oneself and others from unwanted or harmful sexual acts, practices and relationships;
- choose one’s sexual partner(s) freely and responsibly and enjoy one’s sexuality without guilt, shame or fear;
- protect oneself and one’s partner(s) from RTIs/STIs, and especially HIV;
- seek appropriate treatment for RTIs/STIs and other damage to the reproductive tract caused by infections, cancers, childbirth, abortion or harmful practices;
- prevent conception, if desired, with safe and acceptable contraceptive methods;
- terminate safely an unintended or otherwise problematic pregnancy, if allowed by the law;
- conceive, or cause a conception to occur, when a pregnancy is desired and seek treatment for infertility for oneself and/or one’s partner;
- carry a wanted pregnancy to term and deliver a baby under safe conditions;
- ensure the newborn’s well-being with breastfeeding, if possible, and essential care;
- demand and obtain accurate information, counselling, and high-quality services for a range of sexual and reproductive health needs;
- be treated with dignity;
- privacy and confidentiality.

Analysis at the individual level can document the timing and circumstances surrounding significant sexual and reproductive processes and needs as they are experienced through the female and male life course, beginning at birth. Such a framework “allows us to visualize an individual moving through time, developing physically and psychologically, engaging in behaviours [and relationships] that have an impact on reproductive health, and learning from that experience.”¹¹

Events and conditions that are likely to have feedback effects on individuals’ health and decision-making capacity include:

- the differential treatment of male and female children and their acquisition of gender roles;
- the development of the sexual body among adolescents and the occurrence of menarche or semenarche;
- gender differences in the initiation of sexual activity, whether voluntary or coerced;
- partnership formations (and dissolutions) and first and subsequent acts of vaginal and other forms of sexual intercourse;
- alternating periods of male and female contraceptive use or non-use; having or causing a first or subsequent pregnancy (if any);
- the experience of safe or unsafe abortion and/or of childbirth;
- acquisition or prevention of STIs;
- processes of aging, including women’s passage through menopause.¹²

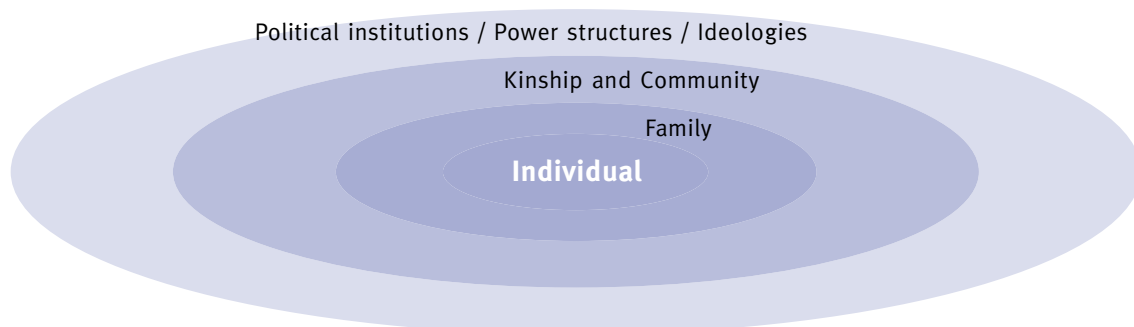
Analysis of “trigger” events or conditions such as these can identify strategic points for informational, educational, behavioural, and service interventions *as early as possible in the causal and interactive sequence* in order to disrupt negative synergies and reinforce positive ones.

Interpersonal contexts and socioeconomic, cultural and political environments

Sexual and reproductive decisions, events and conditions occur within immediate interpersonal contexts that are located in and shaped by broader socioeconomic, cultural and political environments. Settings are constructed of many layers, dimensions and routes by which situational factors make their influence felt. Contexts and environments may be relatively stable or they may involve high degrees of uncertainty and change. The challenge here is not only to identify and understand such situational factors but also to apply this understanding to improving the individual's and couple's capacity to make healthy sexual and reproductive choices.

Information on individual attributes such as age, sex, education, marital status, race, religion, and residence typically collected in Demographic and Health Surveys (DHSs) and other population-based inquiries offers, at best, a partial view of a person's location in a particular social system. By placing the individual at the centre of concentric circles of influence, one can examine, first, the nature of intimate and family relations, including both generational and gender hierarchies, as they affect his or her capacity to make sexual and reproductive decisions from childhood through adolescence and adulthood into old age. These close interpersonal relationships are set within an intermediate circle of kinship structures and community institutions which are, in turn, nested in a potentially influential outer circle of national political institutions, power structures and ideologies.¹³

Within these overlapping spheres of influence, individuals and social groups occupy positions of relative advantage or disadvantage with respect to their access to information and other resources—including their capacity to make decisions—that change over the life course and have important implications for their own and others' sexual and reproductive health and rights.¹⁴



CIRCLES OF INFLUENCE

Research shows that relative advantages or disadvantages in one setting often coexist with their opposite in another. A young man may be subjected to the authority of his father but exercise power over his sisters or young wife, for example. Similarly, a married woman may feel entitled to use birth control without her husband's knowledge but she cannot refuse to have intercourse with him or insist that he use a condom even if she suspects he has AIDS.

Health-seeking behaviours

The ICPD Programme of Action defines reproductive health care as “the constellation of methods, techniques and services that contribute to reproductive [and sexual] health and well-being by preventing and solving reproductive health problems.”¹⁵ Research is needed to establish what such “constellations” consist of in particular settings and to identify where particular individuals and social groups are located with respect to their access to information and advice, to commodities (e.g., antibiotics, condoms and contraceptive supplies); and to essential services (e.g., antenatal and delivery care).

To whom do women, men and adolescents turn as a first or last resort when they need certain types of information or help, and why? How can research on health-seeking behaviours lead to a better understanding of where things go wrong and how to correct them?

A person may select from different elements within the “constellation of methods, techniques and services” depending on the nature and urgency of the problem and his or her capacity to act, on the one hand, and on his or her perceptions of the familiarity, acceptability, convenience, cost, confidentiality and efficacy (among many other factors) of the provider, product or service on the other. A “constellation” could thus include:

- *informal, personal networks* of close friends, neighbours, siblings, parents, schoolmates, workmates or intimate partners, who may be consulted for information, advice, remedies, services and referrals;
- *non-formal-sector providers* who lack formal training but offer a range of advice, products and services, such as purveyors of herbal remedies for all manner of sexual and reproductive (and other) ailments and of over-the-counter drugs; spiritualists; traditional healers; untrained abortion practitioners; and shopkeepers who sell condoms along with cigarettes and beer;
- *formal-sector providers*, facilities and referral systems (public, private and NGOs) such as hospitals, maternal and child health and family planning clinics, primary-care health posts, pharmacies, community-based distributors of contraceptive supplies and private medical offices, typically staffed by trained administrators and medical personnel, including nurses, doctors, counsellors, trained paramedical personnel and outreach workers, who are expected to offer basic and emergency sexual and reproductive health information and care.

Feelings of personal embarrassment, shame and the desire for concealment are likely to favour inaction over action; similarly, they may favour private solutions over more public ones and non-formal-sector solutions over formal ones.¹⁶ The research task is thus to bring to light not only the array of sexual and reproductive *problems* experienced by women, men and young people in different social groups, as noted earlier, but also the array of *beliefs, attitudes, and practices*—either harmful or beneficial—that are imbedded in the personalized networks and non-formal and formal delivery mechanisms that constitute the locally relevant constellation of sexual and reproductive health care.

Formal-sector responses

The shift from a programme-driven to a client-centred approach in the field of family planning over the past two decades has been accompanied by a dramatic expansion of interest (especially among donors) in research designed to measure and improve the quality of *all* aspects of sexual and reproductive health service-delivery, and thus the uptake, continuity and integration of care.¹⁷ Particular attention has been paid to experimenting with methods of combining the core aspects of care in a manner that maximizes their interconnections and makes it easier for clients to obtain the attention they need.¹⁸ Examples include incorporating routine STI/HIV counselling and testing into contraceptive and prenatal care; infertility counselling and treatment into family planning; and contraceptive advice and services into post-abortion and post-partum care. The focus on quality care as a human *right is* reinforced by the ICPD declaration that “The promotion of the responsible exercise of [reproductive] rights *for all people* should be the fundamental basis for government- and community-supported policies and programmes in the area of reproductive health, including family planning” (emphasis added).¹⁹

According to the interpretation of the “right to health” provided by the UN Committee on Economic, Social and Cultural Rights,²⁰ governments are to ensure that public health programmes, including information, facilities, personnel, goods and services, are:

- *available* in sufficient quantity with respect to type and level of service;
- *accessible* to everyone without discrimination, including physical accessibility (within reasonable distance or reach) and economic accessibility (affordability);
- *acceptable* (respectful of cultural differences, sensitive to gender and age or generational requirements, confidential, ethical); and
- *appropriate* with respect to their scientific and medical quality, including staff training and supervision, availability of essential supplies, hygienic standards, etc.

Each of these attributes raises important research questions that require location-specific investigations of the distribution and accessibility of primary health care and family planning information and services in general; of essential sexual and reproductive health-care services and referrals in particular; and of how policies, programmes, personnel, and practices can be improved. The UN five-year review of ICPD, for example, urged that “Governments should strive to ensure that by 2015 *all primary health-care and family planning facilities* are able to provide, directly or through referral, the widest achievable range of safe and effective family planning and contraceptive methods; essential obstetric care; prevention and management of reproductive tract infections, including sexually transmitted diseases; and barrier methods (such as male and female condoms and microbicides if available) to prevent infection” (emphasis added).²¹ This ambitious goal involves the equally ambitious task of retaining, recruiting, training, allocating and providing ongoing technical and moral support to male and female sexual and reproductive health personnel at different educational and skill levels suitable for different environments who are able to provide appropriate information, counselling and preventive, diagnostic and curative care. Research is needed to guide the design, monitoring and evaluation of coordinated global, regional, national, district-level and locally-based plans for achieving these goals.

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CHAPTER 3

Sexuality,
Gender and
Sexual Health

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 3

Sexuality, Gender and Sexual Health

Like reproductive health, sexual health—“a state of physical, emotional, mental and social well-being related to sexuality”—is a holistic and multifaceted concept grounded in the individual’s capacity to exercise his or her basic human rights. The Platform for Action of the Fourth World Conference on Women (FWCW) held in Beijing included for the first time in a UN international conference a statement on human rights related to sexuality and sexual health that could apply equally to all persons, regardless of gender or sexual preference:

The human rights of women include their right to have control over and decide freely and responsibly on matters relating to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence. Equal relationships between women and men in matters of sexual relations and reproduction, including full respect for the integrity of the person, require mutual respect, consent and shared responsibility for sexual behaviour and its consequences.

FWCW, 1995, Platform for Action, paragraph 96

The multidimensionality of the concept of sexuality, which encompasses sexual meanings, identities, desire, orientations and pleasure as well as types of partnerships and sexual acts, has important implications for research.² “Sexuality research must go beyond concerns related to behaviour, numbers of partners and practices, to the underlying social, cultural and economic factors that make individuals vulnerable to risk and affect the ways in which sex is sought, desired and/or refused by women, men and young people. Investigating sexuality in this way entails going beyond reproductive health by looking at sexual health holistically and comprehensively.”³ Research can explore the physiological, social, cultural, psychological and interpersonal foundations of sexual health throughout the life course; its correlates and consequences; and the multitude of factors that facilitate or impede women’s, men’s and young people’s capacity to have a voluntary, safe and fulfilling sexual life and to make sexual choices free of coercion, discrimination and violence.

Sexuality information, education and services: the needs and rights of adolescents

The more than one billion adolescents aged 10-19 years who make up 20% per cent of the world’s population are undergoing a transition from childhood to adulthood that carries profound significance for their current and future sexual and reproductive health and well-being.⁴ International agreements adopted in Cairo and Beijing and at the 2002 World Summit for Children affirm that adolescents have a right to information and services enabling them to deal in a *positive and responsible* way with their sexuality.⁵ The promotion of mutually respectful and equitable gender relations is identified as an essential part of ensuring a safe and pleasurable sexual life. Moreover, adolescents’ access

to reproductive and sexual health information and services is *not to be restricted* by discriminatory legal, regulatory and social barriers or by the attitudes of health-care [or other] providers.⁶

Children and adolescents grow up in environments that are dense with explicit and implicit messages, prejudices and stereotypes relating to sexual and gender identities and their expression.⁷ In the process of internalizing these sex-gender rules they adopt attitudes and behaviours that have significant implications for their own and others' health and rights, both currently and in the future. At the same time, many girls and boys lack even the most basic information about sex and reproduction; about the physical and emotional changes they are experiencing as they pass through puberty and beyond; and about their personal rights and responsibilities, including the skills they need to protect themselves from unwanted sexual acts and from pregnancy and STIs.⁸

Research that tracks the nature and timing of significant events or conditions in the sexual development of younger and older adolescents in different settings offers opportunities for identifying points for educational and health interventions that can disrupt negative sequences (the sexual coercion of boys by other boys, for example) and reinforce positive ones (e.g., condom use at first intercourse). Timing is critical if young people are to be reached *before* they become sexually active and/or while they are still in school, if they are attending at all.⁹ Evidence is accumulating on circumstances surrounding the sexual initiation of adolescents aged 15-19.¹⁰ Less is known about the attitudes and behaviours of boys and girls under age 15, however. Yet, evidence from DHS and other sources reveals that—quite apart from other sexual activities in which they may be engaged—one-quarter or more of young adolescent boys in some countries (particularly in Latin America and the Caribbean) have engaged in vaginal intercourse before the age of 15. The same holds true for girls in parts of sub-Saharan Africa and in India and Bangladesh, due mostly to child marriages.¹¹ The negative physical, social and emotional effects of early sexual initiation—much of which is coercive—have been increasingly documented, together with the social, economic and behavioural environments of risk in which it occurs and the virtual absence of protection against STIs/HIV and high-risk precocious pregnancy.¹²

Where do children and adolescents look for information and help on sexual matters? Research is needed in different settings to identify key sources and their relevance, accuracy and gendered sexual messages. Evidence reveals that boys look to quite different sources than girls, for example, often relying on friends and on sexually explicit magazines, films or Internet web sites rather than on parents, teachers and other legitimate (although not necessarily well informed) sources.¹³ A boy enrolled in an adolescent sexual and reproductive health programme operated by BRAC in Bangladesh explains to an interviewer how eager other boys are to find out what he knows: “When my friends found out I was learning all of this in the school they came and asked me a lot of questions like, ‘How does a girl get pregnant?’ and ‘Why does [the] menses happen?’ ... I answered some of the questions, not all, as I don’t know many of the answers.”¹⁴

The provision of comprehensive and rights-based sexuality education in the schools (beginning at the primary level where children drop out of school early, and intensifying at ages 10-14) and in literacy classes, vocational, recreational and other programmes for out-of-school adolescents of both sexes has been identified as a critical priority in the global agenda for sexual and reproductive health as well as for AIDS prevention.¹⁵ A major research challenge is to identify and evaluate the adequacy of national and local responses in the health and education sectors to children’s and adolescents’ *need and right to know* about safe and unsafe sexual practices.¹⁶ Research initiatives can address the quality and coverage of existing family-life or sex-education programmes in order to assess factors such as teacher preparedness, the responsiveness of the curriculum to the needs of diverse individuals and groups, and its emphasis on tolerance and human rights as well as the potential for adapting and scaling up effective educational interventions and overcoming political resistance. A strong evidence basis is needed to convince policy-makers of the value of early and comprehensive sexuality education. Well crafted interventions that challenge harmful sex-gender ideologies, that encourage male responsibility and that involve young people in deciding their own futures can set the stage for much of what follows in their lives.¹⁷

Addressing sexual harm

Laws and policies at national, state and local levels offer a framework for guaranteeing certain aspects of sexual freedom and choice, such as forbidding marriage in the absence of the full and

free consent of both parties, and for prohibiting and punishing acts that cause sexual harm, such as the sexual abuse of children, rape (marital and non-marital), disfigurement with acid, honour killings, sexual harassment and intimate-partner violence. The success of efforts to eliminate sexual harm at the family and community levels depends at least in part on the willingness of state agencies and local authorities to prosecute violations to the full extent of the law. Research is clearly needed to identify mechanisms for ensuring that the appropriate laws, policies and procedures are in place and functioning effectively.

Unlike many offences, violations of sexual rights are often rooted in gender-based inequalities in interpersonal relationships and in hierarchically structured families, castes or clans in which older and more powerful members control the sexual bodies and lives of the young, both male and female. Incest, the sexual marketing of children, female genital mutilation, forced marriage (or denial of permission to marry), physical or psychological threats, and sexual humiliation may all be justified by principles of customary authority, family honour and/or personal entitlement. Outside the family, men's use of sexual coercion against girlfriends, young boys, acquaintances or strangers and boys' use of coercion against girls or other boys may be justified by ideologies of masculinity and/or by claims that the victim "deserved what s/he got".¹⁸

Research published in the past decade or more, some of which is guided by newly developed interview protocols,¹⁹ has illuminated the prevalence and underlying power relationships of sexual coercion and violence within couples and families as well as across ability, class, caste, ethnic and racial lines.²⁰

From 20 to 40% of young women in some countries report that their first experience of sexual intercourse was forced by their partners.²¹ "It happens that I force her" to have sex, explains a young man in KwaZulu/Natal, South Africa, "because I cannot control myself. In our tradition, it is the man who makes such decisions and a woman must follow."²²

Research also points to a high prevalence in some settings of sexual abuse of male and female children and adolescents by adults in position of trust; of young men as both victims (usually of other males) and perpetrators of sexual violence; and of forced sex within marriage as well as among unmarried partners. Feelings of guilt, shame and fear among victims and of denial, self-justification or indifference among perpetrators conspire to conceal the true levels of coercion and violence. The WHO Multi-Country Study on Women's Health and Domestic Violence Against Women, for example, which investigated the prevalence and health consequences of different forms of intimate-partner violence in eight culturally diverse countries as well as women's risk and protective factors and strategies in different settings, found that "the interviewer was frequently the first person that abused women had ever talked to about their partner's physical violence."²³

Continued efforts to make invisible violations of sexual rights visible in different settings are needed, especially among understudied populations such as children and young adolescents, migrants and refugees, persons with alternative sexual identities and sex workers, whose rights to protection from sexual harm may not be recognized. An even more critical need is to identify innovative ways of turning such research into action, such as the evidence-based design of new interventions to eliminate sexual harm and the assessment of legal, educational and health-based initiatives in these areas (such as the eradication of female genital mutilation) that are currently under way.²⁴ Within the health system, evaluations are needed of approaches to recognizing, assessing, diagnosing, counselling and treating male and female victims of sexual violence, abuse and other forms of sexual harm at all ages and attending to their multiple needs. These may include hospital care, family or couple counselling, legal referrals and prosecution, protective social services, safe houses for women or children at risk, rape counselling and treatment for both female and male victims, emergency and long-term contraception, diagnosis and treatment of STIs/HIV, safe abortion, and pregnancy and delivery care, with special measures to prevent the infliction of additional harm.²⁵

Sexual choice and fulfilment

Much of what is known in the sexual and reproductive health field about male and female sexual behaviour, including frequency of intercourse, multiple partnerships, protection against STIs and

unwanted pregnancies and—increasingly—sexual practices other than vaginal intercourse, comes from population-based surveys such as the DHS and other studies of risk behaviours associated with the transmission of HIV.²⁶ Far less is known about the positive elements of sexual choice and fulfilment implied in the right of all persons “to pursue a satisfying, safe and pleasurable sexual life.” Yet, studies of the physical and emotional health benefits of sexual expression and release for both women and men suggest that an active and enjoyable sexual life can protect against heart attack and possibly stroke, breast cancer and prostate cancer; bolster the immune system; relieve chronic pain, migraine and menstrual cramps; protect against depression; reduce stress; and increase self-esteem, among other benefits.²⁷ A couple’s mutually enjoyable sexual relationship may also have a positive impact on other aspects of their reproductive health.²⁸ Alternatively, fears or experiences of STIs or unwanted pregnancy, difficulty in using protection, relationship problems, stress, chronic pain or illness, the use of certain medications, hormonal imbalances, effects of ageing and a host of other factors can cause psychological as well as physical distress and dysfunction for one or both partners.²⁹

Research is needed in different settings not only on the nature and causes of sexual misinformation and distress among women, men and young people, but also on the sources to which people turn for information, advice and treatment. These include close personal networks as well as non-formal community providers of sexual information or advice (e.g., midwives, spiritualists), products (e.g., vendors of alleged potency enhancers or love potions) and services (e.g., male and female commercial sex workers, including the conditions under which male adolescents and adults seek out their specialized services). Within the formal -sector health system, research could investigate the effectiveness, quality of care (including provider training), and adaptability to different groups and settings of existing approaches to male, female and couple-oriented sexuality counselling, diagnosis, and treatment. Operational research of this type encompasses intake interviews and questionnaires; diagnostic protocols probing possible causes of difficulties; and modes of treatment, including psychological therapy (e.g., for a history of child sexual abuse), couple counselling (relationship problems, lovemaking and self-pleasuring techniques), and treatments with male and female hormones, vaginal lubricants, and other alternatives suitable for low-resource settings.

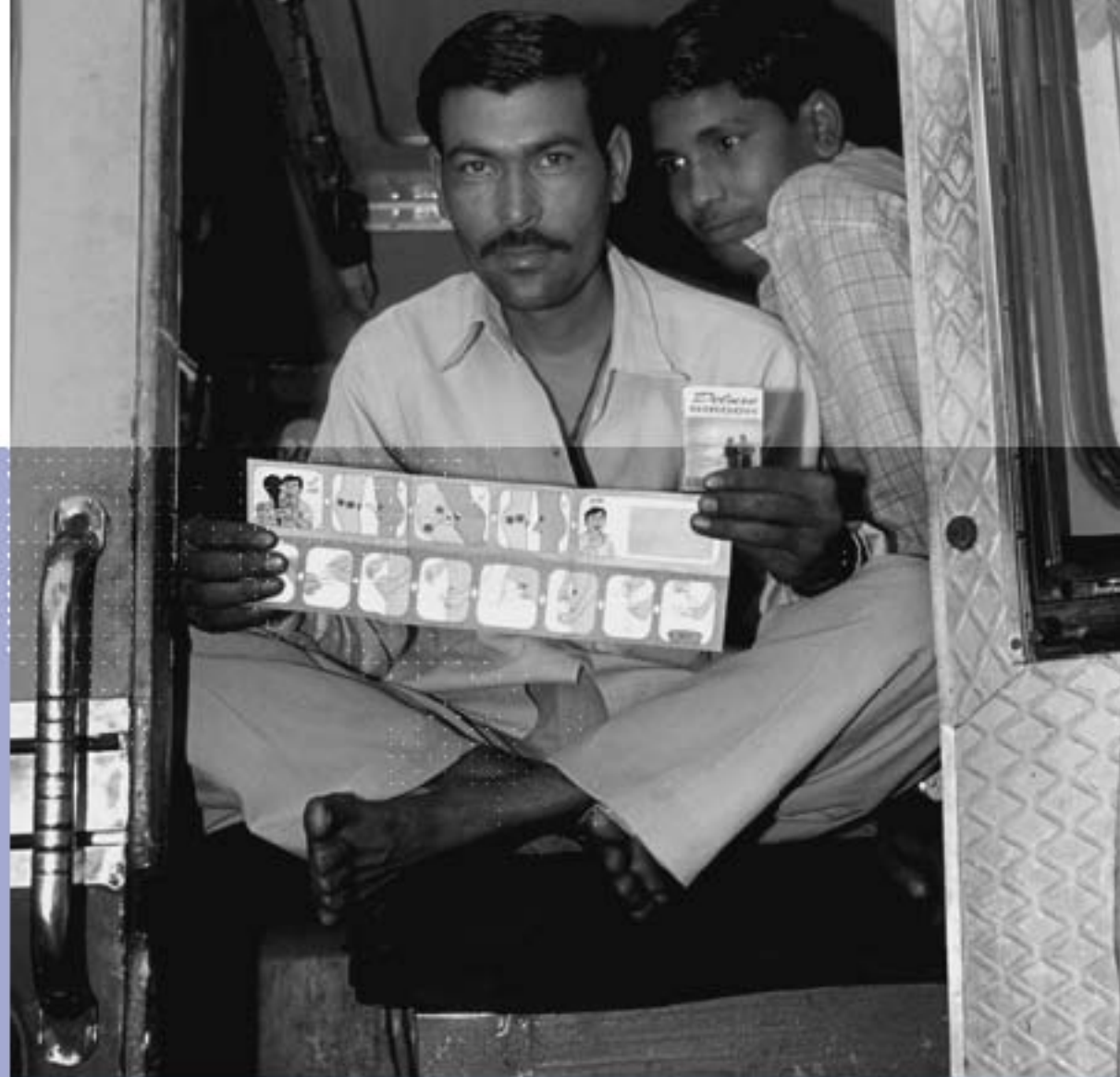
Finally, given that sexual health is a fundamental component of reproductive health and vice versa, research is also needed on the potential for integrating sexuality and relationship counselling more broadly into the sexual and reproductive health-care package in primary health-care and family-planning facilities or through referrals. Understanding sexual and reproductive health as a whole, together with an understanding of clients’ sexual and reproductive histories and behaviour, is essential for a provider or counsellor who is trying to help an individual or couple with contraception or STI/HIV prevention, for example. In turn, the provision of family planning or STI services and even antenatal and postnatal care may provide a good opportunity to identify and address sexual problems among women and their male partners.³⁰ Research to determine the special concerns and health needs of persons with alternative gender identities or sexual orientations, including men who have sex with men, can contribute to the design of educational programmes and outreach services in particular settings for those who are unable or reluctant to seek health care through regular channels or whom some providers may feel ill-equipped or reluctant to serve.

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CHAPTER 4

Preventing and Managing
Sexually Transmitted Infections,
including HIV and
Reproductive Tract Disorders

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 4

Preventing and Managing Sexually Transmitted Infections, including HIV and Reproductive Tract Disorders

The global Strategy for the Prevention and Control of Sexually Transmitted Infections adopted by the World Health Assembly in May 2006 reports that an estimated 340 million curable (although often untreated) bacterial and protozoal infections such as syphilis, gonorrhoea, chlamydia, trichomoniasis and chancroid are transmitted annually throughout the world among people aged 15-49.¹ In addition, untold millions more of incurable viral infections are transmitted every year through sexual contact, including the herpes simplex virus, the human papillomavirus virus (HPV) that causes genital warts and (for some strains) raises the risks of cervical cancer and the human immunodeficiency virus (HIV) that causes AIDS. An estimated 4.9 million people were newly infected with HIV in 2005, including 700 000 children under 15.² More than 30 reproductive tract infections (RTIs) and sexually transmitted infections (STIs) caused by bacteria, viruses and other organisms have been identified, including endogenous vaginal RTIs such as bacterial vaginosis and candidiasis that are not sexually transmitted.

Double standards of sexual behaviour combined with sexual coercion and other power imbalances within partnerships underlie gender-based differences in the probabilities of transmitting or acquiring a sexually transmitted infection.³ Compounding the inequalities of social sexism, the transmission dynamics of STIs and HIV take advantage of a *biological sexism* that puts females—and especially young girls whose bodies are not yet sexually mature—at higher risk than males of acquiring an infection from a single act of vaginal sexual intercourse with an infected partner.⁴ (Unprotected anal penetration carries high risks for both sexes, however.) Once infected, women are more likely to be asymptomatic (and thus to remain untreated) and to suffer more serious long-term consequences such as pelvic inflammatory disease (PID), which can cause infertility if untreated; life-threatening ectopic pregnancy; miscarriage or stillbirth; premature delivery and/or low birth weight; and the transmission of congenital infections to the newborn.⁵

In both women and men, the presence of infections—especially those that produce genital ulcers, lesions or vaginal or urethral discharge—contributes to an epidemiological synergy that raises the probability of acquiring or transmitting HIV and, ultimately, full-blown AIDS and other diseases, including more STIs.⁶ Given their common foundations in behavioural as well as epidemiological synergies, the prevention and earliest possible diagnosis and treatment of *all* RTIs/STIs—including HIV—are essential.⁷ The challenge for researchers is to undertake the investigations needed to identify, adapt and scale up interventions for preventing and controlling the effects of these synergistic RTIs/STIs and HIV in low-resource and/or high-risk settings, including improving the efficacy of rapid low-cost diagnostic and treatment technologies. Innovative and pragmatic modalities for counselling, testing and treating adolescents and adults—as individuals and as couples—and for supporting partner disclosure and behavioural changes need to be developed and tested for

specific sites. A particular challenge is to reach individuals and groups at risk who are likely to be underserved by standard health-care settings such as young brides who are kept in seclusion, street children, and refugees and displaced persons who may be at high risk of infection.

Recognizing risks, negotiating protection

Given the high prevalence and epidemiological complexities of RTIs/STIs and HIV, the frequent invisibility of symptoms, their harmful sequelae and the challenges of diagnosis and treatment, one would expect to find clearly articulated prevention strategies at the centre of public health campaigns directed to the population at large. Interventions and targeting of subgroups of the population are initiated in sequence, and not in parallel. Research and programmes relating to STIs/HIV are initially directed to so-called core transmitters such as female and male sex workers; men and women with multiple partners; men who have sex with men (many of whom have sex with women, too); and injectable drug users.⁸ In some programmes, the strategy is left on this first phase of action, critically lacking other key aspects, like addressing the sexual abuse of male and female children and young adolescents, which often contributes to subsequent substance abuse and sexual risk-taking, and the sexual violence and coercion among young people and adults that leaves its victims not only emotionally and physically damaged but also exposed to infection, including HIV.⁹ Pragmatic approaches are needed for providing *all* male and female adolescents with the information and skills they need to recognize their risks of acquiring or transmitting STIs and, when they become sexually active, to negotiate their own and their partners' protection.

Also needed are strategies for protecting married women whose husbands' past or current behaviour places them and their babies at risk and for convincing sexually active boys and men who may have been exposed to STIs/HIV of their obligation to be tested and treated and to support, protect and respect the health and rights of their male and/or female partners. These are complex issues, of course, and cultural attitudes and beliefs as well as socioeconomic factors may preclude the achievement of these goals in many if not most low-income settings. Nevertheless, research can identify possibilities for working within prevailing constraints to achieve the necessary changes, such as emphasizing the value of preventing, diagnosing and treating STIs in both partners in order to ensure their future fertility.¹⁰

Research is particularly needed among adolescents and young adults in diverse settings to identify their knowledge, attitudes and practices with respect to STIs/HIV and to build the epidemiological data base regarding their current status, some of whom will have been infected as children. How and what do adolescents learn about symptoms (or the lack of symptoms), the risks of acquiring STIs/HIV through sexual activities that include anal and oral as well as vaginal penetration, where to obtain male (and female) condoms, and how to use them correctly? Such research can inform the design and evaluation of information, education and communication (IEC) campaigns in schools, health centres and communities. Research can also identify obstacles to young people's acquisition *and* use of condoms (e.g., cost, boys' concerns about loss of erection, girls' embarrassment) and guide the design and evaluation of youth-friendly sites and services for obtaining information (including the Internet), supplies, counselling, screening and treatment.

Investigations into the relationship between information and risk-taking behaviour among both adolescents and adults typically confront two stubborn findings, however.¹¹

- First, individuals' perceptions of their personal vulnerability are often at considerable odds with reality, not only because of misinformation but also because of magical thinking, denial and other mental acrobatics.
- Second, even accurate information does not guarantee a "rational" response. As has been found in cases of other risky behaviours (e.g., alcohol, smoking, drug use, taking chances on pregnancy), a combination of social, psychological, economic and interpersonal factors feeds into an individual's assessment of the costs and benefits of alternative behaviours—assuming that he or she has some choice—and sidetracks the progression from "treatment" (information) to "effect".

The research challenge here is not only to understand how these factors work for women and men in different circumstances but also to design and test intervention strategies—especially with respect to protection from STIs/HIV—that might counteract them.

Perceiving symptoms, seeking (or not seeking) solutions

Asymptomatic infections, which can be more harmful than symptomatic ones,¹² are likely to remain untreated unless they are picked up by routine screening in clinical settings or partner notification, or unless an individual voluntarily seeks testing. The classic case of an (initially) asymptomatic infection is, of course, HIV, among which 90% of the world's seropositive women and men are estimated to be unaware of their condition.¹³

Even the appearance of symptoms may not trigger health-seeking behaviour, however. Adolescents are particularly likely to ignore signs of infection or to treat themselves with locally available products; in Benin City, Nigeria, the favourites were “Krest Bitter Lemon soda; kola (a popular stimulant); and combinations of salt, potash, gin, lime and pepper fruit ...”¹⁴ But adults, too, may ignore or endure symptoms such as vaginal or urethral discharge or sores in the genital area even when they cause discomfort or pain. They may attribute them to a source other than sex and, whatever the attribution, consult a traditional healer or self-medicate with herbal remedies or over-the-counter drugs such as antibiotics, especially where STI services are unavailable or costly.¹⁵ Acknowledging the link between symptoms and causes is particularly difficult with respect to STIs because they are so deeply personal *and interpersonal*. In some cultures, STIs are considered “women's diseases” for which women are blamed regardless of the behaviour of their male partners.¹⁶ Blaming the woman can even become a source of male pride. In focus group discussions with South African male adolescents in KwaZulu/Natal, “most boys agreed that sexual conquests and repeated sexually transmitted infections (STIs) were vital elements of a strong masculine image ... and proof of a boy's multipartnering success.”¹⁷

All of these scenarios, and more, make a strong case for ensuring the availability of user-friendly voluntary counselling, testing and treatment services for a range of common RTIs/STIs and HIV in primary health-care facilities and outreach clinics located in accessible places. In environments of high prevalence or for persons or groups at high risk, routine individual and couple screening and counselling can be provided directly or through referrals in connection with other health services (WHO's policy of “no missed opportunities”) such as contraception or abortion, antenatal care, and treatment for malaria, tuberculosis, respiratory infections or persistent diarrhoea.¹⁸ Research is needed to explore the implications of voluntary and routine testing in different settings and among vulnerable populations with respect to the capacity of health systems to provide adequate treatment, policies of partner notification, and the potential for reducing the spread of sexually transmitted bacterial infections and of incurable viruses such as HIV.¹⁹

Diagnostic and treatment technologies in the formal health sector

Just as some infections are silent and asymptomatic, others are revealed in symptoms that may be confused with other diseases, including some that are not sexually transmitted.²⁰ Evidence from community-based studies shows that men's and women's self-reports of symptoms (if any) and of their nature and severity may not coincide with the observations of examining diagnosticians.²¹ In turn, the examiner's findings may not coincide with the results of laboratory tests, the interpretations of which may also differ across technicians, tests or facilities. The triangulation of methodologies for assessing RTIs and STIs and the disparities in outcomes that the evidence reveals have produced a somewhat humbling awareness of the complexities of accurate diagnosis even under favourable conditions.²²

Among the approaches to RTI/STI management, diagnosis based on *laboratory tests* to identify the pathogen requires specimen collection, cultures (and incubators), blood samples that have to be handled carefully, testing equipment and trained personnel who can interpret the results. While this method is more accurate in identifying the specific infection and appropriate treatment, it is often not feasible because few developing countries have the necessary laboratory equipment or trained personnel except in specialized facilities. Waiting for lab results also means that the client has to return for the follow-up treatment once the STI has been identified, which he or she may not do.

As an alternative, a *syndromic approach* for use in low-resource settings contains step-by-step guidelines in the form of flowcharts (algorithms) that enable providers to identify the probable cause(s) and treatment option(s) for common conditions (syndromes) such as urethral discharge in men, genital warts in both sexes, and vaginal discharge and lower abdominal pain in women.²³

Recommended drug treatments cover the majority of serious organisms that are likely to be responsible for a particular syndrome. Recommendations also extend to counselling male and female clients on partner notification, testing and follow-up. Benefits of the syndromic approach include its relative simplicity with respect to provider training requirements and the fact that diagnosis and treatment are provided in one visit. There are shortcomings, however. For example, antibiotics may be overused when treatments are given for several infections simultaneously, which can result in drug-resistant pathogens, and asymptomatic infections may remain untreated.²⁴ In addition, the syndromic approach is not helpful in many cases of vaginal discharge and has problems of low specificity in settings where STIs are an important problem but prevalence is generally low.

Key research issues remain with respect to the biomedical technologies of RTI/STI diagnosis and treatment in low-resource settings, however. Low-cost rapid diagnostic kits for specific RTIs and STIs applicable to both clinical and non-clinical settings (e.g. self-tests from pharmacies) are urgently needed, together with low-cost and accessible treatment regimens. Given its potential impact for large segments of the population in developing countries, research to improve the validity (sensitivity and specificity) of the syndromic approach is required. The development of simple and rapid tests for HIV, some of which now require only a finger-prick of blood or an oral swab and can produce results within 15 minutes, has enormous potential.²⁵ Quick analysis slows the loss of clients between test and report; supports counselling efforts; and provides opportunities for involving male and female partners in decision-making about sexual and reproductive options and about treatment and care, including the costs and benefits of antiretroviral therapy (ARV) if that is an option.²⁶ Research on preventive vaccines is also a high priority. The development of a vaccine against the strains of HPV that can cause cervical cancer is showing signs of success and an HPV vaccine has been approved recently by some governmental agencies. Research on strategies to ensure that HPV vaccines are made available and accessible for populations in developing countries is essential, and price negotiations for the vaccine need to be addressed.

The development of vaccines against the many mutating strains of HIV—of which about 30 candidates are under consideration—remains exceedingly problematic.²⁷ The further development and testing of effective, affordable and acceptable vaginal microbicides to reduce the transmission of HIV and some other STIs, which numbers over 60 products of which four are now in Phase III clinical trial, is also an urgent priority.²⁸

Cancers and other disorders of the reproductive tract

Sexual and reproductive ill-health includes other types of disabilities and diseases affecting the male and female reproductive tracts that arise through the life course (some early, some late) and that also require attention and care.²⁹ A village woman in Tamil Nadu who has suffered for years from utero-vaginal prolapse because of the lack of appropriate health care says “I am unable to do any work and feel very depressed. Very often I get acute pain and a burning sensation during urination. There is also a profuse and smelly white discharge on many days.”³⁰ Research is needed to identify the prevalence, underlying causes, contributing factors, consequences and adequacy of prevention, diagnosis and treatment efforts relating to conditions such as the following:

- menstrual cycle problems, including primary (initial) and secondary (subsequent) amenorrhoea; endometriosis; abnormal uterine bleeding; severe premenstrual syndrome (PMS); symptoms and sequelae of menopause (e.g., bone loss, pain during intercourse) and of other gynaecological problems, and their impact on female sexual functioning, contraceptive use, infertility, and self-esteem;³¹
- cervical, uterine and ovarian cancers; risk factors associated with cervical cancer (e.g., early sexual initiation, multiple partnerships of the man as well as the woman; acquisition of high-risk HPV) and methods of cytological screening (Pap smears), visual detection and immediate treatment (“see and treat” modules), HPV vaccines, and related approaches to prevention, detection and management;³²
- vaginal conditions such as vesico-vaginal fistula caused by prolonged labour and other damage in childbirth;³³ uterine prolapse from frequent childbearing and poor care; damage caused by delivery practices such as episiotomy and over-use of Caesarean section procedures; female genital mutilation (FGM) analysed according to its prevalence and severity, cultural meaning

and decision-making context, consequences such as infection, sexual difficulties, menstrual problems and obstetric complications, and approaches to its elimination;³⁴

- prostate and testicular cancers, according to their age-specific incidence and prevalence in different settings, their seriousness and the urgency and accessibility of treatment; benign conditions such as prostatic hyperplasia, epididymitis, testicular torsion, etc. impact of these and other problems and of surgical or chemical therapies on male sexual functioning.

The task of making the invisible visible applies to all of these issues. So, too, do the tasks of understanding the experiences of male and female adolescents and adults with respect to their symptoms (if any) and their search for information and services; designing and evaluating educational and health interventions early in the life course as well as in later years to prevent or interrupt sequences of harmful events and conditions; and assessing educational and health system responses in different settings in order to improve the relevant technologies, provider training and quality and quantity of information and care.

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CHAPTER 5

Helping Women, Men and
Couples to Achieve
their Desired Fertility

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 5

Helping Women, Men and Couples to Achieve their Desired Fertility

... [R]eproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other relevant consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so. ... It also includes their right to make decisions concerning reproduction free of discrimination, coercion, and violence ...

ICPD Programme of Action, 1994, paragraph 7.3

The ICPD Programme specifies “the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law.”¹ The definition of reproductive health care includes family planning counselling, information, education, communication and services; safe pregnancy terminations “in circumstances where abortion is not against the law” and the humane management of consequences of (unsafe) abortion; and the prevention and appropriate treatment of infertility.² Implied in these definitions are:

- that individuals and couples from the time they first begin to have sexual relations and throughout their sexual lives should be able to engage in sexual intercourse without the fear of an unwanted pregnancy;
- to be free to discuss their reproductive desires with their partners and to negotiate their own protection, if needed;
- to have information on the benefits and drawbacks of specific contraceptive methods; and to choose a method that is best for them.

Prevention of secondary infertility is essential, and individuals and couples with infertility should have the right to be diagnosed and, if at all possible, treated for this condition.

Preventing unwanted conceptions: contraceptive efficacy and unmet need

Decades of research and investment in family planning programmes have resulted in dramatically improved programme coverage and biomedical technologies as well as significant (although uneven) increases in contraceptive uptake throughout most of the developing world.³ Contraceptive options—not all of which are available in many developing countries—include a variety of hormonal regimens and modes of delivery for women (e.g., pills, injectables, implants, patches, vaginal rings, medicated intrauterine devices) as well as improved male and female condoms, spermicides, cervical caps and other vaginal barriers, post-coital (emergency) contraception, improved fertility awareness-based methods, and simpler and more effective surgical techniques for tubal ligations and vasectomies.⁴

Nevertheless, Demographic and Health Surveys (DHS) reveal that in many countries—including some with quite high rates of contraceptive prevalence—40% or more of women who recently gave birth reported that the pregnancy was wanted later or not at all.⁵ Proportions of married women with an unmet need for contraception also range up to 30 to 40% or more in a number of countries.⁶

Both of these situations reflect, to variable degrees, programme- and method-related inadequacies, including contraceptive failures due to a variety of reasons, as well as personal and situational factors such as partner's opposition or women's experiences or fears of side-effects that need to be addressed.⁷

Contraceptive information, needs and motivations evolve through the life course as male and female adolescents become sexually active before marriage or cohabitation (perhaps with several partners) or at the time of their marriage, and as couples decide if and when to begin childbearing (if they have not already accidentally done so); accumulate experiences with contraception (or its absence) and with pregnancy and childbearing; think about spacing and stopping; and are potentially faced with 10 or 20 more reproductive years at risk. Some women and men will divorce, remarry and decide to have another child; others will bear children (wanted or unwanted) outside of marriage or be motivated to avoid it. The environmental and contextual scenarios are many; the individual trajectories even more diverse.

The challenge for educational and health sectors is to meet these changing needs with comprehensive information about pregnancy risks, acceptable contraceptive options, and correct and consistent use. Interventions include countering beliefs in ineffective methods and overcoming unrealistic fears about contraceptive side-effects that adolescents may already have acquired. A sustained service package adapted to the specific and changing needs of individuals and couples and linked with other sexual and reproductive health inputs must be offered.⁸

The evidence base is by now quite extensive on how to create more user-friendly family planning environments, enhance client-provider interactions and other aspects of quality of care, and involve men as well as women in the discussion of contraceptive choices with respect to ease of use and need for partner cooperation, possible effects on sexual expression (e.g., coitus-dependent or independent methods), safety, efficacy, side-effects, acceptability, accessibility and cost.⁹ Guidelines have been established for counselling clients such as unmarried adolescents who need dual protection; couples wanting to use a natural method; couples wishing to postpone their first pregnancy or space subsequent pregnancies; women or men who want to use a method without their partners' knowledge; postpartum and breastfeeding women; women receiving post-abortion care; women who have had unprotected intercourse (including rape victims); individuals or couples looking for long-acting reversible or permanent methods; and women approaching menopause.¹⁰

The evidence base has also expanded greatly with respect to the medical aspects of contraception for male and female users. Method-specific medical eligibility criteria have been established for women of all reproductive ages who have particular health problems, such as heavy smokers and those with chronic diseases receiving long-term drug treatments (e.g. antihypertensive agents, antiretroviral drugs).¹¹ Ongoing investigations are assessing the protective and risk factors of particular methods with respect to certain diseases (e.g., breast, cervical or testicular cancers, cardiovascular disease, endometriosis). Critically important for family planning and STI/HIV counsellors is research linking methods such as hormonal pills or injections, vaginal spermicides, tubal ligations and vasectomies, diaphragms and cervical caps, and male and female condoms to risk or protective factors associated with the acquisition and transmission of RTIs/STIs, including HIV.¹²

Research is urgently needed on the interaction between the use of contraceptives such as hormonal methods and the risk of HIV acquisition and on transmission and disease progression among people living with AIDS, as well as on the interactions between method use and HIV therapies such as antiretroviral drugs.

On a more general level, investigations are needed in a variety of low- and middle-income settings in order to:

- identify the interconnections between contraception and physical and mental health among different populations;
- improve the user efficacy, safety, acceptability and convenience of current methods among special groups such as adolescents, older users and users with chronic diseases;
- reduce method-specific side-effects;
- develop new technologies such as once-a-month methods for women, better dual protection against pregnancy and disease, and reversible methods for men.

In parallel with the development of a range of new methods to better meet individuals' and couples' family planning needs, research at the operational level can evaluate and recommend strategies to:

- expand the choices among existing low-cost methods suitable for a variety of users, such as emergency contraception, and ensure a consistent supply of commodities, including those available over-the-counter;
- improve the overall accessibility and quality of contraceptive care;
- adopt and scale up interventions such as new technologies, guidelines and provider training modules.¹³

Research is also needed to identify how services such as sexuality counselling, infertility assessments and STI/HIV screening for clients and their partners can be linked to family planning care in different settings and, in turn, how to ensure that contraception is discussed and offered in antenatal, postnatal and abortion care. Routine screening and treatment for RTIs/STIs including HIV to preserve the couples' health and future fertility is critically important in family planning settings, of course, and is a precondition for IUD insertions and other transcervical procedures.¹⁴

Managing unwanted conceptions

Promoting more effective contraceptive use can go a long way towards reducing the numbers of abortions.¹⁵ An estimated 46 million of the 210 million pregnancies that occur worldwide every year are terminated by induced abortion.¹⁶ Among these are sometimes high proportions of contraceptive users whose method failed.¹⁷ Perhaps 19 million abortions are performed under unsafe conditions according to the WHO definition, virtually all of them in developing countries with restrictive laws.¹⁸

Unsafe procedures result in the deaths of an estimated 68 000 women every year and in temporary or permanent disabilities to perhaps five million others.¹⁹ Accurate estimates of the incidence of abortion and of related morbidity and mortality are notoriously difficult to collect, however, whether from institutional sources, indirect estimation techniques, or from women themselves.²⁰ Research is needed to make this invisible dimension of reproductive health more visible for monitoring, programmatic and policy purposes.²¹

Measures of abortion-related knowledge, attitudes and practice (KAP) could assess the extent of women's information about various methods and where to obtain them; their awareness of risks;²² their knowledge of the legal status of abortion in their countries; whether they have ever tried to induce a late menstrual period or cause a miscarriage; and, if so, how, where, and with what consequences.²³

The realization that she has missed her menstrual period(s) is a significant event in a girl's or woman's life that may be met with excitement, resignation or despair. Her reactions will depend on her age, marital or partnership status, the timing of the pregnancy, previous childbearing, social and economic circumstances, her perception of her husband's or partner's likely response to the pregnancy, health concerns and many other factors.²⁴ She may also have suffered rape from a stranger or sexual violence or coercion from an intimate partner. Little is known about the process of post-conception fertility decision-making, however, or about why some women or couples decide to terminate a pregnancy while others in similar situations do not, and about the role that the male partner plays in the decision.

In legally restrictive environments, a girl or woman who is desperate to terminate a pregnancy will typically look to interpersonal and non-formal sources of information and care if she cannot pay a skilled medical practitioner who operates clandestinely. She might ask a friend or relative about a remedy for “bringing down” a late period, such as herbal teas or vaginal douches, or search the market for commercial pills or injections that are rumoured to induce bleeding.²⁵ “A woman can drink onion juice or garlic juice, or she can get anything from the herbs man,” says an Egyptian woman in a group discussion. “I know a woman who tried everything and nothing ever worked.”²⁶ When these attempts fail, she may or may not resort to more drastic measures. “One of my friends took me to a woman, she massaged my abdomen and she put her hand into my womb and stirred it until it bled,” explains a teacher in Myanmar. “I miscarried at home, the pain was not relieved and I had a fever. I did not know people could lose their lives after an abortion.”²⁷ The sequelae of unsafe practices are well established, including incomplete abortion, chemical burns, poisoning, uterine perforation, haemorrhage and infections, all of which require emergency (and often inaccessible) hospital care.²⁸

The use of simple technologies by trained practitioners could virtually eliminate abortion-related mortality and morbidity where such procedures are permitted by law (or are tolerated without prosecution).²⁹ Clinical trials show that manual or electric vacuum aspiration for pregnancies of less than 12 weeks can be performed safely by trained paramedical personnel.³⁰ Medical methods such as combined mifepristone-misoprostol regimens are being refined to determine minimum dosages, optimal modes of administration (oral, vaginal), and simplified procedures (fewer clinic visits, shorter waiting times) as well as to establish their efficacy later in pregnancy, minimize side-effects and assess their acceptability to providers and clients in different settings.³¹ Explorations continue on the use of misoprostol alone and of other agents to stimulate uterine contractions for later-term abortions.³² A key concern relates to the safety of different methods for inducing abortion among women with HIV infection (especially those who have reduced CD4 counts and/or anaemia) and whether there are any adverse reactions of the misoprostol-mifepristone regimen with antiretroviral therapies.

Post-abortion counselling is a key intervention point for additional sexual and reproductive health services.³³ Evaluations of the quality of post-abortion care address procedures such as monitoring the client’s physical and emotional state; advising her about danger signs and what to do about them; arranging a follow-up visit; counselling about dual protection from STI/HIV and additional pregnancies; discussing negotiating skills; and providing an appropriate contraceptive method on-site, where feasible, or through referral.

The five-year UN review and assessment of ICPD recommended that “in circumstances where abortion is not against the law, health systems should train and equip health-service providers and should take other measures to ensure that such abortion is safe and accessible.”³⁴ To this end, research is needed that will help to:

- improve the collection of population-based data on abortion-related knowledge and practices, including incidence, safety and the characteristics of providers;
- create more supportive policy-environments in countries where laws permit abortion only to save the woman’s life;³⁵
- identify and eliminate unnecessary administrative and regulatory barriers to access *within* existing legal frameworks, such as excessive medical authorizations or waiting periods, as well as negative attitudes of providers towards women seeking abortion;³⁶
- understand the abortion decision-making process among different groups of women (e.g., adolescents, single women, older women) and the various factors determining if, when, where, and how women terminate unwanted conceptions;
- document the costs of unsafe abortion incurred by women and their families and by health systems and the financial gains to providers of various types, including physicians, where abortion is illegal and thus expensive;
- provide evidence on the impact of decriminalization and the establishment of safe abortion services, including the provision of manual aspiration and medical abortion by mid-level providers, on maternal mortality and morbidity.

Achieving wanted conceptions: diagnosis and treatment of infertility

In many communities, social pressures on young brides and their husbands to produce a child in the first year or two of marriage and, subsequently, to produce a second or third child or a child of the desired sex, can be intense.³⁷ Indeed, the failure to do so may spell disaster, especially for the woman who is typically blamed. “She is called *waanj* (barren)” explains a family-planning field organizer in Bhiwandi, India. “There is a superstition that if she touches a baby, the baby will die.”³⁸ Yet, despite the high prevalence of primary and secondary infertility which may affect as many as 20 to 40% of couples in parts of sub-Saharan Africa where STIs are endemic and 10% in developing countries such as India,³⁹ the diagnosis and treatment of male and female infertility are among the most neglected aspects of reproductive health care in low-income settings.⁴⁰ As is the case with so many other aspects of sexual and reproductive health, women having difficulty conceiving often consult traditional healers, spiritualists and other sources before turning to health clinics or private doctors, if they do so at all.

Even under ideal conditions, however, the cause of infertility in a couple often cannot be identified, and most primary health-care and family-planning providers are ill-equipped for the task.⁴¹ Multiple paths that can lead to female and male infertility include the sequelae of RTIs/STIs and systematic diseases such as tuberculosis, malaria and HIV.⁴² Among women, inability to conceive can result from tubal or ovarian damage due to endometriosis, pelvic tuberculosis, or PID, the latter a result of STIs such as gonorrhoea or chlamydia; of postpartum and postabortion infections due to unsafe procedures; or of other causes. Inability to carry a pregnancy to term can be due to STIs such as syphilis, complications of previous deliveries or unsafe abortions, tumours and a variety of other factors. Similarly, infertility in men, whose immediate cause is poor semen quality or quantity, may result from prior conditions such as blocked sperm ducts or sperm production disorders caused by certain STIs and systemic diseases or by hormonal, environmental and lifestyle factors (e.g. smoking, excessive use of alcohol and drugs).⁴³

Treatments for infertility encompass a variety of medical and non-medical approaches, the majority of which are unavailable to most couples in developing countries. Perhaps the most important intervention for infertility secondary to an STI is the early identification and treatment of the STI to prevent secondary infertility. Indeed, the scientific advances in the high-tech field of assisted reproductive technologies (ART) such as in-vitro fertilization, gamete or zygote intrafallopian transfer, intracytoplasmic sperm injection, and embryo freezing and embryo donation could be said to represent a classic case of inequities between investments and needs.⁴⁴ A set of interventions with a much higher potential impact for most low-resource settings are the prevention of STIs and technologies such as antibiotics to cure STIs and PID; surgery to remove tubal blockages in women and men; simple techniques of artificial insemination; and non-medical approaches such as counselling about the optimal timing and frequency of intercourse and other behavioural modifications.⁴⁵ Social science, clinical and operations research could help to identify key interventions at the individual, couple and community levels to prevent common conditions that cause infertility; to diagnose and treat infertility with simple technologies, where possible; and to reduce the stigma of infertility with couple and family counselling, community education, and support for alternative child-sharing arrangements such as fostering or adoptions, among other options.

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CHAPTER 6

Ensuring a Successful Pregnancy Outcome for the Mother and the Newborn

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 6

Ensuring a Successful Pregnancy Outcome for the Mother and the Newborn

All countries, with the support of all sections of the international community, must expand the provision of maternal health services in the context of primary health care. These services, based on the concept of informed choice, should include education on safe motherhood, prenatal care that is focused and effective, maternal nutrition programmes, adequate delivery assistance that avoids excessive recourse to caesarean sections and provides for obstetric emergencies; referral services for pregnancy, childbirth and abortion complications; postnatal care and family planning. All births should be assisted by trained persons, preferably nurses and midwives, but at least trained birth attendants ...

ICPD Programme of Action, 1994, paragraph 8.22.

For the majority of the world's women, and especially for adolescent girls, even a wanted pregnancy can be a source of anxiety as well as anticipation. Will she survive childbirth? "I've heard that the first delivery is even more difficult if the baby is big," says a young Vietnamese woman. "For this reason I don't dare eat much nourishing food, because I'm afraid of being operated on at the district hospital."¹ Will the baby survive, be healthy, and be of the "right" sex? A second woman explains, "I know to have one more child is very hard for us but we have to have at least one son."² The pressures for reproductive "success" on both the woman and the man can be intense.

If we follow a woman through the sequence of events and conditions in her life that raise her risks of pregnancy-related death or disability, two major areas of sexual and reproductive health programmatic intervention become clear. The first involves *reducing her exposure* to the prevailing risks of pregnancy and childbirth with more effective family planning that will enable her to space and limit her pregnancies and avoid unintended conceptions, which will lower the maternal mortality rate (maternal deaths per 100 000 women of childbearing age).³ The second involves *reducing the risks* inherent in pregnancy and delivery by ensuring safer and more accessible services, which will lower the maternal mortality ratio (MMR) (maternal deaths per 100 000 live births) as targeted by the ICPD+5 review and the maternal health goal of the MDGs. Reducing the risks of childbearing does not pertain only to obstetric care, however, but to the continuum of health care and nutrition that is needed from a girl's childhood through adolescence and throughout her reproductive years.

Global Safe Motherhood initiatives have contributed substantially to reductions in pregnancy-related deaths in some parts of the developing world, especially in middle-income countries that have good primary health systems.⁴ Difficulties in addressing some of the causes of maternal (and newborn) mortality and morbidity have been encountered almost everywhere, however,⁵ and less—if any—progress has been made in the poorest countries that lack health-system capacity or are in

the throes of economic or political crisis.⁶ As a consequence, the estimated global MMR remained virtually unchanged in the decade from 1990 to 2000.⁷ Perhaps half a million women die during pregnancy, childbirth and its aftermath every year; 3.3 million babies are stillborn; and an additional 3 million die within a week of their birth.⁸

Biomedical and operational research initiatives continue to test the efficacy of new clinical interventions for preventing and/or managing major prenatal, obstetric and postpartum complications and to adapt others to low-resource settings. Evidence-based guidelines produced by WHO and other UN agencies specify the clinical skills, training, technologies and facilities needed and procedures to be followed in different sites (e.g., hospitals, clinics, health posts, homes) for the provision of essential basic (primary level) and comprehensive (secondary and tertiary level) care.⁹ Extensive research over the years has contributed to the knowledge base on cost-effective interventions; it is their implementation that poses the greatest challenge. Additional research is needed to develop new simple technologies, however, and to understand the causes of major problems such as hypertensive disorders of pregnancy, preterm birth and very low birthweight in order to develop better approaches to prevention and treatment. Research can also help to identify and overcome obstacles within health systems such as retaining qualified staff, recruitment, training, the adoption and scaling-up of best practices, and obstacles within families and communities that impede women's capacity to go through pregnancy safely and to have a safe delivery.¹⁰

The measurement and sequencing of mortality risks

The measurement of maternal deaths and their causes is problematic in the absence of good reporting systems, especially where the majority of women who die do so outside hospital settings.¹¹ Innovative methodologies developed for soliciting information about maternal deaths from family members and non-formal and formal providers are invaluable for identifying major causes of death and guiding health sector responses.¹²

Although patterns vary substantially from one setting to another due to population-based and health-system factors,¹³ the combined data—which are shown in the next paragraph—form a template for designing educational and health sector responses.¹⁴

When a girl or woman becomes pregnant she may already be at high risk because of pre-existing conditions such as poor nutritional status, anaemia, malaria, diabetes, RTIs/STIs and HIV. In interaction with the pregnancy, pre-existing conditions account indirectly for an estimated 19% of all maternal deaths.¹⁵ Events occurring early in pregnancy such as complications from unsafe abortions of unwanted or unintended pregnancies account for 13% of maternal deaths and untreated ectopic pregnancy 8%. Subsequent risks include hypertensive disorders that may worsen in late pregnancy and, if untreated, result in convulsions (eclampsia, accounting for 12% of maternal deaths). Complications of delivery such as prolonged or obstructed labour, retained placenta, vaginal or cervical lacerations, and uterine rupture or inversion account for 8% of deaths. Conditions provoked by labour and delivery that appear in the hours or days postpartum include postpartum haemorrhage (25%), which can occur suddenly and cause death within two hours, and puerperal sepsis (15%).¹⁶ Most of these outcomes result from inadequate care or from harmful birthing practices.¹⁷

Essential care during pregnancy

DHS evidence shows that in the decade from 1990 to 2000 women were increasingly likely to have at least one antenatal visit in all regions except sub-Saharan Africa.¹⁸ Contrasts across and within regions are dramatic, however. Ninety-seven per cent or more of pregnant women in Botswana, Cuba and Bahrain had at least one antenatal consultation, for example, compared with 27% in Ethiopia and 29% in Laos. Within countries, less educated women, poor women, those living in rural areas and women whose pregnancy was unintended are the least likely to receive antenatal care.¹⁹

The antenatal care package, which sets forth recommendations for the timing, number and clinical and counselling content of consultations, is intended to prevent or disrupt harmful sequences of sexual and reproductive health events or conditions that take on particularly critical importance in settings where maternal and perinatal mortality is high and infectious diseases are endemic.²⁰ Key

interventions include advice to avoid smoking, alcohol or narcotic drug use, and screening/treatment of iron-deficiency anaemia, malaria, high blood pressure, vitamin A and iodine deficiencies, bacteriuria and proteinuria (signs of infection, kidney disease or pre-eclampsia) and especially damaging STIs such as syphilis, gonorrhoea, chlamydia and HIV/AIDS.²¹ Simple and relatively inexpensive technologies for performing most of these interventions in a single visit have been developed for use in resource-poor settings that could virtually eliminate conditions such as eclampsia and congenital syphilis if they were universally adopted.²²

Challenging issues remain, however, in particular with respect to implementing and scaling up the intervention to a high percentage of pregnant women in low- and middle-income countries and to manage and treat all potential complications detected. Further challenges remaining include encouraging greater male involvement in antenatal decision-making and care and in eliminating violence against women, which may escalate during pregnancy and which heightens the risks of complications and death. Research is also needed for formulating effective policies for antenatal HIV screening, counselling and prevention of parental transmission to infants in high-prevalence settings or among high-risk individuals.

An HIV-positive woman has a 25-40% chance of passing the infection to her baby if she remains untreated; probabilities are about 2-5% per cent if she is given antiretroviral drugs (ARVs) during pregnancy, labour and the postpartum period if she is breastfeeding.²³ Research evidence is required to inform debates about the ethics of routine testing.²⁴

Concerns about discrimination and the consequences of partner notification; issues relating to the availability, cost, and timing and duration of ARVs; and other questions need to be resolved in diverse contexts in order to reduce the rate of new HIV infections among infants and promote joint parental responsibility.²⁵

Care during delivery and its aftermath

International guidelines recommend that a pregnant woman presenting for antenatal care should make a birth plan that includes, where possible, a decision to give birth in a hospital, clinic or health care centre and, if not, to arrange for the assistance of a skilled birth attendant at home.²⁶ Her right to decide where, how, and with whom to deliver (and whether her male partner should be present) is to be respected. If she decides on a home delivery, she and her family members are to be advised of the danger signs and instructed to make concrete emergency plans in case complications arise. Disposable delivery kits with simple-to-follow flow charts describing good birthing practices and the need to avoid harmful ones have been developed for women who use a traditional birth attendant (TBA), seek the help of a female relative or neighbour, or deliver the baby alone.²⁷

Measuring impact of maternity care services is a very challenging task. Large community-based studies and surveillance systems are required to provide conclusive evidence of the impact of interventions. For example, the Making Pregnancy Safer initiative actively promotes the universal use of skilled birth attendants such as midwives, doctors and nurses who have been trained to proficiency in the skills necessary to manage normal deliveries and to diagnose or refer obstetric complications. A second component of the Making Pregnancy Safer initiative consists of establishing a universally accessible system of communication with and transport to facilities that are staffed and equipped to provide comprehensive and emergency obstetric care.²⁸ Conclusive evidence of the impact on the MMR of skilled attendants and referrals is lacking, however, in part because maternal deaths are rare in some countries and the evidence base takes a long time to build.²⁹ Moreover, the design of studies capable of assessing the independent and interactive effects of particular types of *providers* working with different *interventions* in different *facilities* with different *clients* in different *environments* is extremely challenging. Nor is it just “attended births” that matter, but care during the postpartum period when most maternal deaths occur.³⁰ Other initiatives, like the recently created Partnership for Maternal, Newborn and Child Health (PMNCH), will require solid evidence of the likely impact of interventions aiming at reducing morbidity and mortality to base their recommendations to governments in low- and middle-income countries.

The skilled management of emergency complications favours the obstetrically trained doctor in the well equipped facility. However, given the suddenness and unpredictability of complications, the distance to emergency facilities and the difficulty of arranging transport by car, boat, donkey-cart, wheelbarrow or hand-carried stretcher, the priority for most resource-poor settings will be to provide community-based skilled attendants with the training and supplies necessary to manage, at least temporarily, the most likely life-threatening complications. Practical solutions are being tested and technologies adapted to different national and subnational settings (according to their needs and resources) for the provision of basic emergency obstetric care during and following labour, such as the management of fits (eclampsia) with anticonvulsants; of partially obstructed labour with assisted vaginal delivery; of retained placenta with abdominal massage, manual removal or vacuum aspiration; of postpartum haemorrhage with oxytocics; and of postpartum infection (puerperal sepsis) with antibiotics.³¹ A woman who does not respond will require hospital care, however, including caesarean section for prolonged obstructed labour without which she will almost certainly die.³²

Key research questions include the measurement of impact of interventions for safe motherhood, and the ability of the health systems to scale up interventions, as well as of the communities to engage to ensure that pregnant women will be able to go safely through pregnancy and delivery. This includes technologies for the provision of basic emergency obstetric care described above.

A key research question in many environments relates to the interface between people's beliefs about pregnancy and childbirth, on the one hand, and the characteristics of formal-sector health providers and facilities offering basic and emergency obstetric care on the other. Illustrative studies in Ghana, northern Nigeria and Uganda identify a number of factors that impede the use of existing emergency services even when women are in severe distress, such as:³³

- cultural beliefs that a woman should give birth alone, and that remaining stoic in the face of pain or even death is a matter of personal pride and honour;
 - lack of recognition of the seriousness of complications such as prolonged labour and persistent postpartum pain, fever and heavy bleeding;
 - religious and cultural prohibitions on the use of institutional care, and particularly on women's contact with male doctors or other personnel;
 - lack of confidence in (and fear of) formal-sector providers and facilities;
 - restrictions on women's physical mobility without their husband's permission;
 - lack of money or means of transportation;
 - expectations of poor treatment in a clinic or hospital, including waiting times, social discrimination, demands for extra payments and other concerns.
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Findings such as these, which appear at first glance as insurmountable obstacles, can nevertheless form the basis for designing systematic educational, informational and institutional interventions that involve men, women, families, communities, health-care providers and administrators in a participatory dialogue and decision-making process that will improve both the *provision* and *uptake* of high-quality reproductive health care.³⁴ Research-based interventions are also needed to ensure timely and appropriate care for pregnant unmarried adolescents who may have difficulty accessing services and face the disapproval of health-care providers as well as of their families and communities.

Support for the newborn

After many years of apathy, there has been recent activity in the area of support for the newborn. A review of neonatal survival undertaken by a group working in Bellagio and published in *The Lancet* indicated that, as child health is improving, the proportion of child deaths that occurs in the neonatal period (38% in 2000) is increasing.³⁵ Every year an estimated four million babies die in the first four weeks of life (the neonatal period) and three-quarters of neonatal deaths happen in the first week—the highest risk of death is on the first day of life, mostly in low-income and middle-income countries. The highest numbers of neonatal deaths are in south-central Asian countries and the highest rates are generally in sub-Saharan Africa. Globally, the main direct causes of neonatal death are estimated to be preterm birth (28%), severe infections (26%) and asphyxia (23%). Neonatal tetanus accounts for a smaller proportion of deaths (7%) but is easily preventable.

The Lancet neonatal survival series identified 16 interventions with proven efficacy (implementation under ideal conditions) for neonatal survival and combined them into packages for scaling-up in health systems, according to three service delivery modes (outreach, family-community and facility-based clinical care). All the packages of care are cost-effective compared with single interventions.

In addition to pregnancy loss due to miscarriage early in the pregnancy, an estimated 3.3 million babies worldwide are stillborn every year (one-third of these deaths occur during delivery) and, as noted earlier, an additional three million die in the first week. Fetal and infant deaths from 22 weeks gestation through the end of the first week following delivery constitute the special category of *perinatal mortality*, the causes of which are closely linked to obstetric factors relating to the mother's health and the conditions of the pregnancy and delivery.³⁶ *Neonatal mortality* (deaths occurring during the first four weeks of life) and *infant mortality* (before the first birthday) include that portion of perinatal mortality that occurs within the first week. Not surprisingly, perinatal and neonatal deaths are difficult to document in resource-poor settings, although population-based estimates are available for a number of countries from the DHS.³⁷ Single or repeated episodes of pregnancy loss or of stillbirth and newborn deaths are not only indicators of reproductive ill-health; they are also often tragedies for the woman, her husband and the extended kin group. A recently completed WHO multi-country study has demonstrated clear effects of moderate to severe female genital mutilation on the occurrence of obstetric complications such as caesarean section and postpartum haemorrhage as well as on stillbirths, early neonatal deaths and the use of infant resuscitation.³⁸

Reproductive health events and conditions that affect a woman during her pregnancy—and often well before it—also affect the development of the fetus and its chances of survival. A broad range of maternal diseases noted earlier such as untreated syphilis or severe malnutrition as well as other complications of pregnancy can cause a fetus to die *in utero* before the onset of labour (although the cause is often unknown); in contrast, the death of a baby that was alive when labour began but is born dead is almost always the result of poor obstetric care.³⁹ Among babies born alive, special vulnerabilities associated with preterm births (32-36 weeks gestation) and/or low birthweight (less than 2,500 grams) account for an estimated 24% of all infant (neonatal) deaths during the first four weeks following delivery.⁴⁰ All of these conditions and more (e.g., birth defects) also result in severe morbidities, of course, some of which lead to death later in infancy or childhood.

In addition to treating women (and their partners) early in the pregnancy for harmful conditions such as syphilis, treatments close to delivery that help to protect the newborn include anti-tetanus injections, antiretroviral therapies for HIV and treatment to prevent eclampsia in women with signs of pre-eclampsia. International guidelines for routine and emergency care for newborns outline a number of interventions for infants who show signs of breathing difficulties, jaundice, infection, feeding problems or other distress. Routine care for ensuring the baby's welfare includes hygienic management of the umbilical cord to prevent infection; thermal protection to keep the baby warm, including skin-to-skin contact with the mother ("kangaroo care") for babies born prematurely and/or of low birthweight;⁴¹ routine antimicrobial applications to the eyes to prevent infection; assistance to the mother and the newborn to initiate immediate breastfeeding; ARV prophylaxis for babies born of HIV-positive mothers; and other interventions at the time of delivery and in the subsequent hours and days when risks are high.⁴²

Among emergency measures are those needed to resuscitate an infant who stops breathing. Ideally, skilled birth attendants are trained in such techniques. However, one study found that only 47% of the doctors, midwives, nurses and medical interns in Benin, Ecuador, Jamaica and Rwanda who routinely assisted at births were able to resuscitate a newborn.⁴³

Better training of skilled birth attendants in the care of newborns is needed in many countries, together with the upgrading of clinical facilities for providing emergency care to infants in distress.

Major research challenges remain, with respect to understanding the multiple and interacting causes of preterm births and of restricted fetal (intrauterine) growth resulting in the low birthweight of full-term babies. Low birthweight due to either of these factors—which affects an estimated 16%

of babies in developing countries and 27% in South-Central Asia—is closely associated with fetal and neonatal mortality and morbidity, inhibited growth and cognitive development of the child, and chronic diseases later in life.⁴⁴ Multi-country studies are currently under way by WHO to assess the underlying causes in addition to those that are already known. These include a variety of chronic diseases; poor nutrition and other health conditions associated with poverty and with the social and physical environment (including physically demanding work performed by the mother during and right after pregnancy); background characteristics such as the mother's own fetal growth and her diet from birth to pregnancy; factors associated with the timing and spacing of multiple pregnancies and with the age of the biological father as well as the mother; and other lifestyle factors that may be subject to positive educational and health interventions to prevent, anticipate, and/or manage the multiple problems incurred by babies whose chances for a healthy start in life are so severely compromised.^{45, 46} Key research issues also arise with respect to the relative costs and benefits of breastfeeding alternatives for HIV-positive mothers with and without ARV therapy, taking into consideration the endemic risks of available breast milk substitutes.⁴⁷ Strategies and policies must devise ways of overcoming inequities in the life chances of infants as well as their mothers in order to ensure that interventions benefit poor and marginalized communities.

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CHAPTER 7

Policies and the Role of Research

RESEARCH ISSUES IN SEXUAL AND REPRODUCTIVE HEALTH
FOR LOW- AND MIDDLE-INCOME COUNTRIES

CHAPTER 7

Policies and the Role of Research

The primary research goal as defined in this paper, which is grounded in principles of human rights, social justice and health equity,¹ is to provide evidence for improving the *quality, availability and use* of sexual and reproductive health information, products and services among currently underserved populations in low- and middle-income countries. The preceding chapters have identified research gaps and approaches in each of the core aspects of sexual and reproductive health that are not repeated here. This final chapter pulls together a number of elements described before for collaborative in-country and global research initiatives that could contribute in pragmatic ways to the achievement of sexual and reproductive health for all as envisioned in the Programme of Action of ICPD, the WHO Global Reproductive Health Strategy and the Millennium Development Goals.

The goal of ensuring *universal access* to sexual and reproductive health information and services which was articulated at ICPD and reaffirmed at the ICPD five-year review and the 2005 UN World Summit has been recommended for inclusion in the second phase of the MDGs.² The sexual and reproductive health care package as a whole does not lend itself to easy measurement, however (quite apart from its individual components), nor does the concept of “universal access,” which implies the use of effective services by everyone who needs them.³ Among the indicators that have been recommended, some measure population-based outcomes (e.g., total fertility rate, perinatal mortality rate) whose connections to access are not always clear. Some measure access to information (e.g., knowledge of HIV-related prevention practices) but not its effect on behaviour. Some measure the actual use of reproductive health products, practices or services (e.g., contraceptive prevalence, births attended by skilled health personnel) without taking into account their effectiveness, while still others measure the existence of health care facilities in the aggregate (e.g., number of facilities with functioning comprehensive essential obstetric care per 500 000 population) without reference to their distribution. Ultimately, of course, the goal is to bring about significant improvements in people’s sexual and reproductive *health and rights*, particularly among those who are currently carrying the greatest burden of disease and despair. The process of facilitating universal access to information and services is a necessary condition but not a sufficient one for transforming health and rights outcomes.

Inequalities in the type, severity and distribution of sexual and reproductive health problems derive not only from inequalities in educational and health care delivery but also from inequalities relating to the risks of poor health in general, such as gender, age, race, socioeconomic status, ethnicity, ability and other characteristics. Programme-based indicators of sexual and reproductive health services in the public and private sectors thus tell one story while population-based indicators of health status and service utilization often tell a quite different one. The mixture of supply and demand factors comes together in the experiences, perceptions and decision-making processes of people at particular stages in their lives who need information and care. Both perspectives are necessary for analysing the nature, degree and underlying causes of inequalities across and within populations in health outcomes and for working towards their solutions.

The present chapter attempts to summarize the research questions raised in previous chapters.

Population-based research on inequalities in the distribution of sexual and reproductive health

Household surveys, ethnographic studies and other types of social-science and epidemiological research can be designed (and existing studies better utilized) at global, national, subnational and local levels to assess the sexual and reproductive health problems and needs for information and services of individuals, families and communities, including those in emergency situations.⁴ The purpose is to provide evidence for designing more responsive and rights-based policies, programmes and packages of information and care. Research initiatives can be directed to the following topics, among others:

To identify the major bases of inequalities

- Demographic research on population subgroups according to factors such as household income and assets, household composition, place of residence, migrant or refugee status, occupation and education of household members, race, religion, ethnicity, caste, tribal identity and other characteristics to determine the nature and extent of prevailing socioeconomic inequalities and the groups that are least likely to have access to information and care (e.g., who are the poor, the out-of-school youth, the displaced, the socially ostracized, and how can they be reached?);⁵
- Analysis of national surveys such as the DHS to identify patterns of inequality across households according to wealth quintiles in indicators such as births assisted by skilled personnel, knowledge of how to prevent sexual transmission of HIV, and contraceptive prevalence, among other indicators, in order to devise specific strategies for narrowing the information/access/outcome gaps;⁶
- Analysis of individuals' differential access to and use of sexual and reproductive health information and services *within* households, couples, families and communities and of the gender and generational structures of social control that impede women's or young people's capacity to protect their health and rights;
- Country-specific research on the relationships between the multiple dimensions of sexual and reproductive health and the multiple dimensions of situational and long-term poverty in different settings, in order to document the effects of poverty reduction on the health and well-being of individuals and families, and vice versa.⁷

To establish the scope of sexual and reproductive problems

- Methodological research to improve the collection of valid information on sensitive or taboo issues in particular populations, including the development of tools for comparing responses according to different methodologies on topics such as clandestine abortion, sexual coercion (perpetrators and victims), incest, vaginal or urethral discharge, and the sexual knowledge and behaviours of young male and female adolescents and of adults and older persons;
- Epidemiological research to build the evidence base on the nature and scope of often "invisible" sexual and reproductive health problems and risks among women, men and young people in particular population subgroups in different settings, together with their interrelationships, causes and consequences;
- Social-science research to establish the behavioural, economic, social, cultural and interpersonal determinants of different dimensions of sexual and reproductive ill-health in different settings; their interconnections (e.g., the relationship between contraceptive failure, unintended births and neonatal mortality); and their social and economic costs to women, men, couples, families and communities;
- Social-science research on women's, men's and adolescents' perceptions of their sexual and reproductive health; of their assessment of personal risks and entitlements; of their knowledge, beliefs, attitudes and practices with respect to risks and prevention; of their capacity to protect their rights and health; and of their awareness of their responsibilities towards themselves and others;
- Analysis of the processes by which gender roles are acquired and reinforced in childhood and adolescence and their contribution to male violence and risk-taking, female subordination, double standards of sexual behaviour and sequences of negative personal, social and health consequences; identification of positive elements of male responsibility

and female agency as a basis for education, skills building and sexuality and gender programming;

- Community-based studies to identify and eliminate harmful practices such as FGM, the use of vaginal astringents and unsafe methods of male circumcision, as well as all forms of sexual harassment, coercion and violence, child sexual abuse and other violations of sexual rights such as discrimination based on sexual orientation;
- Compilation of evidence on the unmet need for sexual and reproductive health information and services among population subgroups according to age, gender, socioeconomic status, etc. with respect to sexuality education and counselling, safe and acceptable methods of contraception and abortion, protection from and treatment of STIs/HIV, emergency obstetric care, infertility diagnosis and treatment, and other sexual and reproductive health needs;
- Investigations of the emotional as well as physical aspects of health and their interconnections, including identification of counselling needs relating to anxiety, fear, anger, depression and other mental stressors that affect people's sexual and reproductive health and well-being.⁸

Policy- and programme-based research on the quality of care and accessibility of information and services

The exercise of people's right to the highest standard of sexual and reproductive health care requires that public health programmes—including information, education and a “constellation of methods, techniques and services”—are available, accessible, acceptable and appropriate for meeting people's needs throughout the life course.⁹ To this end, research on government priority-setting, health-system financing, sexual and reproductive health laws and policies, and sexual and reproductive health programmes is urgently needed to ensure the delivery of high-quality and effective preventive and curative health care in a timely fashion to all individuals and groups. Among the many possible topics for collaborative in-country investigations are the following:

To create a favourable policy environment for sexual and reproductive health

- In-country research to ensure that a broad and meaningful set of sexual and reproductive health access and outcome indicators, disaggregated by gender, age, marital status, education, geographical location and other socioeconomic and cultural characteristics, is included in the data collection, reporting and monitoring and evaluation activities of countries associated with the Millennium Development Goals;
- Country-specific analyses of the political determinants of the quantity and quality of sexual and reproductive health services, in order to strengthen the capacity of primary health systems to provide comprehensive information and care;
- Research on the design and implementation of health sector reforms such as decentralization, privatization and fee-for-service provisions to ensure that they protect the availability of and access to essential sexual and reproductive health services at all levels, especially for adolescents and marginalized groups;¹⁰
- Research on health financing mechanisms and resource allocations to ensure that initiatives such as Sector-wide Approaches (SWAs) and the preparation of Poverty Reduction Strategy Papers (PRSPs) recognize and strengthen the provision of essential sexual and reproductive health information, education, services, medicines and supplies;¹¹
- Investigations of the consequences to primary health care and family planning programmes of the vertical funding of specific disease-focused activities in order to ensure that the resulting policies and programmes take maximum advantage of the positive synergies of HIV/AIDS prevention and treatment, the prevention and control of STIs, and other aspects of sexual and reproductive health care;¹²
- Research to identify and promote comprehensive, rights-based sexuality education curricula in schools, to evaluate their content and outcomes and to provide an evidence base for adaptation to local conditions and widespread implementation;
- Policy analysis to identify the nature and impact of global, national, state and local laws and policies relating to sexual and reproductive freedoms, gender equality and protection from sexual harm, including coercion, violence and discrimination;
- Research to identify and promote the participation in health-care and other planning processes of representatives of all segments of civil society, including adolescents, as full partners in the global sexual and reproductive health project.¹³

To provide a continuum of high-quality and accessible information

- Mapping of the geographical distribution at global, regional, national, subnational and local levels of sites and personnel that provide sexual and reproductive health information, products or services of different types in the formal (public and private) and non-formal sectors, including NGOs, and of inequities in their distribution;
- Documentation of the physical accessibility of sexual and reproductive health sites and services to a variety of clients and of their social accessibility (absence of discrimination), economic accessibility (affordability), acceptability and familiarity, hours of operation, waiting times, confidentiality and other factors;
- Identification of training needs of sexual and reproductive health providers of various types and skill levels, and of the level of the health system in which various services should be provided, such as HIV counselling and screening;
- Research to establish the cost-effectiveness of specific informational, educational and service interventions such as school-based sexuality education, subsidized condom distribution, routine testing for STIs including HIV, contraceptive services, specific obstetric interventions and safe abortion care;¹⁴
- Research on alternative and additional modes of information and service delivery in the non-formal and formal sectors in different settings to expand the knowledge and service base, such as popular media and the Internet for accessible information; low-cost sexual and reproductive health-care franchises,¹⁵ accessible STI/HIV screening centres, pharmacies and other low-cost user-friendly sites for services;
- Inquiries into the recruitment, training, retention, supervision and deployment to appropriate sites and service levels of mid-level sexual and reproductive health practitioners such as community-based outreach workers, skilled birth attendants, antenatal care providers, STI/HIV screening personnel and counsellors, family planning workers, providers of Caesarean section and other forms of assisted delivery, infertility counsellors and community and school-based educators;
- Investigations of providers' needs and concerns vis-à-vis providing front-line sexual and reproductive health services, including HIV-related services, especially in areas where the epidemic is generalized.

To ensure that people use the services, and that these are of high quality, appropriate, accessible and available

- Research to identify health-seeking behaviours among women, men and young people in specific social groups according to the type of information or assistance they are seeking; their knowledge of where to go and what to do; and their perceptions of the advantages and disadvantages of alternative sources of information and care;
- Analysis of people's perceptions and experiences with respect to formal-sector health-care and family-planning services and providers, both public and private; the extent to which they believe their needs are or might be met in such settings; and their assessment of the quality of the information and care they (may) receive;
- Methodological enquiries to improve the collection of information on components of access (and perceived barriers) to sexual and reproductive health services, including analysis of reasons for low use of existing formal-sector facilities (where relevant) in order to inform the definition of indicators of success;
- Research on providers' attitudes towards their work and towards their clients, in both formal and non-formal -sector locations and facilities, including prejudicial attitudes or discriminatory practices with respect to certain types of clients (e.g., adolescents, ethnic minorities, homosexuals, commercial sex workers) or services (e.g., women needing abortions or post-abortion care) to identify training needs for improving provider-client relations;
- Clinical research to evaluate the technical quality of sexual and reproductive health care in clinical settings, the knowledge and skills of practitioners at all levels, their use of "best practices" and the adequacy of provider training, continued education and supervision.

Technological support to improve and facilitate programme implementation and scaling up of interventions

Basic and applied biomedical, technological, clinical and epidemiological research is needed on a number of sexual and reproductive health problems and interventions. Gaps expressed in this area include the following:

To develop, adopt and scale up low-cost technologies and best practices

- Biomedical research to expand the range and reduce the cost of rapid diagnostic tests for RTIs/STIs including HIV and related infections, illnesses and conditions in order to improve surveillance (including household visits) and monitor trends and inequalities in the population at large and among special high-risk groups;
- Clinical, technological and biomedical investigations of the long-term safety, efficacy, side-effects, costs and acceptability in low-resource settings of medical interventions such as hormonal contraceptives, antibiotic treatments for STIs, antiretroviral treatments for HIV/AIDS, antiretroviral-contraceptive interactions, surgical and non-surgical abortion methods, as well as other prenatal, obstetric and postpartum interventions;
- Biomedical research directed to the development, testing, adaptation, distribution and use of low-cost preventive, diagnostic and curative sexual and reproductive health technologies, products (e.g., vaginal microbicides, reversible contraceptive methods for men) and treatment algorithms (e.g., for the prevention and treatment of hypertensive disorders of pregnancy) that can be used by mid-level providers, non-formal practitioners, and individuals (where appropriate) for their own diagnosis, treatment and protection;¹⁶
- Operational research to identify supply- or provider-based obstacles to learning about and adopting evidence-based best practices as defined in international standards and to identify and overcome obstacles to scaling up best practices, including analysis of successful cases, lessons learned and actions needed.¹⁷

To document programme impact and to analyse generic elements essential to their replication and adaptation to other settings

- Epidemiological information and indicators to scale up sexual and reproductive health interventions, including estimations of the relevance and impact of the specific programme subcomponents;
- Operational investigations to establish the cost-effectiveness and the practicality of integrating related components of sexual and reproductive health services, e.g., family planning and STI/HIV prevention, diagnosis and treatment, in order to develop models that could guide programme managers in estimating costs, human resource needs, and logistics for integration;¹⁸
- Documentation of the overall costs and benefits of investing in high-quality preventive sexual and reproductive health care, including education, information and universal access to services, and identification of the cross-sectoral linkages needed to maximize the joint impact of investments in different sectors;¹⁹
- Operational research to identify and improve systems of communication, transportation and referrals among providers and facilities so that they form a coherent and accessible network of information and care at primary, secondary and tertiary levels and among specializations.

These are some of the gaps and issues in sexual and reproductive health expressed by a variety of players in the field. The decision as to which of these gaps should become priorities for research, and should be funded, will be left to further consultation with groups of stakeholders.

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Image references



CHAPTER 1
A pregnant woman lifts heavy containers of water onto her head, Pune District, Maharashtra state, India (2002)
Photo: IDRC CRDI/Stephanie Colvey



CHAPTER 2
“River of Life” Photo Competition (2004)
Photo: WHO/Douglas Engle



CHAPTER 3
Adolescent group, Peru, South America
Photo: WHO PAHO/Julio Vizcarra



CHAPTER 4
Comprehensive health care programme to truck drivers in South Delhi (trucker’s project), Delhi, India, Asia (November 2002) Photo: WHO/Pierre Viot



CHAPTER 5
Family in Lesotho, Africa (November 1994)
Photo: WHO/JP Huble



CHAPTER 6
Mother and child, “River of Life” Photo Competition (2004)
Photo: WHO/Nyaung U-than Htay



CHAPTER 7
Community health worker during a village meeting with mothers and children in rural Bangladesh (1996)
Photo: Andres de Francisco

Research issues in

SEXUAL and REPRODUCTIVE HEALTH for low- and middle-income countries

THE FIELD OF SEXUAL AND REPRODUCTIVE HEALTH IS COMPLEX AND MULTIFACETED. RESEARCH IN THIS AREA REQUIRES A MULTI-DISCIPLINARY APPROACH THAT INCLUDES BASIC BIOMEDICAL, EPIDEMIOLOGICAL, SOCIAL AND BEHAVIOURAL, AND POLICY AND HEALTH SYSTEMS RESEARCH. AS A FIRST STEP IN AN INTERNATIONAL CONSULTATIVE PROCESS TO IDENTIFY GAPS IN AND PRIORITIES FOR RESEARCH IN THIS FIELD, THIS PAPER OUTLINES A CONCEPTUAL FRAMEWORK FOR SEXUAL AND REPRODUCTIVE HEALTH AND A NUMBER OF THEMATIC AND CROSS-CUTTING RESEARCH ISSUES THAT LOW AND MIDDLE-INCOME COUNTRIES NEED TO ADDRESS.

