

FAMILY PLANNING AND REPRODUCTIVE HEALTH

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Summary

This chapter focuses on family planning in the context of reproductive health. It brings together the evidence on the levels and trends in the use of family planning methods by area and region. The realization that human fertility can be regulated by using family planning methods and the speed with which this knowledge was put to practice by millions of people worldwide are perhaps the most remarkable achievements since the 1960s. Family planning is a key to attaining sexual and reproductive health, but it also impacts on social and economic development.

Family planning methods are varied - some are permanent and the others are reversible. Some of the methods are classified as modern while the others are traditional. The continuation of use and the switching between various types of methods is insightful to assess the implications of contraceptive used patterns for unintended pregnancies. The chapter also considers the relationship between contraceptive use and induced abortion. Family planning in the era of HIV/AIDS requires revisiting and adapting the guidance on family planning and developing new strategies to meet the needs of people living with HIV/AIDS. The critical role that family planning plays as one of the elements of

reproductive health has also been documented in the chapter.

1. Introduction

Family planning is credited primarily for its role in bringing down the birth rates globally and particularly in developing countries. From 1950 to 2000, the global fertility has fallen by about half - from five children per woman in 1950-1955 to 2.7 children in 2000-2005 (United Nations, 2005a). However, less well recognized is the contribution of family planning to the major social change around the world whereby couples are empowered in regulating their fertility instead of considering it as a matter of *God's will* or destiny. Family planning also has an impact on reproductive health and development, an aspect that is often glossed over.

Family planning is known to have been practiced for centuries long before the advent of modern methods of contraception. The earlier methods used by men and women to regulate their fertility included *coitus interruptus* (withdrawal of the penis from the vagina prior to ejaculation), abstinence (abstaining from sex altogether or around the time of ovulation), herbs and amulets (Planned Parenthood Federation of America, 2006). The condom appeared in the 17th century. Modern methods of family planning have a more recent history since about 1960 when both the oral contraceptive pill and the intrauterine device became available.

The public health relevance of family planning is enormous. In the absence of family planning, the level of childbearing will be high resulting in a greater demand for obstetric and infant/child health services. In such situations maternal morbidity and mortality will be high. Shorter spacing between births, because of non-use of family planning methods, is linked with increased risk of fetal death, low birth-weight, prematurity and of infant and child death. It is estimated that about one million of the 11 million deaths of children younger than age five years could be averted annually if there were no inter-birth intervals of less than two years (Cleland et al., 2006). A higher number of unintended pregnancies may occur due to non-use of family planning methods. Many of these may be terminated unsafely where induced abortion is legally restricted, causing grave danger to the lives of women and a drain on national health services in dealing with complications of unsafe abortion. It is therefore rightly stated that "family planning saves lives".

The social and economic implications of family planning are no less significant. Family planning provides opportunities to women to pursue studies and engage in productive activities. In countries with high levels of family planning use and consequently lowered fertility, savings made in addressing maternal and child ill-health can be invested in social and economic development and improving the quality of life of people. The most obvious examples of economic prosperity and development, partially as a result of lowered fertility, include China, Republic of Korea, Singapore and Thailand.

Such major public health and social achievements have recently been overshadowed by the lack of or lukewarm support for family planning. The continued preoccupation of the world community with the prevention and management of the HIV/AIDS epidemic

has resulted in the neglect of the growing demand for family planning. In the era of sexual and reproductive health and rights, the focus on reproductive health has also raised questions about the place that family planning holds. These new challenges may impact on the advance of contraceptive revolution and on the benefits yielded by it.

The main objective of this chapter is to document the progress made in family planning, globally and by region, to highlight the relevant issues and to explore linkages to reproductive health. Family planning continues to be central to achieving reproductive health goals of reducing child mortality, improving maternal health and combating HIV/AIDS. The provision of quality family planning would meet most of reproductive health needs and hence the focus of this chapter. Data sources are first indicated, followed by definitions and discussion of the key concepts. The chapter then discusses the various aspects of levels and trends in family planning and the role of family planning in reproductive health. The conclusions highlight key findings and lists emerging issues and challenges in family planning and reproductive health.

1.1. Data Sources

This chapter draws upon published material and data. Most of the data come from the regular updates published by the United Nations Population Division and from the Demographic and Health Surveys (DHS).

1.2. Definitions and Discussion of Key Concepts

Family planning has been defined in different ways in literature, but essentially it implies enabling individuals and couples to attain the desired number, spacing and timing of their children, through the use of modern or traditional (also called natural) contraceptive methods. The term *birth control* is sometimes used as a synonym, but its connotation is more on preventing pregnancies and limiting the family size than on *planning* families.

Contraception generally refers to the devices or medications used for reducing the likelihood of the fertilization of an ovum by a spermatozoon. The contraceptive effect can be obtained through temporary or permanent means. *Temporary methods* include: periodic abstinence during the fertile period; coitus interruptus (withdrawal); the naturally occurring periods of infertility (e.g., during breast-feeding and postpartum amenorrhea); use of reproductive hormones (e.g., oral pills and long-acting injections and implants); placement of a device in the uterus (e.g., copper-bearing and hormone-releasing intrauterine devices); interposing a barrier that prevents the ascension of the sperm into the upper female genital tract (e.g., condoms, diaphragms, and spermicides). *Permanent methods* of contraception are male and female sterilization (vasectomy and tubectomy, respectively).

Contraceptive prevalence refers to the percentage of all married or in-union couples using a contraceptive method at the time of the study. It is generally measured from survey questions administered to married women or those in consensual unions who are in the reproductive age of 15 to 49 years. Note that contraceptive prevalence is different from the number of *acceptors* which imply new users. Data on acceptors are usually

collected through family planning clinics or other facilities that offer such services and where administrative records are kept. More recently, contraceptive prevalence has also been measured among all sexually active women, irrespective of their marital status.

The United Nations Population Division provides periodic updates on contraceptive prevalence for all countries of the world where data are available, using the definition noted above. Some noteworthy variants to the standard definition followed by some researchers are: (1) using the age group 15-44 years instead of 15-49 years for the reproductive age span; (2) using the denominator of "exposed" women, that is, those who are sexually active and are not in the period of postpartum non-susceptibility; (3) applying the denominator of "all" women of reproductive age rather than only those who are married or in consensual unions; and (4) restricting the definition of contraception to only "modern" methods rather than "any" contraceptive method. These exceptions are however few and do not seriously hamper the comparison of contraceptive prevalence across most countries and regions.

The concept of *reproductive health* and what it means originated in the World Health Organization (WHO) and was based on the WHO definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Barzelatto (1988) was the first to identify the four components of reproductive health policy which included: family planning, maternal care, infant and childcare, and the control of sexually transmitted diseases. Fathalla (1992) elaborated further on the concept and defined reproductive health "as not merely the absence of disease, rather it is a condition in which the reproductive process is accomplished in a state of complete physical, mental, and social well-being. This implies that people have the ability to reproduce, that women can go through pregnancy and child-birth safely, and that reproduction is carried to a successful outcome, i.e., infants survive and grow up healthy. It implies further that people are able to regulate their fertility without risks to their health and that they are safe in having sex". This laid the foundation for the definition agreed at the the 1994 United Nations International Conference on Population and Development (ICPD), as follows: "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 is 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 counseling and care related to reproduction and sexually transmitted diseases" (United Nations, 1995).

The *reproductive health strategy* adopted by the 57th World Health Assembly in May 2004 identified five core aspects of reproductive health for action. These include: 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 gynecological morbidities; and promoting sexual health (World Health Organization, 2004a). This broader and holistic concept better reflects the interrelated needs of people. However, it presents a major challenge for the measurement and monitoring of the status of reproductive health using commonly available methods that work with one single dimension rather than a composite of several. In addition, the components comprising the core of reproductive health may vary from country to country.

2. Family Planning: Levels and Trends in the Use of Contraceptive Methods

The decline in fertility from its high levels in the 1950s and 1960s (Figure 1) is primarily due to the rise of contraceptive use in developing countries. The World Bank (1984) estimated that 85 percent of the fertility decline in 31 developing countries from 1960 to 1980 could be attributed to the increased use of contraception, when considered together with other determinants of fertility such as marriage, breastfeeding, induced abortion and all other factors. There is a strong empirical relationship between the level of total fertility rate (the number of children a woman is likely to have by the end of her reproductive life if she experienced currently prevailing age-specific fertility rates from age 15 to 49 years) and the percent of couples using any contraceptive method (Figure 2).

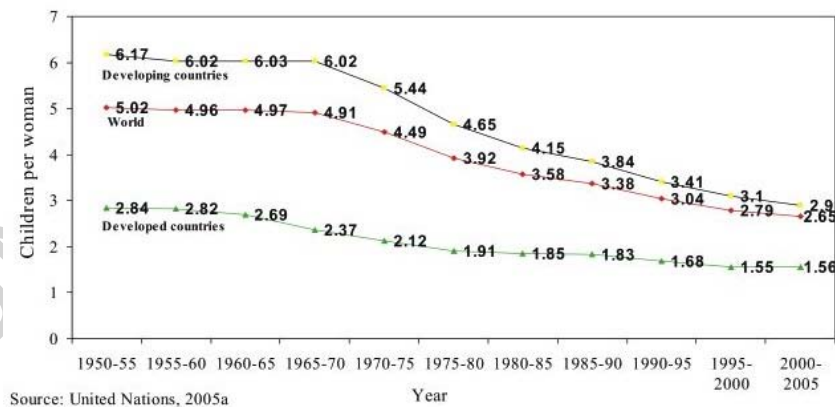


Figure 1. Total Fertility Rate (Number of Children per woman) by Year and Region

Contraceptive prevalence was already high in developed countries in 1960-1965 (67%) and it remained mostly constant over time, that is, 69 percent in 2005 and 67 percent in 2007. On the other hand, contraceptive prevalence - a novelty in developing countries at nine percent in 1960-1965 - expanded to 59 percent in 2005 (Figure 3) and to 62% in 2007 (United Nations, 2007). The sharpest increase in contraceptive prevalence occurred between the late 1960s and 1980s. This was also the period characterized by the launch and expansion of national family planning programs in several populous

countries, including China, India, Indonesia, and Pakistan.

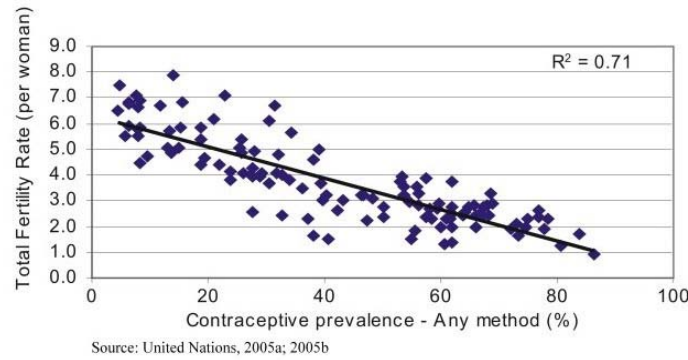


Figure 2. Total Fertility Rate (per woman) by percent of Couples using any method of Contraception, Developing Countries, 2005

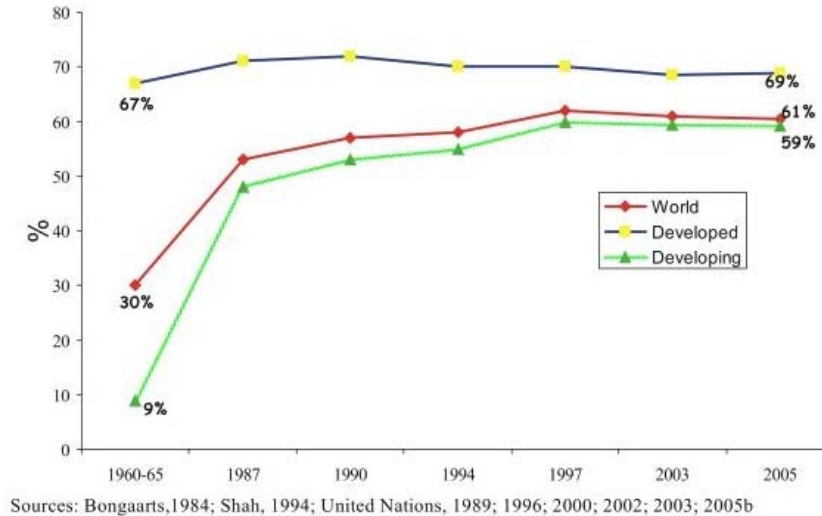


Figure 3. Percentage of Couples using any Method of Contraception, by Year

Among the countries with contraceptive prevalence of less than 20 percent in 1990, five, Central African Republic, Cambodia, Democratic Republic of the Congo, Myanmar and Oman witnessed an average annual increase of two percentage points or higher during 1990 to 2000 (United Nations, 2004). In this group of low prevalence countries, the slowest increase (less than 0.5 percentage points per annum) was observed in Afghanistan, Angola, Benin, Burundi, Eritrea, Ethiopia, Gambia, Madagascar, Mali, Mauritania, Rwanda and Sudan.

The strength and effectiveness of national family planning programs have been subject of several rounds of assessments since 1972, the most recent being in 2004 (Ross, Stover and Adelaja, 2007). The *program effort score*, a composite measure of 30 program features and strengths, has continued to rise despite some funding losses and unstable supplies of contraceptives. The overall program effort score is derived from

responses to 125-item questionnaire on 30 family planning dimensions, including, among others, for example, availability of full range of contraceptive methods, coverage of family planning services, full-time staff for family planning and policy statements by national leaders. However, gaps persist in the effort, quality and access of family planning services, especially for populations in rural areas and in poverty. In addition, the full range of contraceptive methods is generally lacking in most services and post-abortion and postpartum contraception remain neglected.

2.1. Family Planning Use by Major Area and Region

While the overall increase in contraceptive prevalence at the global level has been spectacular, the progress in the effectiveness of family planning programs and in the range contraceptive methods used has been uneven at the regional level. In 2007, Africa had the lowest level of contraceptive prevalence of 28 percent as compared to 71 percent in Latin America and the Caribbean and 68 percent in Asia (Table 1). The use of modern methods in Africa continues to be about one-third the levels in the other two developing regions.

Region	All methods (%)	Modern methods (%)
World	63.1	56.1
Africa	28.0	21.4
Asia	67.9	61.7
Europe	67.5	52.5
Latin America and the Caribbean	71.4	64.5
Northern America	73.0	68.6
Oceania	52.9	48.9

Source: United Nations, 2007

Table 1. Percentage of couples with wife in reproductive age, using any method and modern methods of contraception, by region, 2007

Within each major area, variation in contraceptive prevalence is also noted at the sub-regional levels. For example, prevalence of all methods or of modern methods of contraception is much higher in Northern and Southern Africa than in any other African region. The use of modern methods is especially low in Middle and Western Africa, six and nine percent, respectively, in 2007 (Table 2). Contraceptive prevalence is generally high in all regions of Asia. Eastern Asia has the highest prevalence of 88 percent, followed by South-east Asia at 60 percent. In Latin America and the Caribbean, the highest prevalence (74%) in 2007 was in South America, followed by 68 percent in Central America and 60 percent in the Caribbean.

Region	All methods (%)	Modern methods (%)
Africa	28.0	21.4
Eastern Africa	25.4	20.3
Middle Africa	24.2	5.9

Northern Africa	51.0	45.6
Southern Africa	57.5	57.3
Western Africa	13.6	8.6
Asia	67.9	61.7
Eastern Asia	87.6	86.4
South-central Asia	54.2	45.8
South-east Asia	59.9	51.0
Western Asia	54.5	34.4
Latin America and the Caribbean	71.4	64.5
Caribbean	60.4	55.9
Central America	68.2	63.0
South America	73.7	65.8

Source: United Nations, 2007

Table 2. Percentage of couples with wife in reproductive age, using any method and modern methods of contraception, by sub-region, 2007

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Bibliography

Áhman E. and Shah I.H. (2006). Contraceptive Use, Fertility, and Unsafe Abortion in Developing Countries. *The European Journal of Contraception and Reproductive Health Care*, 11(2): 126-131. [This paper examines the associations of contraceptive use, fertility and unsafe abortion.]

Ali M.M., Cleland J.G, and Shah I.H. (2004). Condom Use within Marriage: a neglected HIV intervention. *Bulletin of the World Health Organization*, 82(3): 1-7. [This represents a new approach to analyzing pregnancy history data from the Demographic and Health Surveys.]

Barzelatto J. (1988). Continuity and change. In: *Research in Human Reproduction: Biennial Report 1986-1987*, edited by Diczfalusy E., Griffin P.D. and Khanna J. Geneva: World Health Organization. [This provides the framework for the concept of reproductive health.]

Bongaarts J, Bruce J. (1995). The causes of unmet need for contraception and the social content of services. *Studies in Family Planning*, 26(2):57-75. [The paper assesses the causes of unmet need, using Demographic and Health Survey data.]

Bongaarts J. (1984). Implications of Fertility Trends for Contraceptive Practice, *Population and Development Review*, 10(2): 341-352. [This considers the relationship between total fertility rate and contraceptive prevalence.]

Cleland J. Bernstein S., Azeh A., Faundes A., Glasier A., and Jolene I. (2006). Family Planning: The Unfinished Agenda. *The Lancet: Series on Sexual and Reproductive Health*: 47-64. [This is a comprehensive review of family planning issues and also indicates research gaps.]

- Fathalla, M. F. (1992). Reproductive Health in the World: two decades of progress and the challenges ahead. In: *Reproductive health: a key to a brighter future: Biennial Report 1990-1991*. Geneva: World Health Organization. [This is an overview of the progress in reproductive health.]
- Maharaj P. and Cleland J. (2004). Condom use within marital and cohabiting partnerships, *Studies in Family Planning*, 35(2): 116-124. [This provides information on the potential of condom use in marriage and cohabitation.]
- Marston C. and Cleland J. (2004). *The Effects of Contraception on Obstetric Outcomes*. Geneva: World Health Organization. [This looks at the relationship between contraceptive use and obstetric outcomes.]
- Planned Parenthood Federation of America. (2006). *A History of Birth Control Methods*. New York: Katharine Dexter McCormick Library. [This provides information on developments in the field of family planning.]
- Ross, J., Stover J., and Adelaia D. (2007). Family Planning Programs in 2004: New Assessments in a Changing Environment, *International Family Planning Perspectives*, 33(1): 22-30. [This provides the latest assessment of family planning programs in their effectiveness, coverage and quality.]
- Shah I. (1994). The Advance of the Contraceptive Revolution. *World Health Statistics Quarterly*, 47(1): 9-15. [This examines the trends in contraceptive use from 1960 to 1990.]
- Shah, I. 1995. *Perspectives on methods of fertility regulation: setting a research agenda*. Geneva, UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction. [This is a review of literature on family planning.]
- Shah, I.H. (2001). Perspectives of Users and Potential Users on Methods of Fertility Regulation. In: *Sexual and Reproductive Health: Recent Advances, Future Directions* edited by Puri Chander and Van Look, Paul F.A. New Delhi: New Age International Limited. [This documents the perspectives of family planning users on methods of contraception.]
- The Alan Guttmacher Institute. (1999). *Sharing Responsibility: women, society and abortion worldwide*. New York: The Alan Guttmacher Institute. [This provides a comprehensive review of issues related to induced abortion.]
- Trussell J. and Kowal B. (1998). The Essentials of Contraception: efficacy, safety, and personal consideration. In: *Contraceptive Technology*, edited by Hatcher RA, Trussell J, Stewart F, Cates W., Guest F, and Kowal D. New York: Ardent Media, Inc. [This provides information on contraceptive failure rates of the various methods of contraception.]
- Tucker GM. (1986). Barriers to modern contraceptive use in rural Peru. *Studies in Family Planning*, 17(6): 308-316. [This identifies social, cultural and program barriers to contraceptive use among couples in rural Peru.]
- United Nations (2005b). *World Contraceptive Use 2005*. New York: United Nations. [A wall chart providing information on current contraceptive prevalence, by method, trends in contraceptive use as of 2005.]
- United Nations (2007). *World Contraceptive Use 2007*. New York: United Nations. [A wall chart providing information on current contraceptive prevalence, by method, and unmet need for family planning for countries and regions of the world as of about 2007.]
- United Nations. (1989). *Levels and Trends of Contraceptive Use as Assessed in 1988*. New York: United Nations. [Country, regional and global data on the prevalence of contraceptive methods by type of the method.]
- United Nations. (1995). *Report of the International Conference on Population and Development, Cairo, 5-13 September 1994*. United Nations Publication Sales No. E.95.X111.18, New York: United Nations. [This provides the Plan of Action agreed at the International Conference on Population and Development in 1994.]
- United Nations. (1996). *Levels and Trends of Contraceptive Use as Assessed in 1994*. New York: United Nations. [A report providing a comprehensive review of the available data on current contraceptive use and presents updated 1994 estimates of global and regional levels of contraceptive prevalence by method.]
- United Nations. (2000). *Levels and Trends of Contraceptive Use as Assessed in 1998*. New York: United

Nations. [A report providing a comprehensive review of the available data on current contraceptive use and presents updated 1998 estimates of global and regional levels of contraceptive prevalence by method.]

United Nations. (2002). *World Contraceptive Use 2001*. New York: United Nations. [A wall chart providing information on current contraceptive prevalence, by method, trends in contraceptive use for countries and regions of the world as of about 2001.]

United Nations. (2003). *World Contraceptive Use 2003*. New York: United Nations. [A wall chart providing information on current contraceptive prevalence, by method, trends in contraceptive use for countries and regions of the world as of about 2003.]

United Nations. (2004). *Levels and Trends of Contraceptive Use as Assessed in 2002*. New York: United Nations. [A report providing a comprehensive review of the available data on current contraceptive use and presents updated 2002 estimates of global and regional levels of contraceptive prevalence by method.]

United Nations. (2005a). *World Population Prospects: The 2004 Revision*. New York: United Nations. [This provides data on population indicators for the world, regions and the specific countries.]

Walker N., Garcia-Calleja J.M., Heaton L., Asamoah-Odei E., Pomerol G., Lazzari S., Ghys P.D., Schwartlander B. and Stanecki K.A. (2001). Epidemiological Analysis of the Quality of HIV Surveillance in the World: How Well Do We Track the Epidemic? *AIDS*, 15(12): 1545-1554. [This is a critical assessment of the methods and information on HIV prevalence.]

World Bank (1984). *World Development Report 1984*. New York: Oxford University Press and Washington DC: The World Bank. [This report focuses on fertility and its components.]

World Health Organization. (1994). *Contraceptive Method Mix: Guidelines for Policy and Service Delivery*. Geneva: World Health Organization. [This report defines and assesses the issues related to contraceptive method mix.]

World Health Organization. (2004a). *Reproductive Health Strategy to Accelerate Progress towards the attainment of International Development Goals and Targets*. Geneva, World Health Organization. [This describes the Reproductive Health Strategy of the World Health Organization.]

World Health Organization. (2004b). *Unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000*. Geneva: World Health Organization. [This report provides estimates of the incidence of unsafe abortion and abortion rate and ratios by major area and regions of the world.]

World Health Organization. (2004c). *Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA*. Geneva: World Health Organization. [This provides estimates of maternal mortality ratios.]

World Health Organization. (2006). *Sexual and Reproductive Health of Women Living with HIV/AIDS*. Geneva: World Health Organization. [This discusses the sexual and reproductive health needs of women living with HIV/AIDS.]

World Health Organization. (2007). *Unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2003*. Geneva: World Health Organization. [A report providing regional and global estimates of the incidence of unsafe and related maternal mortality.]

Biographical Sketch

Iqbal H. Shah received his Master of Arts (MA) degree in Sociology from the University of Punjab, Lahore, Pakistan, in 1973. During 1975-1976, he attended the School of Public Health, the Johns Hopkins University, Baltimore, USA and received the Master of Science (MSc) degree in Population Dynamics. In 1985, he received his PhD degree in Sociology/Demography from the Vrije University in Brussels, Belgium. From 1983 to 1985, he worked as a consultant at the World Fertility Survey (WFS) project of the International Statistical Institute (ISI). At WFS, he worked on a project to examine trends in fertility in Mexico, Pakistan and the Philippines and on a monograph summarizing the findings from the survey in Ghana. Since 1985, he has been working at the World Health Organization. He currently coordinates the Team on Preventing Unsafe Abortion. His main research interests include: adolescent sexual and reproductive health, family planning, HIV/AIDS, induced abortion, and maternal health. He has co-edited four books and published over 40 scientific papers. He is a member of the International Union for the

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