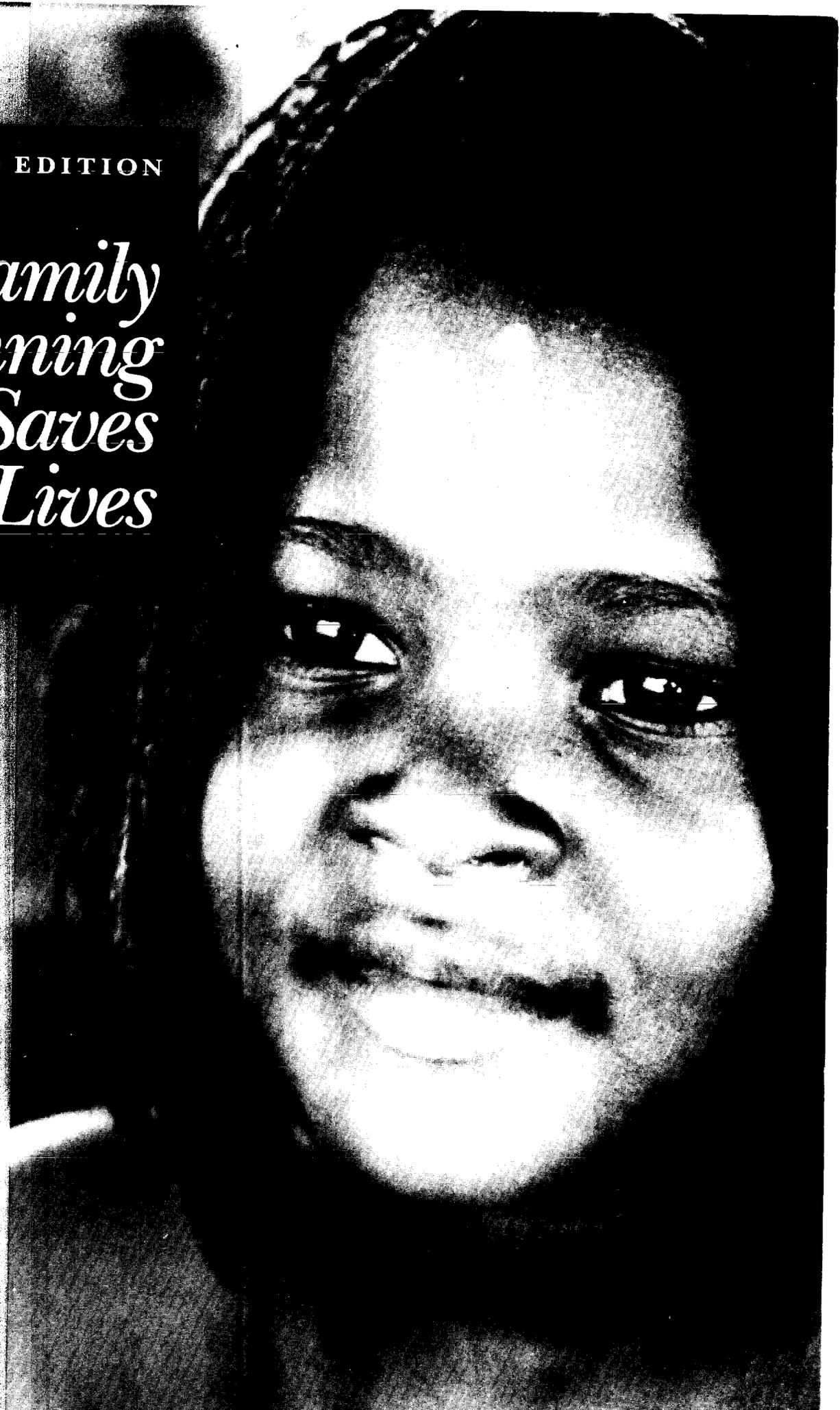


PA-ABM-248

79216

2ND EDITION

*Family  
Planning  
Saves  
Lives*



## TABLE OF CONTENTS

Executive Summary	1
Infant and Child Survival	2
Maternal Survival	7
Maternal and Child Health: The Interaction	15
Program Costs	16
Actions	18
References	20

**Family Planning Saves Lives, 2nd Edition** is an updated version of the original 1986 publication. It is part of an occasional series of booklets on population and family planning topics produced by the International Programs of the Population Reference Bureau.

*The Population Reference Bureau invites comments and questions from its readers. Please address correspondence to:*

International Programs  
Population Reference Bureau  
1875 Connecticut Avenue N.W., Suite 520  
Washington, DC 20009 U.S.A.

September, 1991

# *Executive Summary*

Family planning saves lives. By helping women bear their children during the healthiest times for both mother and baby, family planning helps prevent the deaths of infants, children, and mothers.

Women of childbearing age and children under five make up almost 40 percent of the population in the developing world. These two groups need special programs to ensure their survival. Although reduced over the last 30 years, the mortality of mothers, infants, and children in the developing world is still extremely high: in 1990 an estimated 14 million children under the age of five died, and an estimated 500,000 women died of causes related to pregnancy and childbirth. Family planning is an effective, inexpensive way to prevent many of these deaths. It is an investment in human resources that can be a key part of programs designed to improve maternal and child health.

Family planning enables couples to decide for themselves when to have their children as well as how many to have. Studies worldwide demonstrate that spacing births two or more years apart significantly reduces the risk of death for a newborn infant and the next oldest brother or sister. The use of family planning allows women to avoid unwanted pregnancies, dangerous illegal abortions, and childbearing under circumstances that will threaten their infants' and their own health.

# Infant and Child Survival

Despite recent declines in infant and child mortality, during 1990 an estimated one out of every 12 babies in developing countries died before his or her first birthday.<sup>1</sup> In addition to these ten million infant deaths, four million children between the ages of one and five also died. The loss of 14 million lives in one year — a number larger than the populations of the majority of the world's countries — is a human tragedy.

Respiratory and diarrheal diseases, complicated by malnutrition, are the leading causes of child deaths in developing countries. Each day 23,000 children die from these causes alone (see Box 1). Many child deaths could be prevented through routine immunization, breastfeeding, adequate nutrition and hygiene, oral rehydration therapy, and birthspacing. Efforts are underway to address the needs and improve the welfare of children around the world. (See page 10 for a description of the World Summit for Children.)

## Birthspacing

Family planning is part of the international child-survival effort because the lives of millions of infants and children in developing countries could be saved by spacing births at least two years apart. Such birthspacing gives parents a greater opportunity to ensure their children's survival.

Infants born less than two years after a sibling are at greater risk of dying. Closely spaced pregnancies are more likely to result in low-birth-weight infants. Such infants are more vulnerable to illness and thus less likely to survive.<sup>2,3</sup>

In turn, the next oldest brother or sister is also more likely to die.<sup>4,5</sup> A young child may be weaned

too soon if the mother becomes pregnant again. Early discontinuation of breastfeeding can lead to malnutrition and can dramatically

increase the child's risk of death from diarrhea and respiratory infections.

Furthermore, diseases are likely to spread and to be more severe in households with many young children. In developing

**■ Babies born less than two years after a sibling are almost twice as likely to die as those born after an interval of at least two years.**



**Box 1:**

**INFANT AND CHILD MORTALITY**

*“Our attention has been drawn to the startling and awesome statistics showing that in every passing year, 14 million children die all over the world. Is it not a paradox that this should happen right in the midst of all the modern resources available to mankind?”*

MR. JOSEPH S. MOMOH,  
*President of Sierra Leone, 1990*

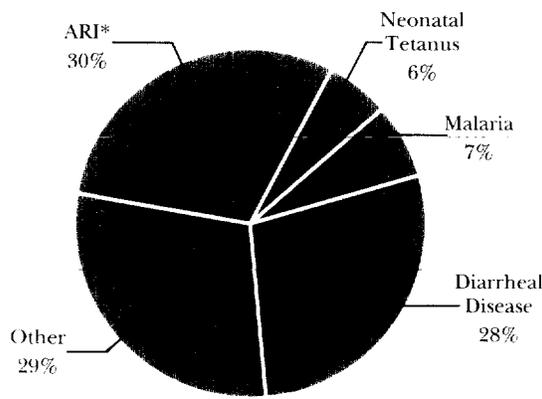
Nearly 40,000 children die every day. At least half of the deaths among children less than five years of age occur to infants less than one year old.

**Infant Mortality Rates\***

	<i>Average</i>	<i>Range</i>
AFRICA	109	14 to 154
ASIA	74	7 to 182
EUROPE	12	6 to 26
LATIN AMERICA	54	9 to 122
NORTH AMERICA	9	7 to 10

*\*The infant mortality rate is the number of deaths of infants under one year of age per 1,000 live births in one year.*

**Causes of Child Mortality (Deaths of children under age five)**



*\*Acute Respiratory Infections*

Poor nutrition underlies many infant and child deaths; a malnourished child is more likely to die from the diseases highlighted in the above chart. In addition to immunization, growth-monitoring, and oral rehydration therapy, birthspacing is an effective way to reduce infant and child mortality. Well-spaced children are less susceptible to both malnutrition and disease.

*References 1, 18, 19*

countries, poor sanitation and crowded living conditions aggravate this situation and further endanger the health of infants and children.

Evidence of the beneficial relationship between birthspacing and infant and child survival comes from two survey series conducted in countries throughout the developing world. The World Fertility Surveys (1972-1984) first showed birthspacing's health benefits for infants and children.<sup>5,6</sup> The recent Demographic and Health Surveys reinforce this finding: on average, babies born less than two years after their next oldest brother or sister are almost twice as likely to die as those born after at least a two-year interval (see Chart 1).<sup>7</sup> At the same time, the older child is, on average, one-and-a-half times more likely to die.<sup>4</sup>

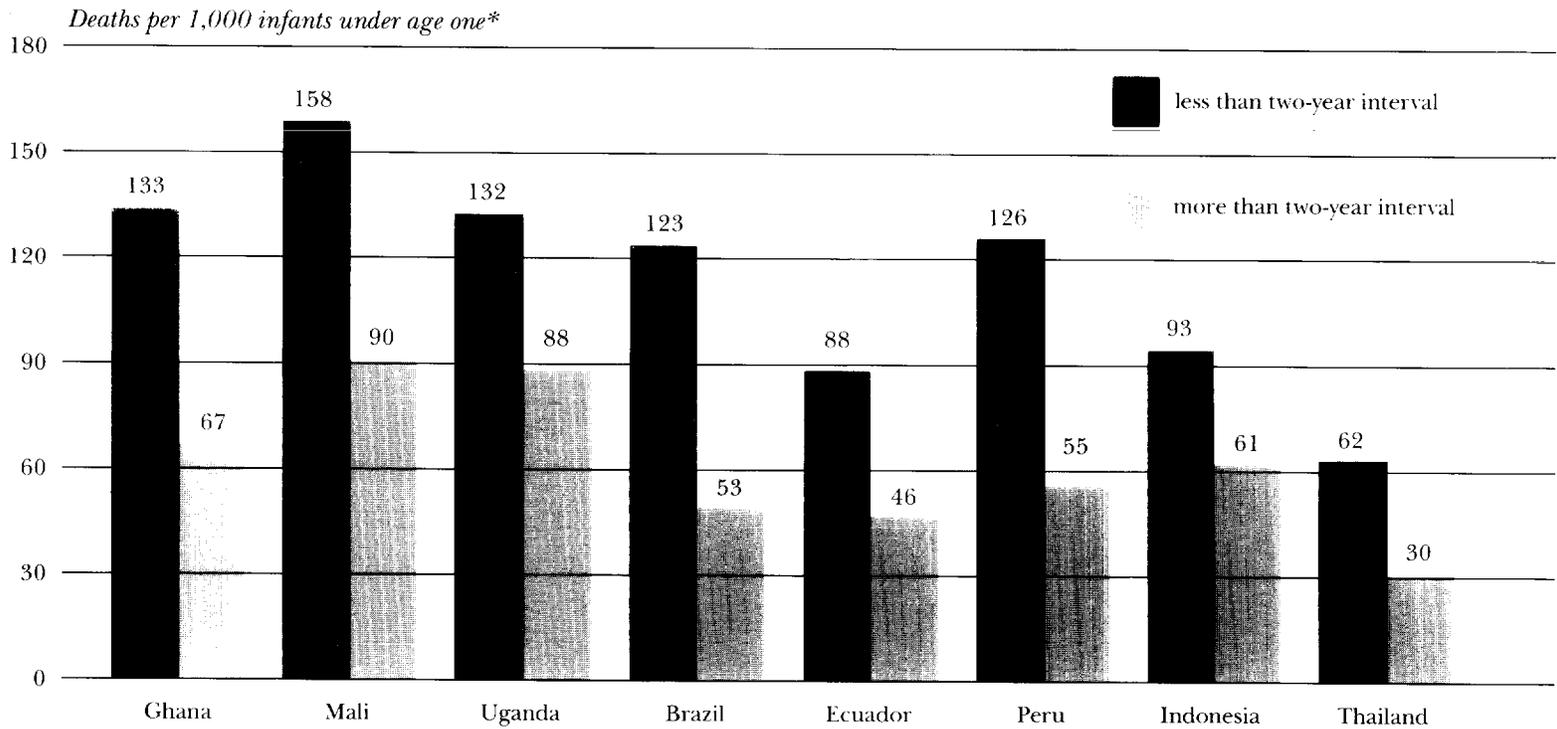
Increased birthspacing will have the greatest effect on child survival in countries where most babies are born after short intervals. Nonetheless, in many countries, birthspacing alone could prevent one in every five infant deaths.<sup>7</sup> Chart 2 shows the estimated percent reduction in the infant mortality rate of several countries if all births were spaced at least two years apart.

**How to Achieve Healthy Birthspacing**

Family planning enables couples to achieve healthy birthspacing. To date, a wide variety of methods have been developed, including oral contraceptives (“the

CHART 1

**Infants born after short intervals are almost twice as likely to die as those born after intervals of two or more years.**



\*Infant mortality rate

Chart 1: A comparison of mortality rates for infants born after short or long birth intervals

Reference 7

pill”), injectables and implants, the IUD, male and female sterilization, condoms, and new techniques of natural family planning.

Full breastfeeding can also temporarily protect a woman from pregnancy. In addition, prolonged breastfeeding significantly improves the health of the infant: breast milk is the best source of complete nutrition for at least the first four-to-six months of life, and it provides the infant

with immunity from several diseases.

Methods of family planning can reinforce the benefits of breastfeeding by enabling a mother to delay her next pregnancy until after she has fully weaned her youngest child.



# Maternal Survival

Family planning also saves women's lives. Most women welcome pregnancy and childbirth, yet the risks of illness or death associated with these events are high in some parts of the world (see Box 2). These risks are determined not only by the quality and availability of prenatal and delivery care, but also by a woman's health status and the number of pregnancies she experiences.

Although research has not yet clarified the precise effect of repeated childbearing on a woman's nutritional status, it is already clear that a woman who is nutritionally and physically depleted when pregnancy begins will continue to suffer after the child is born.<sup>8</sup> Breastfeeding, while

**Family planning helps women avoid pregnancy at times when their health could be at risk.**

important to the infant's survival, makes nutritional demands on the mother. If a woman were to become pregnant while

breastfeeding, she could jeopardize her own health as well as the health and survival of her unborn child and the child she is breastfeeding.

About half a million women die every year from complications of pregnancy and childbirth; 99 percent of these deaths occur in developing countries. Women in devel-

oping countries have both more pregnancies and less access to adequate medical care than women in developed countries. Many maternal deaths could be prevented through routine prenatal care and obstetric attention. Several international organizations are working together with national governments to remedy the tragedy of maternal illness and death. (See page 11 for a description of the Safe Motherhood Initiative.)

Advances in medical technology over the last 30 years make it possible for all women to plan their reproductive lives. For example, the use of family planning enables a woman to delay motherhood, to space her births, to avoid high-risk pregnancies, and to stop childbearing when she has achieved her reproductive goals.

Many women do not use family planning because they have heard rumors about the harmful effects of certain methods. Although limited health risks are associated

CHART 2

**On average, spacing births at least two years apart could prevent twenty percent of infant deaths.**

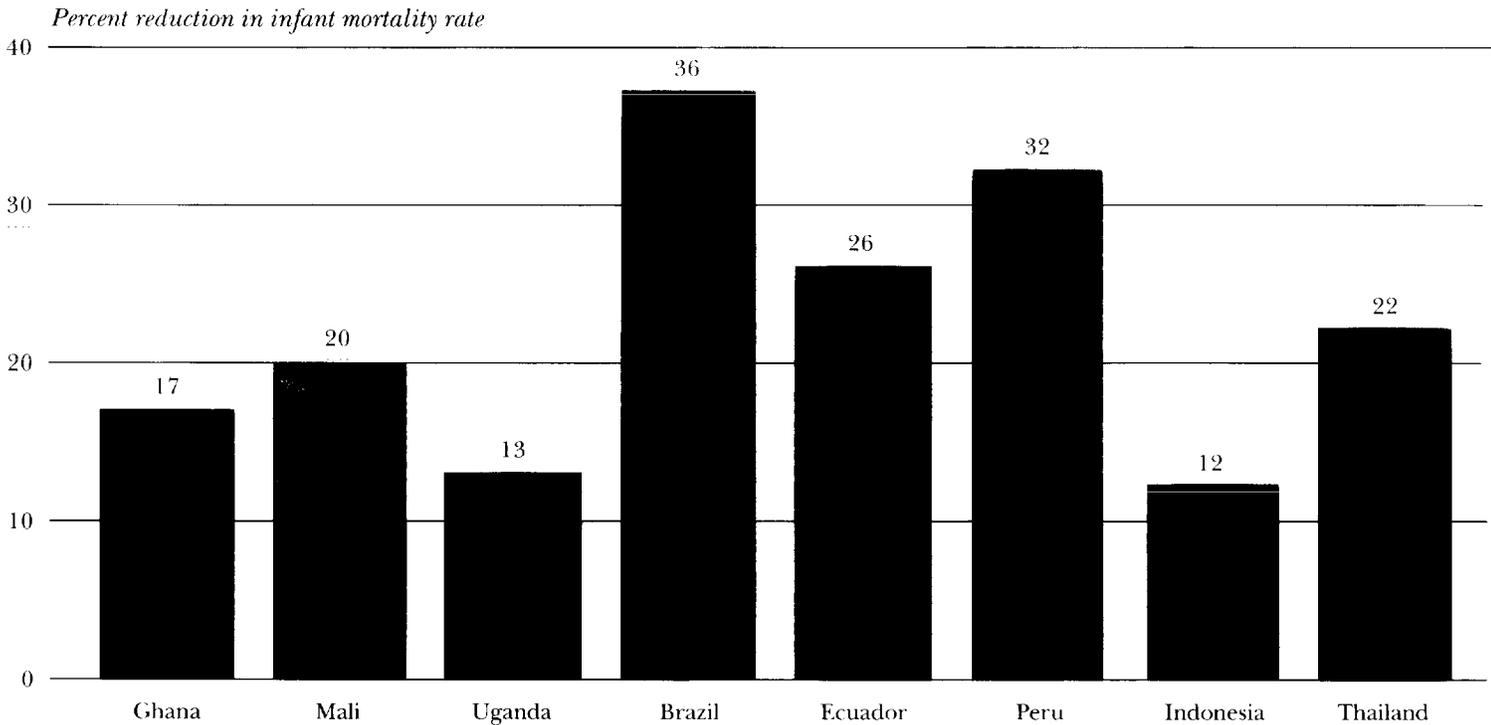


Chart 2: Estimated percent reduction in infant mortality rate if all babies were born after at least two-year birth intervals

*Reference 7*

with some modern methods of family planning and not all methods are appropriate for all women, the use of family planning is, in general, a safe and effective way to avoid or space pregnancies. Research indicates that the risk of dying from pregnancy- and childbirth-related causes is greater than the

risks associated with contraceptive use, particularly in developing countries where there is less access to prenatal and obstetric care (see Chart 3).<sup>9</sup> Therefore, it is important that women receive counseling that fully explains the risks, benefits, relative effectiveness, and appropriateness of all family planning methods so that they can make informed contraceptive choices throughout their reproductive lives.

**Box 2:**

**MATERNAL MORTALITY**

*“The demand on a woman to marry young and produce children to exhaustion, to grow, harvest and prepare the food for consumption, to bear sole responsibility for the household . . . may come to a head during an episode of pregnancy and childbirth and contribute significantly to her death.”*

PROFESSOR O. RANSOME-KUTI,  
Minister of Health of Nigeria, 1991

**Family Planning and Safer Childbearing**

Childbearing is safer if a woman receives prenatal care and trained medical assistance during delivery. In addition, childbearing is safer for women who 1) are between the ages of 18 and 35; 2) have given birth fewer than five times; 3) have not had a child within the previous two years; and 4) do not have existing health problems that would be aggravated by pregnancy.<sup>10, 11, 12</sup> Women who begin childbearing early in their reproductive years and who bear children close together are often the ones who have many children and continue to bear children into their 40s. Family planning can help mothers avoid these risks and thus meet the conditions for safer childbearing.

Many women are aware of the risks associated with childbearing and want to control their fertility. For example, a study of six countries in sub-Saharan Africa found that women who had a greater-than-average “reproductive risk” due to age, number of children, or interval since last birth were also more likely to want to delay or stop childbearing.<sup>13</sup> Unfortunately, in

The following complications are the leading causes of maternal deaths in developing countries:

**Hemorrhage** — heavy and rapid bleeding — is more common among older women with many children. If treatment with a blood transfusion is not available, the woman is likely to die.

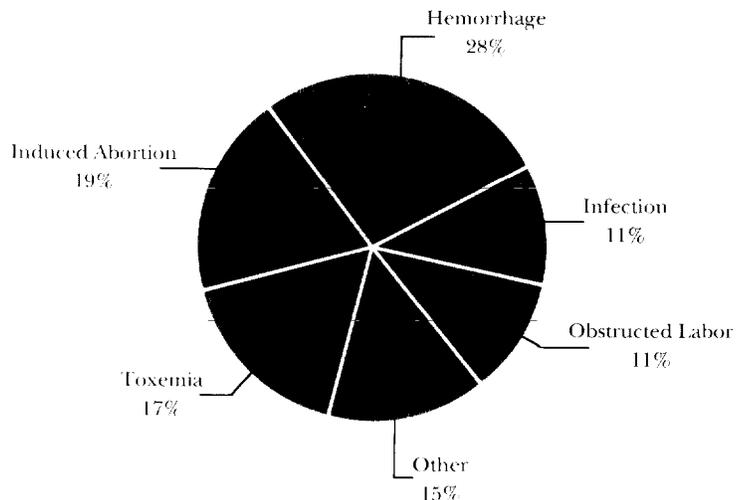
**Toxemia**, or pre-eclampsia, is characterized by high blood pressure, swelling of the feet and hands, and protein in the urine. It is more common during a woman’s first pregnancy than subsequent pregnancies. If not diagnosed and treated, toxemia can lead to convulsions and then death for both the mother and her unborn baby.

**Infection** can be caused by unsterile procedures during delivery, prolonged labor, poorly performed abortions, and pre-existing sexually transmitted diseases.

**Obstructed labor**, often resulting from a birth canal blocked either by small pelvic size or previous disease or injury, can lead to death when delivery by caesarian section is not available.

**Unsafe induced abortion** (often illegal) causes a large number of maternal deaths through infection and hemorrhage. Based on reported cases, 19 percent of all maternal deaths result from abortion; however, since many abortions are not reported, the actual percent of maternal deaths due to abortion is probably higher.

**Causes of Maternal Death in Developing Countries**



# The World Summit for Children

**"We cannot allow ourselves to become resigned to the fact that 40,000 children die every day of hunger and malnutrition, of disease, from lack of drinking water and medical care, or from the effects of drugs."**

**King Baudouin  
of Belgium, 1990**

In September 1990, 71 world leaders met at the United Nations in New York where they issued a Declaration and a Plan of Action listing more than twenty specific targets to ensure the survival, protection, and development of children. The 1990 World Summit for Children was the largest gathering of Heads of State in history, and over 150 governments endorsed the Declaration. In his opening address, Javier Perez de Cuellar, Secretary General of the United Nations, made clear the motive for the Summit:

*Children personify the world's future. In ensuring their welfare, we transcend all divisions of the present. We participate in the shaping of human destiny. This unique occasion should serve as an inspiration to that end.*

The task assigned to participating nations is to provide children with the basic elements of life: improved health and nutrition, basic education for both children and mothers, equal rights for women, improved maternal health and family planning services, a safe and supportive environment, and sustainable economic growth.

## **Family Planning and the Summit**

Throughout the Summit, presidents and prime ministers repeatedly emphasized the integral role of family planning programs in improving children's chances for survival. Among other things, family planning allows women the opportunity for having their babies at the healthiest times. For the infants' health, births should be spaced by at least two years and the mother should be at least 18 years old. To protect mothers' health, women over 35 or women who have had four or more children need to receive information about their increased maternal health risks.

The Prime Minister of Barbados, L. Erskine Sandiford, stated in his commentary, "Women should have a greater control over their bodies

and greater knowledge about factors affecting their fertility. Mothers so educated are more likely to have fewer children and provide better care for them." The President of the Republic of Chile, Patricio Aylwin, noted, "We know what needs to be done: pre-natal care, education of mothers, health care for children, appropriate nutrition, spacing of births, immunization, and a sound environment."

UNICEF, the initiator of the Summit, released a press summary noting that making family planning available to all couples is included as one of the more than 20 specific targets: "Family planning also brings improvements in child care, health, nutrition and education, as parents invest more time, energy, and money in fewer children." In addition, the press summary states that "The promotion of family planning itself is one of the most important ways of reducing child deaths."

Family planning is incorporated into the Summit's Plan of Action that states:

*Maternal health, nutrition and education are important for the survival and well-being of women in their own right and are key determinants of the health and well-being of the child in early infancy. The causes of the high rates of infant mortality, especially neonatal mortality, are linked to untimely pregnancies, low birth weight and pre-term births, unsafe delivery, neonatal tetanus, high fertility rates, etc.;*

and,

*All couples should have access to information on the importance of responsible planning of family size and the many advantages of child spacing to avoid pregnancies that are too early, too late, too many or too frequent. . . .*

The Declaration of the World Summit for Children calls for action on both national and international levels and for attention at the most basic level — the family. The Declaration appeals for world-wide participation to ensure the survival, protection, and development of children. Each cooperating country will prepare a national program and each international development agency will draw up a plan for achieving the goals set forth during the Summit.

# The Safe Motherhood Initiative

In a global effort to improve maternal health and make childbearing safer, the International Safe Motherhood Conference was convened in Nairobi, Kenya, in 1987. The Conference launched the "Safe Motherhood Initiative," which seeks to reduce the number of maternal deaths by 50 percent by the year 2000.

Barber Conable, then President of the World Bank, explained the incentive behind the Initiative in his opening address to the Conference:

*Women's health is basic to women's advancement in all fields of endeavor. And as a mother's health is the bulwark of her family, it is the foundation of community and social progress. Working for Safe Motherhood, we will be working for steady development on all fronts.*

During the Conference, participants identified a number of factors contributing to increased maternal health risks: poor nutrition, illiteracy, lack of income and employment opportunities, poor environmental conditions, inadequate health and family planning services, and low social status. The Conference adopted a Call to Action that targets each factor for policy and program action. Representatives of the International Planned Parenthood Federation, the Population Council, the United Nations Development Programme, the United Nations Population Fund, the United Nations Children's Fund, the World Health Organization, and the World Bank have formed an inter-agency working group that meets on a regular basis to plan further activities linking maternal and child survival, women and development, and family planning.

Since the 1987 Conference, cooperating organizations have held a variety of conferences, workshops, and seminars in different regions of the world as part of the Safe Motherhood Initiative. New research, increased donor lending, training programs for health professionals in developing countries, and a Safe Motherhood newsletter are just some of the results of the

ongoing collaboration. In addition, the Safe Motherhood Initiative has been incorporated into other global efforts such as the World Summit for Children. (See opposite page for a description of the Summit.)

## Family Planning and Safe Motherhood

The high rate of maternal mortality in developing countries is an indicator of both the poor health status of women and the large number of pregnancies. One means to reduce the maternal mortality rate is to reduce the number of unwanted pregnancies through the provision of family planning services. Family planning alone could prevent between 25 and 40 percent of maternal deaths. One of the eleven points in the Call to Action adopted by Conference participants says:

*We need to expand family planning and family life education programmes, particularly for young people, and make services for planning families socially, culturally, financially, and geographically accessible.*

Family planning could be provided conveniently and efficiently if it were incorporated into other health care programs. Most developing countries spend less than 20 percent of their health budgets on maternal and child health programs, with the majority allocated to child health. Due to the growing number of women in their reproductive years, if fertility rates stay constant, an estimated 650,000 maternal deaths will occur in the year 2000 if no action is taken.

The Safe Motherhood Initiative outlines the actions necessary to reduce this annual number of maternal deaths by over 50 percent. By the end of 1992, an estimated 100 nations will have participated in advocating safe motherhood through the Initiative.

*References 10, 11, 12, 29, 30*

**"Every minute of every day, a woman dies from complications related to pregnancy or childbirth."**

**Safe Motherhood Initiative, 1987**

**CHART 3**

**Even though some contraceptive methods involve a slightly increased risk of death, the risk of dying from pregnancy and childbirth is far greater.**

**Women's Death Rate from Pregnancy and Childbirth (in one year)**

<i>Region</i>	<i>Deaths per 100,000 births:</i>
WORLD	390
AFRICA	640
ASIA	420
CARIBBEAN	220
LATIN AMERICA	270
DEVELOPED COUNTRIES	30

*Note: A woman's lifetime risk of dying from maternal causes is affected by her health status, available medical care, and the number of times she becomes pregnant.*

**Women's Death Rate from Using Contraceptives (in one year)**

<i>Method</i>	<i>Deaths per 100,000 users:</i>
ORAL CONTRACEPTIVES — NONSMOKER	1.6
ORAL CONTRACEPTIVES — SMOKER	6.3
IUD	1.0
BARRIER METHODS	0.0
NATURAL METHODS	0.0
FEMALE STERILIZATION	5.0

*Note: The contraceptive risks are based on United States data. At this time, there are no reliable sources of contraceptive risk information for developing countries.*

many areas, family planning methods are not readily accessible.

In the event of an unplanned and unwanted pregnancy, many women in developing countries seek abortions — often illegal and unsafe. Even in those developing countries where abortion is legal, access to safe procedures may be lacking. Although accurate figures are difficult to obtain, at least 19 percent of maternal deaths in developing countries are the result of abortion complications.<sup>10</sup> The toll is taken not only in

terms of women's lives, but in hospital costs as well. In some regions, as much as 50 percent of hospitals' maternity care budgets is spent on treating abortion patients.<sup>11</sup> Family planning can significantly reduce these human and financial losses.

Recent surveys show that many married women in developing countries who wish to delay or avoid childbearing are not using contraception.

Chart 3: A comparison of death rates from pregnancy or childbirth and from various contraceptive methods

References 11, 12, 22



CHART 4

**Many married women who wish to space or limit births are not using family planning.**

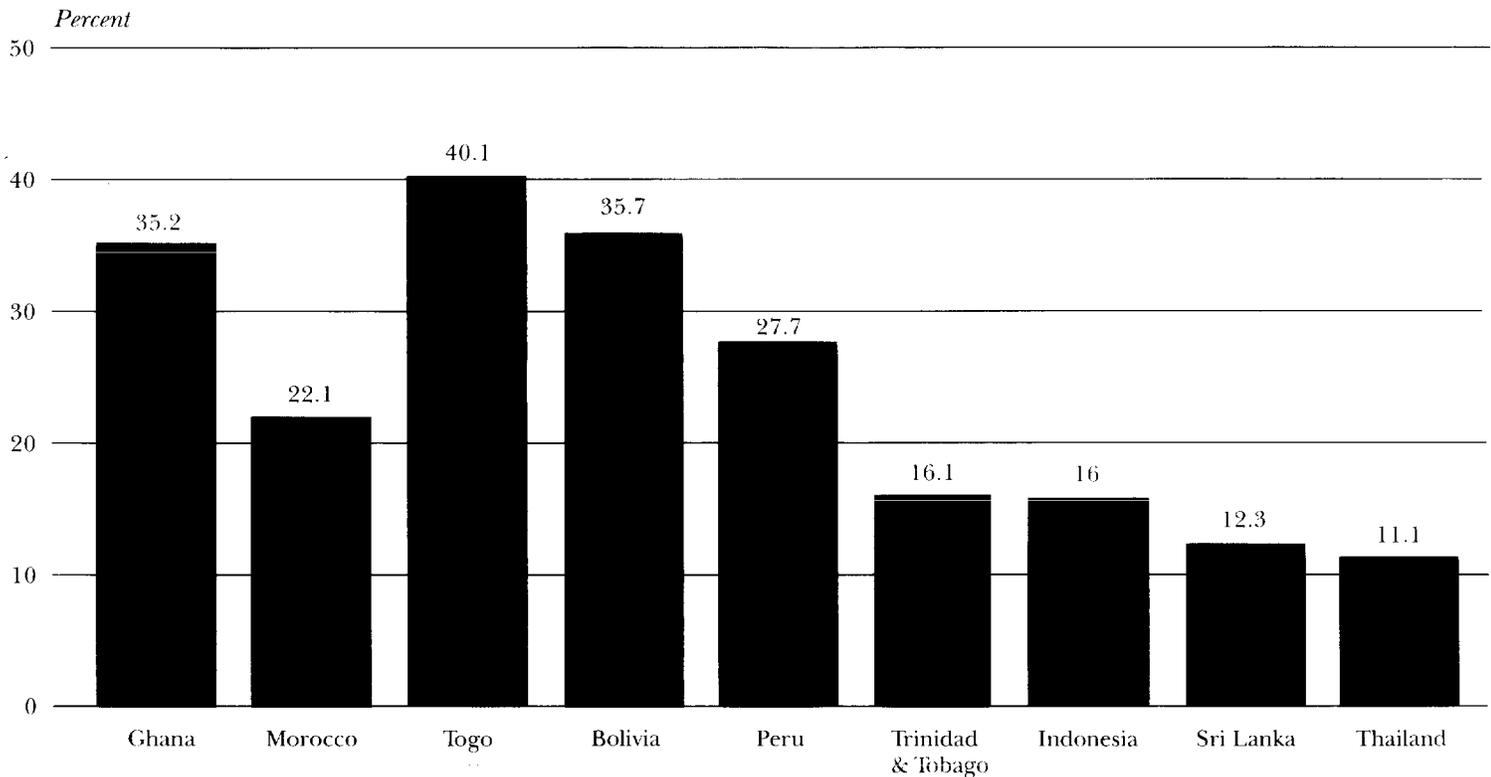


Chart 4: Percent of married women who say they want no more children or want to space their births and are not using family planning

Reference 23

Although more and more women of reproductive age in developing countries are using some method of contraception, surveys show that millions more may be in need of family planning services. In some

countries, as many as two out of every five married women who wish to delay or avoid childbearing are not using contraception (see Chart 4). If appropriate, effective means of family planning were made available to these women, the lives of thousands of mothers and children might be saved every year.

# *Maternal and Child Health: The Interaction*

High-risk childbearing has far-reaching consequences. If a woman dies during childbirth or soon thereafter, it is less likely that her infant will survive. Her other children under five years of age are also more likely to die. Even if the mother survives, babies born to very young mothers or older mothers are more likely to die during their first year. Some children are subject to multiple risks. Close birthspacing combined with such factors as teenage childbearing or the death of the previous infant can increase a child's risk of dying.<sup>15</sup> In addition, some health problems, such as sexually transmitted diseases — especially AIDS — can compromise the survival of both mothers and infants (see Box 3).

Many women in developing countries experience a cycle of poor health that begins before they are born and persists through adulthood, passing from generation to generation.<sup>14</sup> Poor health among pregnant women, due to infections and

malnutrition, increases the risk of giving birth to unhealthy infants. Because of their poor health, these women often cannot adequately meet the needs of their newborn and older children. The health and nutrition of female children may be further compromised by discriminatory practices.<sup>12</sup> For example, in many countries females eat last — which often means less. Such a disadvantaged beginning leads to impaired growth and development for many adolescent girls who will then begin their childbearing years with poor health. Thus the cycle continues.

# Program Costs

Family planning is a cost-effective health intervention that has immediate benefits for women, their newborns, and their families in general. Not only does family planning help prevent deaths, it can significantly decrease levels of maternal and child illness, thus decreasing health costs. In the long term, investments in family planning can better the community as a whole by substantially reducing high fertility and by relieving the pressures rapid population growth puts on many social sectors, including health, education, and employment.

Several studies show family planning to be an important preventive measure that lessens the need for future expenditures on maternal and child health care. For example, the *Instituto Mexicano del Seguro Social* (IMSS), the social security institute of Mexico, found that for every peso spent on family planning in urban areas, the institute saved eight pesos. By 1984, it was estimated that the family planning program had averted expenditures in maternal and child

health care equal to 8.5 percent of IMSS's total health budget. These funds were then available to IMSS for other health services.<sup>16</sup> Similarly, for the Tata Steel Family Welfare Programme in Jamshedpur, India, the benefits outweigh the costs. Since the program's inception in 1960, each rupee Tata Steel invested in family planning has yielded an overall savings of 2.39 rupees.<sup>17</sup> The costs per client of most family planning programs are greatest in the beginning — due to initial investments — but decrease over time, while the benefits continue to grow.

Even modest investments in health and family planning can be effective. According to a World Bank study, if annual spending to provide better maternal health and family planning services in developing countries increased by US\$1.50 per capita — from US\$9 to US\$10.50 — the maternal mortality rate would drop by half within a decade; the infant mortality rate would also decline.<sup>11</sup> For even one-third that amount — a more realistic investment for some governments — a substantial start could be made in decreasing the number of maternal deaths.

■ **Reduced population growth can alleviate pressure on many social sectors, including health, education and employment**



# Actions

Most people in the world now live in countries whose governments offer some level of family planning services. A variety of non-governmental groups offer family planning as well. Over three decades of experience and research have led to a better understanding of how to organize and implement effective programs:

1. If not yet available, introduce family planning into government maternal and child health services.
2. If some family planning services are already provided, expand the locations, days, hours, and kinds of methods offered so services are available and convenient to all

who need them. In addition, improve the quality of services to promote higher acceptance and continuation rates.

3. Bring family planning directly to the people through community-based distribution of contraceptives. Research demonstrates that family planning services can be provided safely by trained non-medical workers.

4. In addition to government programs, increase the availability of family planning offered by the private sector. Family planning associations, commercial marketing of contraceptives, and the inclusion of family planning in health services offered by employers or insurance companies are some possible avenues for private sector involvement.

5. Put strong emphasis on information, education, and communication through the use of mass media, person-to-person counseling, and group discussions. In particular, educate women and health providers about high-risk pregnancies and how to avoid them by using family planning. Include clear information on the use, benefits, and risks of family planning methods.

6. Develop culturally sensitive family planning information, services, or counseling

**Box 3:**

**AIDS AND FAMILY PLANNING**

*“Saving women from HIV infection is the key AIDS child survival strategy.”*

UNICEF, 1990

Family planning can help reduce the spread of Acquired Immune Deficiency Syndrome (AIDS), a growing threat to the health and survival of men, women, and children. AIDS is a disease caused by HIV — human immunodeficiency virus. Of the estimated 6.5 million people infected with HIV, almost two million are women of childbearing age.

**Estimated Rate of HIV Infection in Women\*  
May 1990**

NORTH AMERICA	140
LATIN AMERICA & CARIBBEAN	200
WESTERN EUROPE	70
EASTERN EUROPE & USSR	5
ASIA	29
MIDDLE EAST & NORTH AFRICA	20
SUB-SAHARAN AFRICA	2,500

*\*The infection rate is the number of women with the virus per 100,000 women of reproductive age.*

Not only do HIV-infected women face their own deaths, but those who are pregnant have an estimated 25-to-40 percent chance of passing the virus to their infants before or during birth. In addition, recent research shows that HIV-infected women may pass the virus to their infants through breastfeeding. However, the World Health Organization recommends that all women continue breastfeeding because the benefits of breastmilk outweigh the risk of contracting HIV.

By the year 2000, an estimated ten million children under age five will have been infected with HIV. One-quarter of the children born with HIV infection are likely to die before age one, and up to 80 percent are likely to die before age five.

It is estimated that, on average, a woman dying of AIDS leaves behind two children; without a mother to provide for them, these children are also more likely to die.

As yet, there is no vaccine or cure for AIDS; prevention of infection is the only hope. Using barrier methods of contraception during sexual intercourse, especially latex condoms, can help prevent the spread of AIDS. In addition, the use of family planning by women with AIDS can help them avoid pregnancy and thus the risk of bearing an infected child.

*References 18, 24, 25, 26*

for people with special needs, including men, teenagers, unmarried and newly married women, new mothers, and those seeking help for infertility.

7. Develop programs to encourage full and prolonged breastfeeding, which significantly reduces a mother's chance of becoming pregnant while benefiting the health of her infant.

8. Provide AIDS information, education, and testing as part of family planning programs; promote the use of condoms to prevent the transmission of HIV.

Many resources are available to introduce, expand, improve, and evaluate family planning services. Many governments and donors, including the U.S. Agency for International Development, the United Nations Population Fund, and the World Bank, offer support for private and public initiatives in family planning.

## References

- 1 Population Reference Bureau, *World Population Data Sheet 1990 and 1991* (Washington, DC: PRB, 1990, 1991).
- 2 Wallace, Helen M. and Kanti Giri, *Health Care of Women and Children in Developing Countries* (Oakland, CA: Third Party Publishing Co., 1990).
- 3 Parnell, Alan, ed., *Contraceptive Use and Controlled Fertility: Health Issues for Women and Children* (Washington, DC: National Academy Press, 1989).
- 4 Maine, Deborah and Regina McNamara, *Birth Spacing and Child Survival* (New York, NY: Columbia University Center for Population and Family Health, 1985).
- 5 Hobcraft, J.N., J.W. McDonald, and S.O. Rutstein, "Childspacing Effects on Infant and Early Child Mortality," *Population Index*, 49(4), 1983.
- 6 Trussell, James and Anne R. Pebley, "The Potential Impact of Changes in Fertility on Infant, Child and Maternal Mortality," *Studies in Family Planning*, 15(6), 1984.
- 7 Demographic and Health Surveys, unpublished data (Columbia, MD: Institute for Resource Development/Macro International, 1990).
- 8 Winikoff, Beverly and Mary Ann Castle, "The Maternal Depletion Syndrome: Clinical Diagnosis or Eco-demographic Condition?" Technical background paper prepared for the International Conference on Better Health for Women and Children through Family Planning, October 1987.
- 9 Winikoff, Beverly and Maureen Sullivan, "Assessing the Role of Family Planning in Reducing Maternal Mortality," *Studies in Family Planning*, 18(3), 1987.
- 10 Maine, Deborah, *Safe Motherhood Programs: Options and Issues* (New York, NY: Columbia University Center for Population and Family Health, 1991).
- 11 Herz, Barbara and Anthony R. Measham, "The Safe Motherhood Initiative, Proposals for Action," World Bank Discussion Paper 9 (Washington, DC: World Bank, 1987).
- 12 Starrs, Ann, *Preventing the Tragedy of Maternal Deaths*, Report on the International Safe Motherhood Conference, Nairobi, Kenya, February 1987.
- 13 Radloff, Scott R., Barbara Seligman, Judith Seltzer, and Richard Cornelius, "Reproductive Risks and Intentions in Six Countries in Sub-Saharan Africa," *International Family Planning Perspectives*, 15(4), December 1989.
- 14 Winikoff, Beverly, "Women's Health: An Alternative Perspective for Choosing Interventions," *Studies in Family Planning*, 19(4), 1988.
- 15 Hobcraft, John, "Does Family Planning Save Children's Lives?" Technical background paper prepared for the International Conference on Better Health for Women and Children through Family Planning, October 1987.
- 16 Nortman, Dorothy L., Jorge Halvas, and Aurora Rabago, "A Cost-Benefit Analysis of the Mexican Social Security Administration's Family Planning Program," *Studies in Family Planning*, 17(1), 1986.
- 17 The TIPPS/Tata Steel cost/benefit study of the Family Welfare Programme, unpublished paper (Columbia, MD: TIPPS Program; JSA; April 1988).
- 18 UNICEF, *State of the World's Children 1990* (New York, NY: UNICEF, 1990).
- 19 United Nations, Conference speeches for the World Summit for Children (New York, NY: UNICEF, September 1990).
- 20 "Mothers' Lives Matter: Maternal Health in the Community," *Population Reports*, Series L, Number 7.
- 21 Ransome-Kuti, O., Keynote Address, Demographic and Health Surveys World Conference, Washington, DC, August 1991.
- 22 Hatcher, Robert A., et al, *Contraceptive Technology: International Edition* (Atlanta, GA: Printed Matter, Inc., 1989).
- 23 Westoff, Charles F. and Luis Hernando Ochoa, *Unmet Need and the Demand for Family Planning*, DHS Comparative Studies Number 5 (Columbia, MD: Institute for Resource Development/Macro International, 1991).
- 24 UNICEF, *Children and AIDS: An Impending Calamity* (New York, NY: UNICEF, 1990).
- 25 World Health Organization, AIDS Information Line, Washington, DC, 202-861-4346, September 1991.
- 26 Hiltz, Philip J., "Study Shows Passing AIDS in Breast Milk is Easier than Thought," *The New York Times*, 29 August 1991, p. B1.
- 27 UNICEF, *State of the World's Children 1991* (New York, NY: UNICEF, 1991).
- 28 United Nations, *World Declaration on the Survival, Protection and Development of Children and Plan of Action* (New York, NY: United Nations, September 1990).
- 29 *Safe Motherhood Initiative*, Brochure (New York, NY: Family Care International, 1987).
- 30 World Health Organization, *Maternal Health and Safe Motherhood Programme*, Progress Report (Geneva, Switzerland: WHO, 1990).