

Chapter 6



Interventions to Improve Reproductive Health

John Stover, Karen Hardee, Bella Ganatra, Claudia García Moreno, and Susan Horton

INTRODUCTION

Health systems and individuals can take a number of actions to safeguard reproductive health. These actions differ from many other health interventions in that the motivation for their use is not necessarily limited to better health and involves cultural and societal norms. Irrespective of these additional considerations, these interventions have important health implications. This chapter describes four areas of intervention:

- Family planning
- Adolescent sexual and reproductive health
- Unsafe abortion
- Violence against women.

Each of these areas involves the delivery of specific health services to prevent or alleviate health risks; each also involves the complex social and cultural issues that affect the widespread implementation and use of the services.

FAMILY PLANNING

Rationales for Family Planning Programs

Family planning has been a major development success over the past half century, with global fertility rates falling from more than six children per woman during her lifetime in the 1960s to less than three children in the

1990s. Family planning offers a range of potential benefits that encompass economic development, maternal and child health, education, and women's empowerment (Bongaarts and others 2012). Furthermore, family planning is cost-effective. The United Nations (UN) estimates that for every US\$1 spent on family planning, from US\$2 to US\$6 can be saved from the reduced numbers of people needing other public services, such as immunizations, health care, education, and sanitation (UN Population Division 2009).

Support for voluntary family planning has been based on several rationales, including the following (Habumuremyi and Zenawi 2012):

- Population and development, the so-called demographic rationale
- Maternal and child health
- Human rights and equity
- Environment and sustainable development.

Demographic Rationale

The population and development rationale for family planning emerged in the 1960s amid a concern that rates of rapid population growth would hinder economic growth in low- and middle-income countries (LMICs) and affect the ability of these countries to improve the well-being of their citizens. This rationale has been in and out of favor (Birdsall, Kelly, and Sinding 2001; Bongaarts and others 2012; NAS 1986). Recent evidence

shows positive links between slower population growth and economic development—at least in the initial phase of the demographic transition, when countries enjoy a demographic dividend, if other economic and human capital policies are in place. The demographic dividend allows countries to take advantage of a beneficial dependency ratio between the working-age population and the groups who need support, that is, children and the elderly (Bloom, Canning, and Sevilla 2003). It is important to have supportive economic policies and labor regulations in place to reap the potential benefits of the demographic dividend; many countries in Sub-Saharan Africa need to coordinate development of their economic and reproductive health policies to fully realize this effect.

Maternal and Child Health Rationale

The improved health of mothers and children has long been a rationale for the provision of family planning (Seltzer 2002). In the 2009 round of the Family Planning Effort Index, measured periodically since 1972, women's health was the dominant justification for family planning programs, followed by reducing unwanted fertility (Ross and Smith 2011). These reasons ranked higher than fertility reduction, economic development, and reduction of childbearing among unmarried youth. Contraception can serve as an effective primary prevention strategy in LMICs to reduce maternal mortality (Ahmed and others 2012). By one estimate, increases in contraceptive use from 1990 to 2008 contributed to 1.7 million fewer maternal deaths (Ross and Blanc 2012). Reductions in fertility rates accounted for 53 percent of the decline in maternal deaths; lower maternal mortality rates per birth accounted for 47 percent of the decline (Ross and Blanc 2012).

Family planning can have significant effects on the health of children. Analysis of data from Demographic and Health Surveys (DHS) from 52 countries showed that children born within two years of a previous birth have a 60 percent increased risk of infant death, and those within two to three years have a 10 percent increased risk of infant death, compared with children born after an interval of three or more years from the last sibling (Rutstein and others 2008). These analyses have confirmed the usefulness of program initiatives to promote healthy timing and spacing of births.

Human Rights and Equity Rationale

The right of couples and individuals to decide freely and responsibly on the number and spacing of their children was articulated at the 1968 International Conference on Human Rights (UN 1968). Subsequent international

population conferences in 1974, 1984, and 1994 reaffirmed this right (Singh 2009).

The human rights rationale has focused on sexual reproductive health and rights, with family planning implicitly included. Efforts are underway to more explicitly define a rights-based approach to implementing voluntary family planning programming (Hardee and others 2014). Ensuring equity is a fundamental principal of human rights-based programming. Wealth quintiles analysis has shown that wealthier women have lower fertility rates and better access to family planning than poorer women. Gillespie and others (2007), in a study of 41 countries, find that although variations were observed among countries, the number of unwanted births in the poorest quintile was more than twice that in the wealthiest quintile, at 1.2 and 0.5, respectively.

Environment and Sustainable Development Rationale

A resurgence of interest in global population dynamics is linked to growing attention to environmental issues, climate change, and concerns about food security (Engelman 1997; Jiang and Hardee 2011; Martine and Schensul 2013; Moreland and Smith 2012; Royal Society 2012). Although global population growth is slowing, the momentum built into past population trends means that the world's population will continue to grow. The world's population surpassed 7 billion in 2012; the 2013 UN Population Division projection estimates that it could grow to 9.6 billion by the middle of the century and level off at about 10.9 billion by the end of the century under their low scenario, or it could grow to more than 16 billion by the end of the century under their high scenario. According to the United Nations Population Fund (UNFPA), "Whether future demographic trends work for or against sustainable development will depend on policies that are put in place today" (UNFPA 2013, 5). If the unmet need for family planning services were satisfied in all countries, world population growth would fall between the UN's low and medium projections (Moreland, Smith, and Sharma 2010).

Health Consequences of High Fertility

High fertility affects the health of mothers and children in several ways. Unwanted pregnancies may lead to unsafe abortions, which are associated with elevated risks of maternal mortality. All births carry some risk of maternal mortality, so women with a large number of births have higher lifetime risk of dying from maternal causes. The World Health Organization's (WHO's) Global Health Estimates reports that there were 303,000 maternal deaths in 2015; 300,000 of these deaths occurred in LMICs (WHO 2015). The maternal mortality ratio

(MMR) in LMICs averages about 242 maternal deaths per 100,000 live births. At that rate, a woman with seven births has a 2 percent chance of dying from maternal causes, compared with 0.5 percent for a woman with two births. In Sub-Saharan Africa, where the MMR is 546, the risk of death increases to almost 5 percent for a woman with seven births (WHO 2014a, 2014b, 2015).

The risk of maternal mortality is particularly high for older women; it is typically two to three times higher for women over age 40 years who give birth than for those ages 35–39 years (Blanc, Winfrey, and Ross 2013). High-parity births (fourth and higher births) may also carry an increased risk. Family planning can reduce maternal mortality by reducing the number of times a woman is exposed to the risk and by helping women avoid high-risk births. From 1990 to 2005, family planning may have averted more than 1.5 million maternal deaths through lower fertility rates and reductions in the MMR due to fewer high-parity births to older women (Stover and Ross 2009).

Family planning also influences child survival rates. Child mortality rates are generally higher for high-risk births, typically defined as births of order four (a woman's fourth birth) and above, births occurring less than 24 months after a previous birth, and births to mothers who are less than age 18 years or more than age 35 years. Short birth intervals, young age of mother at birth, and parity greater than three are associated with greater chances of births that are preterm, low birth weight, and small for gestational age (Kozuki, Lee, Silveira, Sania, and others 2013; Kozuki, Lee, Silveira, Victora, and others 2013). DHS data show the risk of child mortality by birth characteristic. Mortality rates are about 50 percent higher for closely spaced births and births to mothers under age 18 years. The largest effects occur when multiple risk factors are combined. Mortality increases by 150 percent to 300 percent for births with short intervals to very young mothers and those with high parity and short birth intervals. Family planning affects the distribution of births by risk factor. On average, the percentage of births with any one of these avoidable risk factors drops from about 73 percent when the national total fertility rate is greater than seven to 25 percent at a total fertility rate of less than two. As figure 6.1 shows, the greatest change from a high to a low total fertility rate is in the proportion of births that are high parity and have multiple risk factors.

Contraceptive Methods

A wide variety of contraceptive methods are available to women and men (table 6.1). These include permanent methods, that is, female and male sterilization, for couples who know that they do not want any more

children; long-acting reversible contraceptives (such as intrauterine devices [IUDs], implants, and injections) for couples who do not want more children in the near term but may want more later; temporary methods (such as oral contraceptives and condoms) that provide short-term protection; and nonmedical methods (such as fertility awareness methods, lactational amenorrhea, and withdrawal) for couples who do not want to use a contraceptive agent or device or who do not have access to them.

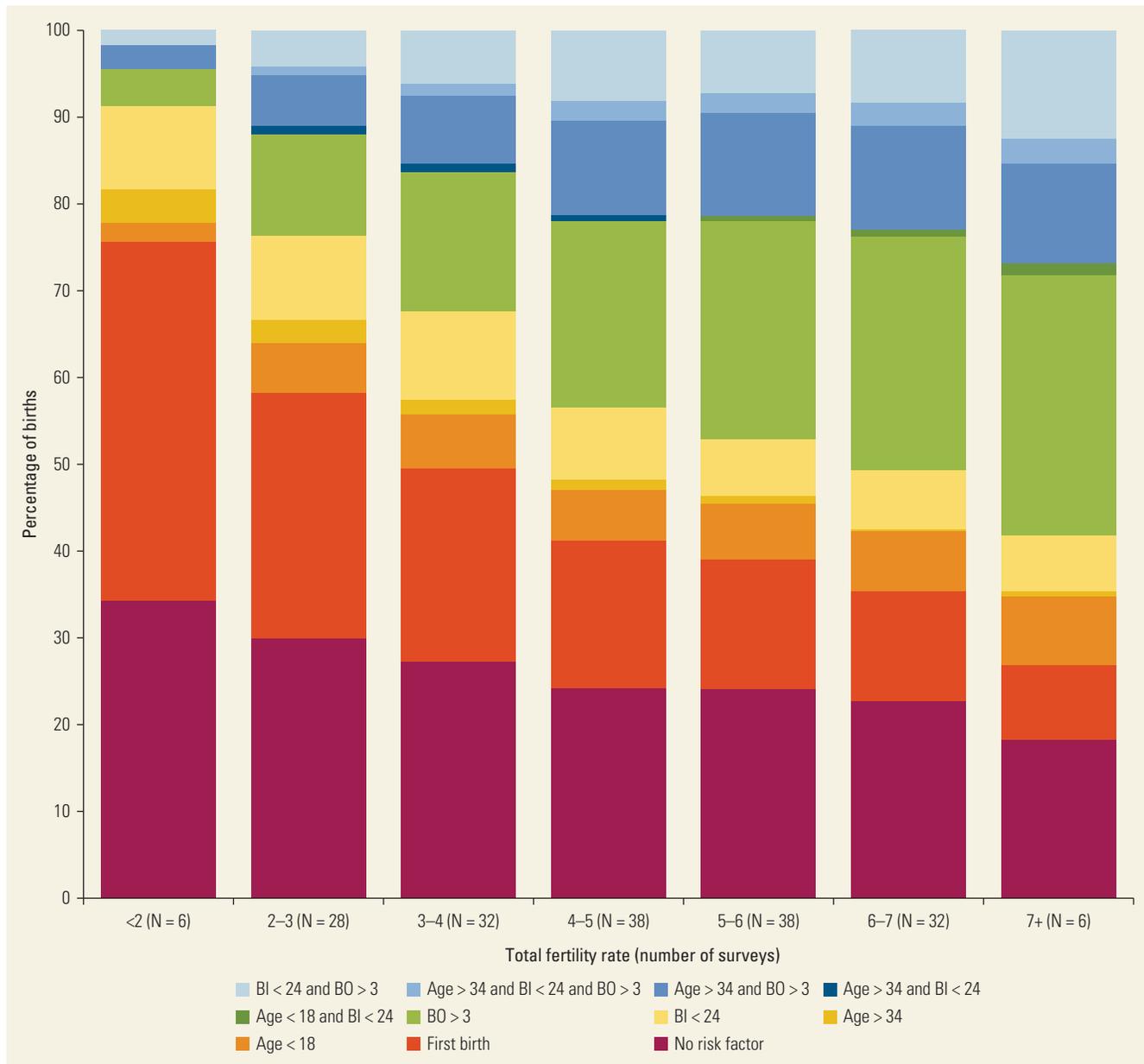
Women and men report a number of factors that are important to them in choosing methods (WHO 1997). Among the key factors that allow potential users to match contraceptive methods to their needs are effectiveness, duration of effectiveness, and reversibility. Other major considerations include side effects, ease of use, ability to hide use from a partner, and familiarity with the method. Some women are also concerned about whether the method regulates menstruation or causes amenorrhea.

Although the number of approved methods is quite large, in practice couples in most countries have limited options. Ross and Stover (2013) analyze data from the Family Planning Effort Index scores to show the number of methods available over time in 80 countries. The Family Planning Effort Index measures, among other things, the percentage of the population that has ready and easy access to contraceptive methods (Ross and Smith 2011). If a method is considered to be available when more than 50 percent of the population has access, then potential users had access to 3.5 methods in 2009, up from 2 methods in 1982.

Globally, female sterilization is used by the largest share of couples (figure 6.2) and dominates the method mix in Asia, Latin America and the Caribbean, and North America. The second most popular method is the IUD, which has the largest share of users in Asia. Oral contraceptives have a significant share of users in most regions, except Asia. The highest share for injectables is in Latin America and the Caribbean and in Sub-Saharan Africa.

Although cost and demand play roles in determining method availability, the most important factors affecting availability in many settings are religious and cultural factors and program factors. Figure 6.3 shows the wide variation in method mix across a selection of countries with total contraceptive prevalence between 45 percent and 75 percent. In Bangladesh, Morocco, and Zimbabwe, oral contraceptives account for 50 percent or more of all contraceptive use; in Brazil and India, sterilization is the preferred option. In the Arab Republic of Egypt and other Muslim countries, the IUD is the most popular form of long-acting contraceptive.

Figure 6.1 Distribution of Births by Risk Factor by Total Fertility Rate



Source: Demographic and Health Surveys from 1980 to 2012.
 Note: Age = mother's age at time of birth; BI = birth interval; BO = birth order.

The method mix in Kenya has evolved, and injectables are now the most popular form of contraception. In Turkey and Ukraine, for example, withdrawal and condoms are used most often; high rates of abortion compensate for the lower effectiveness of these methods (UN Population Division 2013b). In countries with limited access to health clinics, community-based distribution (CBD) and social marketing are used to reach a large portion of

the population, resulting in greater reliance on methods appropriate for those delivery channels, such as oral contraceptives, injectables, and condoms. In countries with higher access to medical providers, physician-supplied methods, such as IUDs, may be preferred.

More than 180 new contraceptive methods are in various stages of research and development (<http://pipeline.ctiexchange.org/products/table>).

Table 6.1 Contraceptive Methods

Method	Types	Duration	Effectiveness ^a (percent)	CYP factor
Sterilization	Female sterilization	Permanent	99	10–13 per sterilization
	Male sterilization	Permanent	99	10–13 per sterilization
Implants	Implanon	3 years	99	2.5 per implant
	Sino-Implant	4 years	99	3.2 per implant
	Jadelle	5 years	99	3.8 per implant
Intrauterine devices	Copper-T-380A	10 years	99	4.6 per insertion
	Levonorgestrel-releasing intrauterine device	5 years	99	3.3 per insertion
Injectables	Depo-Provera	3 months	93	4 injections per CYP
	Noristerat	2 months	93	6 injections per CYP
	Cyclofem	1 month	93	13 injections per CYP
Oral contraceptives	Many brands	One month per cycle	90	15 cycles per CYP
Condoms	Male	One sex act	79	120 units per CYP
	Female	One sex act	75	120 units per CYP
Spermicides	Vaginal foaming tablets	One sex act	67	120 tablets per CYP
Emergency contraception		One unprotected sex act	75	20 doses per CYP
Monthly vaginal ring or patch		One month	90	15 units per CYP
Diaphragm		One sex act	88	—
Lactational amenorrhea		6 months	99	4 active users per CYP
Fertility-awareness methods	Standard days, Two Day Ovulation, Symptothermal	One sex act	72	1.5 CYP per trained adopter
Withdrawal		One sex act	75	—

Source: USAID: <http://www.usaid.gov/what-we-do/global-health/family-planning/couple-years-protection-cyp>.

Note: — = not available; CYP = couple-years of protection.

a. Effectiveness estimates are drawn from Trussel (2011).

Although many will never reach the market, some have the potential to address current barriers to use for some users. Several new methods that may address some limitations in current methods are becoming available. Sino-implant (II), a subdermal contraceptive implant consisting of two silicone rods with 75 milligrams of levonorgestrel, provides four years of protection. Although similar to other implants already on the market, Sino-implant (II) is considerably less expensive and could potentially expand the availability of implants. It is registered for use in about 20 countries. Sayana Press, an injectable contraceptive (Depo-Provera) with a duration of three month, is packaged in a Uniject system that allows subcutaneous injection. The main advantage of this system is that field workers can easily administer it without the need for users to visit clinics. It is expected to appeal

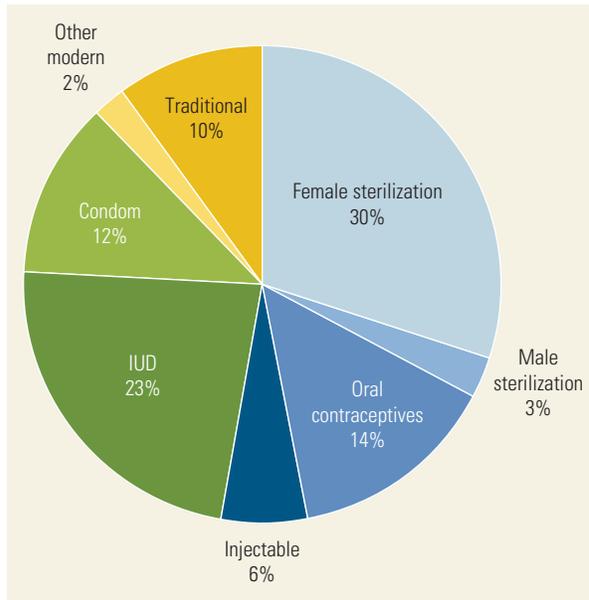
to programs that rely on community workers to reach large numbers of users. In the longer term, it may even be labeled for self-injection.

Organization of Family Planning Programs

Global Initiatives

Family planning programming has been guided by global initiatives for decades, including through decennial population conferences in 1974 in Bucharest, 1984 in Mexico City, and 1994 in Cairo, as well as global frameworks, including the 2000 Millennium Development Goals (MDGs). The twentieth anniversary of the 1994 International Conference on Population and Development (ICPD) has passed, and the UN recently adopted the post-2015 development agenda. The ICPD positioned family planning within a broad context of

Figure 6.2 Global Distribution of Contraceptive Methods, 2012

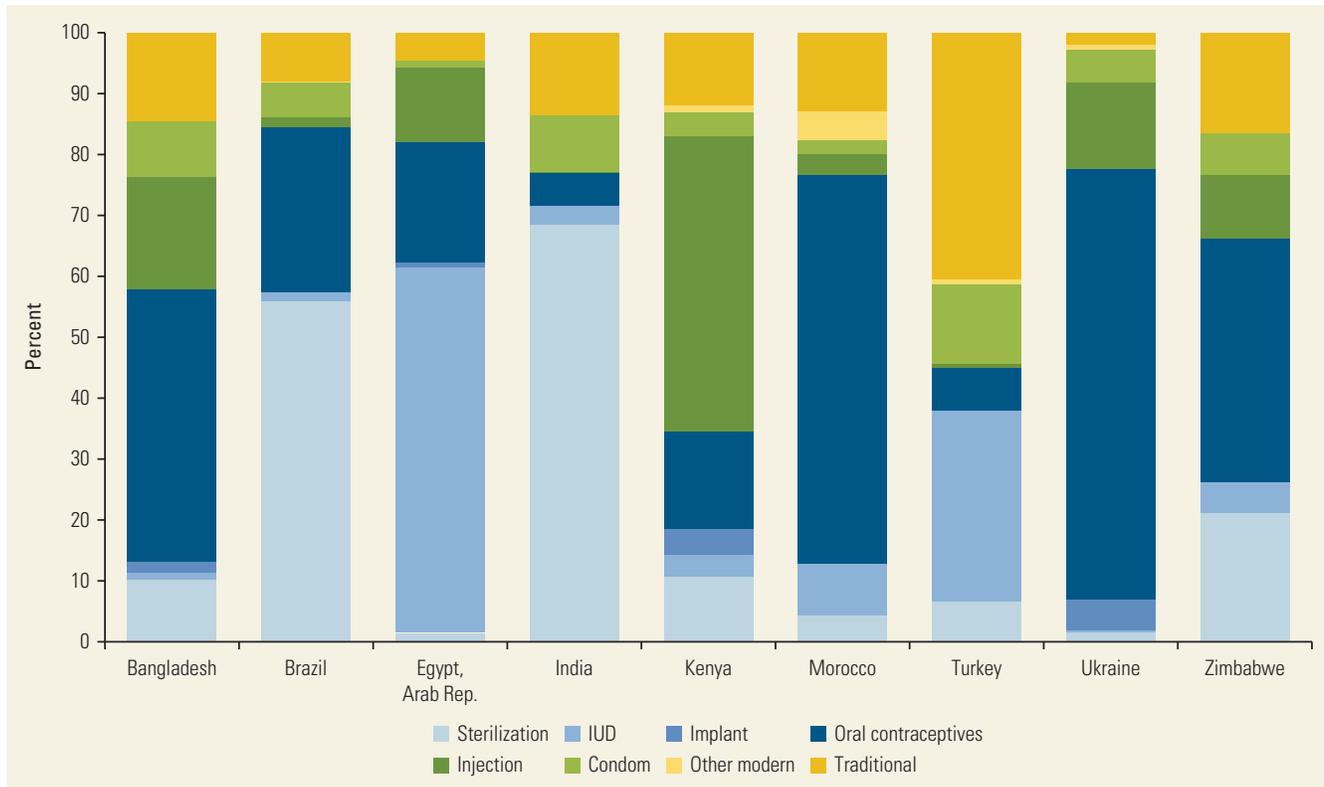


Source: Biddlecom and Kantorova 2013.
Note: IUD = intrauterine device.

reproductive health and human rights. Both the ICPD and the SDGs now include targets and indicators related to universal access to reproductive health. Attention to shortages of contraceptives led to the 2001 Istanbul conference, “Meeting the Reproductive Health Challenge: Securing Contraceptives, and Condoms for HIV/AIDS Prevention,” which resulted in the establishment of the Reproductive Health Supplies Coalition (<http://www.rhsupplies.com>).

In 2010 the UN Secretary General launched Every Woman Every Child, a global effort to provide catalytic support to achieve MDGs 4, 5, and 6 by 2015 (<http://www.everywomaneverychild.org/about>). The Ouagadougou Declaration, to which eight West African countries agreed in 2011, called for countries to accelerate the implementation of national strategies for reproductive health and family planning and to address the unmet needs of populations (FP Ouagadougou Partnership 2014). The 2012 London Summit on Family Planning resulted in pledges of resources to reach an additional 120 million new users with voluntary family planning services by 2020 (Bill & Melinda Gates Foundation and DFID 2012).

Figure 6.3 Share of Contraceptive Users by Method, Selected Countries



Source: Demographic and Health Surveys, latest available survey for each country.
Note: IUD = intrauterine device.

Services Delivery

Family planning is delivered through a variety of programs and services. In 2011, 91 percent of governments in LMICs surveyed by the UN reported that they provide direct support for family planning, an increase from 64 percent in 1976 (UN 2011). Currently, a focus on total market approaches includes all service modalities—public, private, and nongovernmental organizations—to expand the reach of family planning services and meet the needs of the diverse clientele across countries (Barnes, Vail, and Crosby 2012). Initiatives to identify the ingredients of successful family planning programs (Richey and Salem 2008) and high-impact practices in family planning (www.fphighimpactpractices.org/), and approaches to scaling up services and ensuring equitable access (Amadou and others 2013; Simmons and Shiffman 2007), are shaping service delivery programming. Scaling-up approaches include task-shifting (Janowitz, Stanback, and Boyer 2012) and innovative financing schemes.

Public, nongovernmental, and commercial providers.

Funding for public family planning programs comes from a variety of sources. Many middle-income countries fund contraceptive services, along with all other health services, out of tax revenues. Low-income countries often rely on donor funding for commodities, training, research, policy reform, evaluation, and service delivery outside the health facility. Donors that have supported family planning programs include bilateral donors such as the United States Agency for International Development and the U.K. Department for International Development; multilateral donors such as the United Nations Population Fund; and foundations such as the Bill & Melinda Gates Foundation. This support usually takes the form of commodities and funding of nongovernmental organizations to provide specific services. Many LMICs have provided line items in their budgets for family planning commodities. Even in low-income countries, national governments provide most of the funds for infrastructure and personnel.

Integration with other sectors. Family planning services are usually integrated with other health services. Activities for outreach, advocacy, the building of political commitment, and resource mobilization are often integrated with other development priorities, such as HIV prevention and treatment, child immunization, and environmental protection.

Community-based programming. Community-based programming has been part of family planning programs since the 1970s. CBD was designed to extend the reach

of clinics to serve clients who were unable to travel to clinics or who did not know about clinic services for family planning. CBD programs focused on rural areas and trained community members to provide family planning information and selected resupply methods. Under various names, including *community-based distributor*, *community health worker*, and *health extension worker*, this cadre of staff has delivered information and selected services to families' doorsteps, providing access for women with limited mobility and those at a distance from clinical services. These workers, for example, the Accredited Social Health Activists in India, at times accompany clients to health facilities for clinical methods of contraception.

A review of the evidence shows that CBD has increased access to and use of contraception in Sub-Saharan Africa (Phillips, Greene, and Jackson 1999). Bongaarts and others (2012) report that CBD resulted in increases in contraceptive acceptance and use on the order of 15 percent to 25 percent. In Bangladesh, the Matlab program achieved a 25 percent reduction in fertility during an eight-year period among women who were visited every two weeks by trained community health workers (Koenig and others 1987). A study in Madagascar finds that individuals who had direct communication with community health workers were 10 times more likely to use contraceptives than individuals who did not (Stoebenau and Valente 2003). Community-based health workers have successfully reached underserved populations, including unmarried women, those with less supportive husbands, and indigenous women (Malarcher and others 2011; Prata and others 2005).

Community-based programming is considered to be a high-impact practice in family planning (HIP 2012), and interest is growing. To rapidly scale up access to a range of public health services, including family planning, Ethiopia in 2003 began to deploy more than 30,000 health extension workers at the community level. Ethiopia's health extension workers are partially credited with achieving that country's rapid increase in its contraceptive prevalence rate, from 13.9 percent in 2005 to 27.3 percent in 2011 (USAID/Africa Bureau and others 2013).

Social marketing. Social marketing has been part of family planning programming since the 1960s, when it was first used to link social good with marketing approaches to raise awareness and promote condom use (Chandy and others 1965). Social marketing combines the "4Ps" of marketing—product, price, place, and promotion—to increase use by population groups. Social marketing in family planning programs makes contraceptive products accessible and affordable through private-sector outlets, most notably, pharmacies and shops,

while using commercial marketing techniques to achieve behavioral change goals (HIP 2012).

Using a variety of models, family planning social marketing has been used most widely to promote condoms and oral contraceptives, with strong evidence of impact (Chapman and Astatke 2003; Madhavan and Bishai 2010; Sweat and others 2012). It has also been used to promote injectables, emergency contraception, and the Standard Days Method (CycleBeads®). In 1990, social marketing contributed an estimated 7.4 million couple-year protection (CYP), growing to 23.4 million in 2000 and 53.4 million in 2010 (DKT International 2011), more than a sevenfold increase during the 20-year time span.

Social franchising. Social franchising has been used to increase the share of the private commercial sector in family planning. From the first social franchises for family planning that Sangini started in Nepal in 1994 and Greenstar in Pakistan in 1995, the use of this approach has grown globally and includes PROSALUD in Bolivia and Blue Star in Ghana. An extension of social marketing, social franchises use the same techniques as commercial franchises—standardized, high-quality services, offered by trained providers under a franchise name.

Social franchising for family planning supports fee-based provision of a range of clinical contraceptive methods and broader reproductive health services. Fees can be paid with cash, vouchers, or other mechanisms. An analysis of the effect of social franchising on contraceptive use in four countries finds that “franchising has a positive association with both general and family planning client volumes, and the number of family planning brands available,” with client satisfaction varying across settings (Stephenson and others 2004, 2053). A 2010 assessment of evaluations of social franchising concludes that the studies demonstrate strong evidence that social franchising increases the uptake of family planning services, and moderate evidence that it increases use by poor populations (Madhavan and Bishai 2010).

Mobile services. Mobile services have been used to extend access to long-acting and permanent contraceptive methods to remote populations using trained providers (Bakamjian 2008). A 2010 evaluation of mobile outreach services operated by Marie Stopes International in Ethiopia, Myanmar, Pakistan, Sierra Leone, and Vietnam to provide IUDs and implants finds that women were generally satisfied with the services, would use the mobile services again, and would recommend the services to others (Eva and Ngo 2010). In Nepal, mobile services are a key component of the government’s program to reach remote areas. Government-run mobile clinics provide 20 percent of voluntary female sterilization procedures

and more than 33 percent of voluntary male sterilization procedures (Ministry of Health and Population [Nepal], New ERA, and Macro International Inc. 2012). For mobile services to provide optimal care, it is important that adequate follow-up care be available.

mHealth. Family planning programming has made use of a range of media, including radio and television, to raise awareness and spread messages about services (Bertrand and others 2006). These conventional uses of information and communication technologies are being supplemented by use of wireless technology, most notably cell phones. mHealth is reaching clients with information and financing mechanisms and measures to strengthen services, including providing training and support to health workers, addressing commodity logistics, and monitoring and evaluation. These mHealth initiatives are building on the rapidly growing use of wireless technology. A 2012 review of information and communication technologies for family planning and reproductive health noted that such initiatives “range from using SMS [short message service] and text messages to give information on family planning methods to women mobile users; to wireless solutions that update and connect rural health workers to web-based distance learning programs; to mobile phones and PC [personal computer] solutions that help to manage health data, drug supplies, patient medical records, and the health workforce” (AIDSTAR-Two 2012, 32). mHealth initiatives are relatively new, and few have been well evaluated; most are in pilot phases, with little current evidence of scale up.

Results-based financing. Use of results-based financing, known by many names, including *performance-based financing* and *performance-based incentives*, is a rising trend in health programming. Given the history of misuse of incentive payments in family planning (Norman 2013), careful consideration of which aspects of performance are to be rewarded is critical. Performance payments that focus on improving access to family planning services and reducing financial and other barriers are appropriate. For example, reasonable reimbursement to compensate for the costs of obtaining a voluntary sterilization are allowable. However, paying clients to accept contraception or to accept certain methods are not. Similarly, offering incentives to providers to achieve target numbers of users or specific methods is not condoned (Eichler and others 2010).

Vouchers. Performance-based financing for family planning has included vouchers for services and conditional cash transfers. Vouchers can increase access for poor and marginalized populations to specific reproductive

services and products at qualified outlets at subsidized prices (Bongaarts and others 2012). A systematic review of the evidence on vouchers in LMICs finds 13 programs that fit the systematic review criteria; of these, all evaluations reported positive findings, indicating that voucher programs increased the use of reproductive health services, improved quality of care, and improved population health outcomes (Bellows, Bellows, and Warren 2011). However, most voucher programs are small, and additional research is needed to evaluate their impact.

Conditional cash transfers. Conditional cash transfer (CCT) programs can include family planning, although such programs should not make contraceptive use a condition for acceptance into the program. CCTs are relatively new and require more research on their effects on family planning decision making. For example, Brazil's Bolsa Família CCT, which reaches 12 million families with payments going through women, resulted in significantly increased women's decision-making power related to contraception but only in urban areas (De Brauw and others 2013). In Mexico's Oportunidades program, contraceptive use increased more among the beneficiaries in communities with the CCT program, compared with women in communities in which the program had not been initiated (Feldman and others 2009). Nicaragua's CCT, Red de Protección Social, is credited with increasing birth spacing among beneficiaries (Todd, Winters, and Stecklov 2010).

Cost-Effectiveness of Family Planning

A systematic literature search identified seven studies on cost-effectiveness of contraceptives published since 2000; one additional study was obtained from a supplemental search adding the term "couple-year protection" as an economic term. The literature on cost-effectiveness of family planning is well established, given that lending and aid for family planning has been available since at least the 1970s. Recent studies focus on the cost-effectiveness of extending benefits to underserved countries and on newer family planning methods.

Four studies use cost per life-year saved, examining primarily the benefits to the mother's health from pregnancies averted; the other four use cost per CYP. The four studies focusing on mother's health (Afghanistan, India, and two from Nigeria; see Horton, Wu, and Brouwer 2015) conclude that modern contraceptives are very cost-effective in that cost per life-year saved was less than per capita gross domestic product (GDP).

The four studies using CYP as an outcome examined somewhat disparate policies. Seamans and Harner-Jay (2007) conclude that using more modern methods of

vasectomy compared with older methods reduced the cost per CYP in three countries, provided that clinics do a large enough volume of procedures to maintain quality. Abbas, Khan, and Khan (2013); Nakhaee and others (2002); and Onwujekwe and others (2013) examine the expansion of modern contraceptive use in countries with limited access. Abbas, Khan, and Khan (2013) conclude that the public services in Pakistan are high cost per CYP compared with other countries; Nakhaee and others (2002) rank the cost-effectiveness of various methods for the Islamic Republic of Iran; and Onwujekwe and others (2013) conclude that willingness to pay exceeds costs for methods other than female condoms in Nigeria.

ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH

The public health outcomes of adolescent pregnancy are profound. Adolescents ages 15–19 years are twice as likely to die during pregnancy and childbirth than women older than age 20 years; those under age 15 years are five times more likely to die during pregnancy or childbirth (WHO 2011). Complications of pregnancy and childbirth are the leading cause of death for adolescent girls ages 15–19 years in LMICs. Adolescents undergo an estimated 3.2 million unsafe abortions every year (UNFPA 2013). The social outcomes of adolescent pregnancy are also profound, with girls' potential remaining unfulfilled and their basic human rights denied (Hindon and Fatusi 2009; UNFPA 2013; WHO 2011).

Programming for Adolescents

Providing adolescents with the means to attain high standards of health, in ways that ensure equality, nondiscrimination, privacy, and confidentiality, is an integral part of respecting and protecting globally accepted human rights (Ringheim 2007; UNFPA 2012). Ensuring that adolescents have access to sexual and reproductive health services requires extending the availability, accessibility, acceptability, and quality of the information and the services (Hardee and others 2013). Helping adolescents make a healthy transition to adulthood involves programs to protect them from unintended pregnancy, sexually transmitted infections (STIs), and poor reproductive health outcomes. These programs can enable young people to delay sexual activity, to protect themselves from pregnancy and STIs once they do initiate sexual activity, and to ensure that sex is not coerced.

The range of interventions suggested include strengthening the enabling environment, and providing

information and services and support programs to build resilience and assets.

Enabling Environment

Provide legal protection. Although the need for strong legal protection for adolescents is clear, few interventions have been documented or evaluated. Still, laws protecting against child marriage and against rape and other forms of gender-based violence clearly need to be developed and implemented (Lee-Rife and others 2012; WHO 2011). Laws requiring parental consent for adolescents to access HIV testing discourage adolescents from knowing their HIV status and accessing treatment in a timely fashion.

Reduce gender-inequitable norms and violence. Norms about acceptable behavior for males and females strongly influence the socialization of children and adolescents; gender disparities become more evident as children near adolescence (UNICEF 2011). Gender norms tend to dictate that girls should be sexually submissive, while boys should be sexually adventurous; these norms promote the acceptance of gender-based violence, place girls at risk of unintended pregnancy, and put both girls and boys at risk for HIV (Gay and others 2011). Gender norms that accept gender-based violence are harmful to the lives and reproductive health of adolescents.

Keep girls and boys in school. Staying in school provides a protective effect. Girls who stay in school are less likely to become pregnant, less likely to marry at a young age (Lloyd and Young 2009; UNFPA 2013), and more likely to use contraception. Staying in school also provides a protective effect against HIV acquisition (Bradley and others 2007; Hargreaves and others 2008). Interventions to abolish school fees have enabled adolescents to attend or to stay in school (Burns, Mingat, and Rakotomalala 2003; Deininger 2003; UNICEF 2005; World Bank and UNICEF 2009).

CCTs show the potential to enable girls to stay in school (Baird and others 2012), but context is important. Recent studies in South Africa show an effect of cash transfers on herpes simplex virus type 2 (HSV-2) but no effect on HIV incidence (Karim and others 2015; Pettifor and others 2015). Community-based programming (CBP) to encourage girls to stay in school can also be effective (Erulkar and Muthengi 2009).

Information and Services

Offer age-appropriate comprehensive sex education. Ensuring that young people have the appropriate information to plan to protect themselves—before their first sexual experience—is vitally important.

As the late Doug Kirby stated, young people around the world are seeking access to reliable information on reproductive health and answers for their questions and concerns about sexuality. “They need information not only about physiology and a better understanding of the norms that society has set for sexual behavior, but they also need to acquire the skills necessary to develop healthy relationships and engage in responsible decision-making about sex, especially during adolescence when their emotional development accelerates” (Kirby 2011).

Evidence shows that comprehensive sex education with specific characteristics regarding content and pedagogy, taught by trained teachers, can affect behavior, including delaying sexual debut, decreasing number of sexual partners, and increasing the use of condoms or other contraceptives (Grunseit and others 1997; Mavedzenge, Doyle, and Ross 2011; UNESCO 2009). It is important to include a discussion of gender norms that can put both male and female adolescents at risk (Barker and others 2010; Pulerwitz and others 2006).

Use mass media. Multiple mass media approaches have been used to inform adolescents about sexual and reproductive health issues, particularly AIDS and HIV (UNFPA 2013). Evaluated media approaches include entertainment-education, social marketing, and media channels (television, radio, magazines, and the Internet) (Gurman and Underwood 2008). Newer social media approaches are promising, but their effects have yet to be evaluated.

A systematic review of the effectiveness of 24 mass media interventions on HIV-related knowledge, attitudes, and behaviors finds that such programs generally produced small to moderate changes (Bertrand and others 2006). Outcomes included increased knowledge and behavioral changes, such as reduction in high-risk behavior, increased communication, and increased condom use. A similar review by Gurman and Underwood (2008), which focuses specifically on media interventions for adolescents, finds similar outcomes, although the review highlights the paucity of results in the literature pertaining to gender-specific and youth-focused interventions.

Gurman and Underwood (2008) offer four lessons from their review:

- Ensure that the intervention is appropriate for the intended audience.
- Design interventions that go beyond the individual level to include contextual factors, such as improving communication with caring adults, changing gender norms, and linking to services.

- Include a range of media, as well as interpersonal communication.
- Plan for the evaluation at the beginning of the program.

Provide adolescent-friendly contraceptive services.

The importance of providing adolescents and youth with services that are tailored to their special needs has long been recognized (Senderwitz 1999). Rather than stand-alone youth-friendly services or separate spaces within services for adolescents, current programming is focusing on mainstreaming adolescent-friendly contraceptive services with existing family planning services. Four components of adolescent-friendly contraceptive services are important to reducing the common barriers adolescents face in accessing services (box 6.1).

Interventions in China, Ghana, India, Kenya, Nicaragua, Tanzania, Uganda, and Zimbabwe have shown that providing one or more of the components of adolescent-friendly contraceptive services can increase use of contraceptives or condoms (Decker and Montagu 2007; Kanesathasan and others 2008; Karim and others 2009; Kim and others 2001; Lou and others 2004; Meuwissen, Gorter, and Knottnerus 2006; Williams and others 2007).

Youth centers, however, have not been found to be an effective and efficient programming strategy for reaching youth (Zuurmond, Geary, and Ross 2012).

Expand access to and promotion of the use of condoms and other contraceptives. Ensuring access to and regular use of condoms and other contraceptives is an essential element in programs to protect youth from unintended pregnancies and STIs. The use of condoms to guard against STIs can provide the added benefit of safeguarding fertility (Brady 2003). Promoting condoms for pregnancy

prevention, as well as for prevention of HIV and other STIs, could increase condom use for safe sex among young people (Agha 2003). An analysis of survey data from 18 Sub-Saharan African countries finds that use of condoms for pregnancy prevention rose significantly in 13 of 18 countries between 1993 and 2001. Condom use among young Sub-Saharan African women increased by an average annual rate of 1.4 percent, with 58.5 percent of the users reporting that they were motivated by a desire to prevent pregnancy (Cleland, Ali, and Shah 2006).

Evidence suggests that if condom use is established during adolescence, it is more likely to be sustained in the long term (Schutt-Aine and Maddaleno 2003). A study of sexually active youth in Ethiopia, 75 percent of whom were female, finds that once young people started to use condoms, they were more likely to continue to use them (Molla, Astrøm, and Berhane 2007). Still, a review of 28 studies of HIV prevention in Sub-Saharan Africa finds that the effect of interventions on condom use at last sexual activity were generally greater in males than in females, suggesting that “women still experience marked difficulties in negotiating condom use or assuming full control over their sexual activity” (Michielsen and others 2010, 1201).

A gender-transformative approach could be to ensure that all adolescent girls receive fertility awareness training, for example, using CycleSmar™ or using CycleBeads® as they begin menstruation as a teaching tool to empower them to know and understand their reproductive cycles and to understand when they can get pregnant (IRH, n.d.a). A new study is underway to study the effects of fertility awareness on contraceptive use (IRH, n.d.b).

Implement programs for out-of-school and married adolescents. Most programming for adolescents is school- or health facility-based, yet millions of children and adolescents are not in school. UNESCO estimates that 57 million children of primary school age and 69 million children of lower-secondary school age do not attend school (UNESCO 2013; UNFPA 2013). Mass media approaches and CBP show promise in reaching out-of-school adolescents, although programming for this group is challenging (Bhuiya and others 2004).

Building Resilience and Assets

Programs to improve life skills and build resilience to risk factors among adolescents have shown promising results (Askew and others 2004; Erulkar and others 2004; Kanesathasan and others 2008; Kim and others 2001; Mathur, Mehta, and Malhotra 2004; Meekers, Stallworthy, and Harris 1997). These programs, which focus on building protective factors to promote success rather than eliminating factors associated with failure,

Box 6.1

Components of Adolescent-Friendly Contraceptive Services:

- Train providers to provide nonjudgmental services that promote gender-equitable norms and encourage healthy decision making by adolescents.
- Enforce confidentiality and ensure audio and visual privacy.
- Offer a wide range of contraceptive methods.
- Provide no-cost or subsidized services.

Source: HIP, forthcoming.

have included a mix of community awareness and engagement of community leaders; assistance to link adolescents with significant adults in their lives, most notably parents; provision of safe spaces for adolescents; and provision of information, services, and the building of skills. Cuidate, a sexual-risk-reduction program in Mexico, provides a six-hour training program for parents and adolescents. After four years, the adolescent program participants were more likely to be older at first sexual activity and to use a condom or other contraceptive at first sexual activity, compared with the control group (Villarruel and others 2010).

UNSAFE ABORTION

Interventions to Reduce Unsafe Abortion

Although the need for abortion can be reduced if the need for contraceptive options is better addressed, the need for safe abortion care will remain. Contraceptive methods do fail; women often become pregnant in circumstances in which the use of contraception may not be possible or where sex is nonconsensual. Medical or other circumstances for the woman could change even after she becomes pregnant.

Abortion in early pregnancy (less than nine weeks) performed with appropriate techniques by trained personnel is one of the safest medical procedures, with a case fatality rate of 0.6 per 100,000 procedures (Raymond and Grimes 2012); this rate is 14 times lower than the risk of death associated with childbirth. Complications increase with increasing gestation, but the termination of pregnancy remains a safe procedure.

Safe and Simple Technologies

The WHO recognizes vacuum aspiration (manual and electric) up to 12–14 weeks of gestation, and dilation and evacuation beyond that stage, as safe and appropriate surgical procedures. Medical abortion using the sequential combination of mifepristone, followed by misoprostol, is recommended as a safe and effective method that can be used at any stage of pregnancy, although doses and specific protocols change as gestation advances. Vacuum aspiration can be provided on an outpatient basis at the primary care level; medical abortion up to nine weeks is a process rather than a procedure and can be managed as an outpatient primary care service, with some of the medications taken by women at home (WHO 2012).

Access to Technologies

Although simple, safe, and effective medical interventions already exist, appropriate technology is of little

benefit if it is not used by providers and is not accessible to women. Therein lies the challenge. Legal restrictions on the circumstances under which abortions are permitted or who can provide them; critical health workforce shortages, particularly in South Asia and Sub-Saharan Africa; lack of training opportunities for providers; conscientious objection to care provision on the part of some providers; and the social, cultural, and political stigma around abortion all make it difficult to ensure access to safe abortion care. Despite the availability of vacuum aspiration for more than 40 years, the use of sharp curettage (dilation and curettage) is still common in many countries. The WHO no longer recommends dilation and curettage because it has more complications, often needs general anesthesia, and has higher costs for women and health facilities (WHO 2012). Similarly, although both mifepristone and misoprostol are included in the WHO's model list of essential medicines, mifepristone is not registered or available across most of Latin America and the Caribbean and Sub-Saharan Africa (Gynuity 2013).

Promising Approaches

Services to the full extent of the law. Although laws vary, all but six countries allow legal abortion in some circumstances, most often to save the life of the woman and often when pregnancy is the result of rape or incest (UN Population Division 2013a). Whatever the legal context, the treatment of women with complications is legal, and evacuation in case of incomplete abortion is a signal function of basic emergency obstetric care. Interpreting and implementing laws to their full extent and keeping the health of women center stage can make safer care more accessible.

Expanding the pool of providers. A systematic review of the evidence shows that both vacuum aspiration and medical abortion can be safely provided by non-physician providers (Renner, Brahmi, and Kapp 2013). Many countries allow clinical associates, midwives, or nurses to treat incomplete abortion using manual vacuum aspiration; several, including Vietnam, allow them to provide induced abortion as well. Bangladesh has had a mature program with auxiliary workers providing menstrual regulation for more than 40 years (Johnston and others 2011). Because medical abortion is a relatively newer technology, fewer countries have yet moved to decentralize care; it is well-suited to a wider provider base since it does not need surgical skills. Ethiopia and Ghana both allow midwives to provide medical abortions, and Nepal has incrementally progressed to allowing midwives, then nurses, and more recently,

auxiliary nurses working at lower-level facilities to provide medical abortions, demonstrating the feasibility even in low-resource settings.

In many contexts, a pharmacy is the first and sometimes only health care contact for a woman with an unintended pregnancy. Although results have not always been successful, interventions to provide pharmacy workers with accurate information, minimize harm, or develop referral linkages with other authorized providers have potential and need to be further explored (Sneeringer and others 2012). Similarly, community health workers can play a role in assessing eligibility, making appropriate referrals, and helping women determine the need for follow-up care.

Where mifepristone is not available. If mifepristone is not available, misoprostol, an inexpensive anti-ulcer medicine with other obstetric and gynecological uses, is usually more readily accessible and can be used alone to terminate a pregnancy. The failure rate is higher than when used in combination with mifepristone, but it is still safe and effective, and is a WHO-recommended option (WHO 2012). Important gains in reducing the morbidity and mortality from unsafe abortions have been made, especially in Latin America and the Caribbean, with the use of this strategy.

Innovations. The use of telemedicine to provide medical abortions can help bring needed care to women who do not have physical access (Gomperts and others 2012; Grindlay, Lane, and Grossman 2013; Grossman and others 2011). Decreasing the need for clinic visits through approaches that allow telephone follow-up or self-assessment of the abortion process using semi-quantitative pregnancy tests (Lynd and others 2013) is another promising innovation. mHealth approaches with text messaging can help support women through the abortion process, providing information and reminders about medications, side effects, and postabortion contraception. The risk-reduction model pioneered in Uruguay combines provision of information and post-abortion care; this approach can be legally implemented even in countries with restrictive legal environments (Fiol and others 2012).

Information and attitudes. Even where abortion is legal, women are often unaware of how and where to access it (Adinma and others 2011; Banerjee and others 2013; Thapa, Sharma, and Khatiwada 2014). Approaches to empowering women with knowledge using interpersonal communication, drama, theater, radio, wall signage, and mass media communication have all had some success; understanding the local context and appropriately tailoring the approach is critical (Banerjee

and others 2013; Bingham and others 2011). Telephone help lines can provide confidential sources of information and support. Social networking and Internet-based information are becoming increasingly important in providing accurate information; however, empowering women to be able to detect misinformation and avoid dangers, like the sale of spurious medical abortion agents, is also needed.

Addressing the stigma and taboos around sexuality, unintended pregnancies, and abortion is important, as is providing women with the information and skills to negotiate traditional gender roles and inequities. Providers need medically accurate information and the skills to be able to clarify internal values and provide care to women in a nonjudgmental way.

Postabortion contraception. Although the evidence on its overall impact on maternal mortality has not been well studied, ensuring effective and seamless linkages among abortion care, contraceptive information, voluntary counseling, and onsite availability of contraception is an important strategy for increasing the use of post-abortion contraception and helping women prevent subsequent unintended pregnancies (Tripney, Kwan, and Bird 2013). However, ensuring that contraceptive acceptance does not become coercive or a precondition to getting abortion care is also needed.

A multifaceted approach is needed. An excellent example is seen in Nepal, where legal reform followed by proactive efforts to scale up services has yielded rich dividends and already shows some evidence of a decline in serious morbidity from unsafe abortion (Henderson and others 2013; Samandari and others 2012).

Conclusion. A combination of approaches that include sexuality education and women's contraceptive needs to reduce the need for abortion, the provision of safe abortion services, and the availability of treatment for complications to attenuate morbidity and reduce the mortality from unsafe abortions—grounded in a framework of human rights—can collectively minimize the burden of the consequences of unsafe abortion. Safe abortion has been shown to be cost-effective (see *DCP3*, volume 1, *Essential Surgery*, chapter 18 [Prinja and others 2015]).

VIOLENCE AGAINST WOMEN

What Can the Health Sector Do?

Primary prevention of violence is critically important, but it is also necessary to provide care and support for the many women who already face violence. Early identification and response can play an important role in

secondary prevention by mitigating the consequences of violence and reducing the risk of further violent episodes. Early identification and response can also contribute to primary prevention by identifying and supporting the children of women who suffer domestic violence. Evidence suggests that early intervention is likely to have a positive impact on later risk behaviors and health problems among children and adolescents. It can also contribute to reducing the social and economic costs of such violence. (Bott, Morrison, and Ellsberg 2005; García Moreno and others 2014). (See *DCP3* volume 7, *Injury Prevention and Environmental Health*, Mercy and others, forthcoming, for further discussion of interpersonal violence)

Although violence against women has been accepted as a critical public health and clinical care issue, the health care policies of many countries still do not address it. The critical role that the health system and health care providers can play in identification, assessment, treatment, crisis intervention, documentation, referral, and follow-up is poorly understood or poorly accepted within national health programs and policies (WHO 2013; WHO 2014c). Women who have been subjected to violence often seek health care for their injuries, even if they may not disclose the associated abuse or violence, and a health care provider is likely to be the first professional contact for survivors of intimate partner violence or sexual assault. Women also identify health care providers as the professionals they would most trust with the disclosure of abuse (Feder and others 2006). Reproductive health care providers are particularly well positioned given that most women will at some point consult them for contraception, antenatal care, and delivery.

Responding to Intimate Partner Violence and Sexual Violence

The WHO clinical and policy guidelines (WHO 2013) summarize the evidence for clinical interventions for intimate partner violence and for sexual violence against women. They also review the evidence for service delivery and training on these issues for health care providers and make evidence-based recommendations to improve the response of the health sector to violence against women.

Health professionals can provide assistance to women suffering from violence by facilitating disclosure, offering support and referral, gathering forensic evidence—particularly in cases of sexual violence—and providing the appropriate medical services and follow-up care. Health care providers who come into contact with women facing intimate partner violence need to be able to

recognize the signs and respond appropriately and safely. Women exposed to violence require comprehensive, gender-sensitive health care services that address the physical and mental health consequences of their experience and aid their recovery. Women may also require crisis intervention services to prevent further harm. Treating cases of rape includes providing emergency contraception and prophylaxis for HIV and other STIs; psychological first-line support; and access to safe abortion and longer-term mental health care support, if needed. In addition to providing immediate medical services, the health sector is a potentially crucial gateway to providing assistance through referral to specific services for violence against women—or other aid that women may require at a later date, such as social welfare and legal aid. In all circumstances, all health care providers should be trained to provide a minimum first-line supportive response (WHO 2013, 2014b).

The WHO recommendations are addressed to health care providers because they are in a unique position to address the health and psychosocial needs of women who live with or who have experienced violence. They also seek to inform health policy makers or program managers in charge of planning and implementing health care services and those designing curricula.

The health sector can also play an advocacy role by supporting research to document the impact and extent of the problem, raise awareness, and establish links in the multisectoral response that is needed to address this serious health risk for women.

CONCLUSIONS

Significant progress in improving reproductive health has been made in some areas. Family planning has expanded worldwide through new approaches and new methods. A renewed commitment to family planning among donors and national governments has stimulated wider coverage of services accompanied by greater emphasis on quality and human rights. A new focus on adolescent sexual health has spurred interest in better ways to reach adolescents with effective messages and services. New approaches to reducing gender-based violence have been tested and the lessons learned have been distilled in clinical and policy guidelines.

However, much remains to be done. In spite of the advances in family planning, in 35 countries fewer than 30 percent of women of reproductive age use modern contraception. Choice of methods is still limited in many countries, even some with high levels of contraceptive prevalence, because of lack of access, provider biases, and other program factors. Although good options for safe abortion exist, these services remain

unavailable in many countries because of legal barriers, lack of training, and stigma. We have more information about how to reach adolescents with effective services and how to reduce gender-based violence. The major challenge is how to more widely implement those programs that have been proven to be safe, effective, and affordable.

NOTE

World Bank Income Classifications as of July 2014 are as follows, based on estimates of gross national income (GNI) per capita for 2013:

- Low-income countries (LICs) = US\$1,045 or less
- Middle-income countries (MICs) are subdivided:
 - a) lower-middle-income = US\$1,046 to US\$4,125
 - b) upper-middle-income (UMICs) = US\$4,126 to US\$12,745
- High-income countries (HICs) = US\$12,746 or more.

REFERENCES

Abbas, K., A. A. Khan, and A. Khan. 2013. "Costs and Utilization of Public Sector Family Planning Services in Pakistan." *Journal of the Pakistan Medical Association* 63 (4 Suppl 3): S33–9.

Adinma, E. D., J. I. Adinma, J. Ugboaja, C. Iwuoha, A. Akiode, and others. 2011. "Knowledge and Perception of the Nigerian Abortion Law by Abortion Seekers in South-Eastern Nigeria." *Journal of Obstetrics and Gynaecology* 31 (8): 763–76.

Agha, S. 2003. "The Impact of a Mass Media Campaign on Personal Risk Perception, Perceived Self-Efficacy and on Other Behavioral Predictors." *AIDS Care* 15 (6): 749–62.

Ahmed, S., Q. Li, L. Liu, and A. Tsui. 2012. "Maternal Deaths Averted by Contraceptive Use: An Analysis of 172 Countries." *The Lancet* 380 (9837): 111–25.

AIDSTAR-Two. 2012. *The Use of Information and Communication Technology in Family Planning, Reproductive Health and Other Health Programs: A Review of Trends and Evidence*. Cambridge, MA: Management Sciences for Health.

Amadou, B., J. Curran, L. Wilson, N. A. Dagadu, V. Jennings, and others. 2013. "Guide for Monitoring Scale up of Health Practices and Innovations." Manual. MEASURE Evaluation PRH, Chapel Hill, NC.

Askew, I., J. Chege, C. Njue, and S. Radeny. 2004. "A Multi-Sectoral Approach to Providing Reproductive Health Information and Services to Young People in Western Kenya: Kenya Adolescent Reproductive Health Project." FRONTIERS Project, Population Council, Washington, DC.

Baird, S. J., R. S. Garfein, C. T. McIntosh, and B. Ozler. 2012. "Effect of a Cash Transfer Programme for Schooling on Prevalence of HIV and Herpes Simplex Type 2 in Malawi: A Cluster Randomised Trial." *The Lancet* 379 (9823): 1320–29.

Bakamjian, L. 2008. "Linking Communities to Family Planning and LAPM via Mobile Services." Presentation at the Flexible Fund Partner's Meeting, Washington, DC. EngenderHealth, New York.

Banerjee, S. K., K. L. Andersen, J. Warvadekar, and E. Pearson. 2013. "Effectiveness of a Behavior Change Communication Intervention to Improve Knowledge and Perceptions about Abortion in Bihar and Jharkhand, India." *International Perspectives on Sexual and Reproductive Health* 39 (3): 142–51.

Barker, G., C. Ricardo, M. Nascimento, A. Olukoya, and C. Santos. 2010. "Questioning Gender Norms with Men to Improve Health Outcomes: Evidence of Impact." *Global Public Health* 5 (5): 539–53.

Barnes, J., J. Vail, and D. Crosby. 2012. "Total Market Initiatives for Reproductive Health. Strengthening Health Outcomes through the Private Sector Project." Abt Associates, Bethesda, MD.

Bellows, N. M., B. W. Bellows, and C. Warren. 2011. "The Use of Vouchers for Reproductive Health Services in Developing Countries: A Systematic Review." *Tropical Medicine and International Health* 16 (1): 84–96.

Bertrand, J., K. O'Reilly, J. Denison, R. Anhang, and M. Sweat. 2006. "Systematic Review of the Effectiveness of Mass Communication Programs to Change HIV/AIDS-Related Behaviors in Developing Countries." *Health Education Research* 21 (4): 567–97.

Bhuiya, I., U. Rob, A. H. Chowdhury, L. Rahman, N. Haque, and others. 2004. "Improving Adolescent Reproductive Health in Bangladesh." FRONTIERS, Population Council, Washington, DC.

Biddlecom, A., and V. Kantorova. 2013. "Global Trends in Contraceptive Method Mix and Implications for Meeting Demand for Family Planning." Presented in Session 81 at the meeting of the Population Association of America, New Orleans, April 11–13.

Bill & Melinda Gates Foundation and DFID (UK Department for International Development). 2012. "Landmark Summit Puts Women at Heart of Global Health Agenda." Press Release. <http://www.londonfamilyplanningsummit.co.uk/1530%20FINAL%20press%20release.pdf>.

Bingham, A., J. K. Drake, L. Goodyear, C. Y. Gopinath, A. Kaufman, and others. 2011. "The Role of Interpersonal Communication in Preventing Unsafe Abortion in Communities: The Dialogues for Life Project in Nepal." *Journal of Health Communication* 16 (3): 245–63.

Birdsall, N., A. C. Kelly, and S. W. Sinding, eds. 2001. *Population in the Developing World Matters: Demography, Economic Growth and Poverty*. Oxford: Oxford University Press.

Blanc, A. K., W. Winfrey, and J. Ross. 2013. "New Findings for Maternal Mortality Age Patterns: Aggregated Results for 38 Countries." *PLoS One* 8 (4): e59864. doi:10.1371/journal.pone.0059864.

Bloom, D. E., D. Canning, and J. Sevilla. 2003. *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*. Santa Monica, CA: Population Matters, RAND.

- Bongaarts, J., J. Cleland, J. Townsend, J. Bertrand, and M. Das Gupta. 2012. *Family Planning in the 21st Century: Rationale and Design*. New York, NY: Population Council.
- Bott, S., A. Morrison, and M. Ellsberg. 2005. "Preventing and Responding to Gender-Based Violence in Middle- and Low-Income Countries: A Global Review and Analysis." World Bank, Washington, DC.
- Bradley, H., A. Bedada, H. Brahmabhatt, A. Kidanu, D. Gillespie, and others. 2007. "Educational Attainment and HIV Status among Ethiopian Voluntary Counseling and Testing Clients." *AIDS and Behavior* 11 (5): 736–42.
- Brady, M. 2003. "Preventing Sexually Transmitted Infections and Unintended Pregnancy, and Safeguarding Fertility: Triple Protection Needs of Young Women." *Reproductive Health Matters* 11 (22): 134–41.
- Burns, B., A. Mingat, and R. Rakotomalala. 2003. *Achieving Universal Primary Education by 2015: A Chance for Every Child*. Washington, DC: World Bank.
- Chandy, K. T., T. R. Balakrishnan, J. M. Kantawalla, K. Mohan, N. P. Sen, and others. 1965. "Proposals for Family Planning Promotion: A Marketing Plan." *Studies in Family Planning* 1 (6): 7–12.
- Chapman, S., and H. Astatke. 2003. "Review of DFID Approach to Social Marketing. Annex 5: Effectiveness, Efficiency, and Equity in Social Marketing, and Appendix to Annex 5: The Social Marketing Evidence Base." DFID Health Systems Resource Centre, London.
- Cleland, J., M. Ali, and I. Shah. 2006. "Trends in Protective Behavior among Single vs. Married Young Women in Sub-Saharan Africa: The Big Picture." *Reproductive Health Matters* 14 (28): 17–22.
- De Brauw, A., D. O. Gilligan, J. Hoddinott, and S. Roy. 2013. "The Impact of Bolsa Familia on Women's Decision-Making Power." *World Development* 59: 487–504.
- Decker, M., and D. Montagu. 2007. "Reaching Youth through Franchise Clinics: Assessment of Kenyan Private Sector Involvement in Youth Services." *Journal of Adolescent Health* 40: 280–82.
- Deininger, K. 2003. "Does Cost of Schooling Affect Enrollment by the Poor? Universal Primary Education in Uganda." *Economics of Education Review* 22 (3): 291–305.
- DHS (Demographic and Health Surveys). Data from multiple surveys and years. <http://www.statcompiler.com>.
- DKT International. 2011. "1990–2010 Contraceptive Social Marketing Statistics." DKT International, Washington, DC.
- Eichler, R., B. Seligman, A. Beith, and J. Wright. 2010. *Performance-Based Incentives: Ensuring Voluntarism in Family Planning Initiatives*. Bethesda, MD: Health Systems 20/20 Project, Abt Associates Inc.
- Engelman, R. 1997. *Why Population Matters: International Edition*. Washington, DC: Population Action International.
- Erulkar, A. S., L. Etyang, C. Onoka, F. K. Nyagah, and A. Muyonga. 2004. "Behavior Change Evaluation of a Culturally Consistent Reproductive Health Program for Young Kenyans." *International Family Planning Perspectives* 30 (2): 58–67.
- Erulkar, A. S., and E. Muthengi. 2009. "Evaluation of Berhane Hewan: A Program to Delay Child Marriage in Rural Ethiopia." *International Perspectives on Sexual and Reproductive Health* 35 (1): 6–14.
- Eva, G., and T. D. Ngo. 2010. *MSI Mobile Outreach Services: Retrospective Evaluations from Ethiopia, Myanmar, Pakistan, Sierra Leone and Vietnam*. London: Marie Stopes International.
- Feder, G. S., M. Hutson, J. Ramsay, and A. R. Taket. 2006. "Women Exposed to Intimate Partner Violence: Expectations and Experiences When They Encounter Health Care Professionals: A Meta-Analysis of Qualitative Studies." *Archives of Internal Medicine* 166 (1): 22–37.
- Feldman, B. S., A. M. Zaslavsky, M. Ezzati, K. E. Peterson, and M. Mitchell. 2009. "Contraceptive Use, Birth Spacing, and Autonomy: An Analysis of the Oportunidades Program in Rural Mexico." *Studies in Family Planning* 40 (1): 51–62.
- Fiol, V., L. Briozzo, A. Labandera, V. Recchi, and M. Piñeyro. 2012. "Improving Care of Women at Risk of Unsafe Abortion: Implementing a Risk-Reduction Model at the Uruguayan-Brazilian Border." *International Journal of Gynaecology and Obstetrics* 118 (Suppl 1): S21–27.
- FP Ouagadougou Partnership. 2014. *Family Planning: Francophone West Africa on the Move—A Call to Action*. Family Planning Ouagadougou Partnership. http://www.prb.org/pdf12/ouagadougou-partnership_en.pdf.
- García Moreno, C., C. Zimmerman, A. Morris-Gehring, L. Heise, A. Amin, and others. 2014. "Addressing Violence against Women: A Call to Action." *The Lancet* 385 (9978): 1685–95. doi:10.1026/S0140-6736(14)61830-4
- Gay, J., K. Hardee, M. Croce-Galis, and C. Hall. 2011. "What Works to Meet the Sexual and Reproductive Health Needs of Women Living with HIV/AIDS?" *Journal of the International AIDS Society* 14 (56). doi: 10.1186/1758-2652-14-56.
- Gillespie, D., S. Ahmed, A. Tsui, and S. Radloff. 2007. "Unwanted Fertility among the Poor: An Inequity?" *Bulletin of the World Health Organization* 85 (2): 100–7.
- Gomperts, R., S. Petwo, K. Jelinka, L. Steen, K. Gemzell-Danielsson, and others. 2012. "Regional Differences in Surgical Intervention Following Medical Termination of Pregnancy Provided by Telemedicine." *Acta Obstetrica Gynecologica Scandinavica* 91 (2): 226–31.
- Grindlay, K., K. Lane, and D. Grossman. 2013. "Women and Health Providers' Experiences with Medical Abortion Provided through Telemedicine: A Qualitative Study." *Women's Health Issues* 23 (2): e117–22.
- Grossman, D., K. Grindlay, T. Buchacker, K. Lane, and K. Blanchard. 2011. "Effectiveness and Acceptability of Medical Abortion Provided through Telemedicine." *Obstetrics and Gynecology* 118 (2 pt 1): 296–303.
- Grunseit, A., S. Kippax, P. Aggleton, M. Baldo, and G. Slutkin. 1997. "Sexuality Education and Young People's Sexual Behavior: A Review of Studies." *Journal of Adolescent Research* 12 (4): 421–53.
- Gurman, T. A., and C. Underwood. 2008. "Using Media to Address Adolescent Sexual Health: Lessons Learned Abroad." In *Managing the Media Monster. The Influence of Media (from Television to Text Messages) on Teen Sexual Behavior and Attitude*, edited by J. D. Brown. Washington, DC: National Campaign to End Teen and Unplanned Pregnancy.

- Gynuity. 2013. "Map of Mefepristone Approvals." http://gynuity.org/downloads/mapmife_en.pdf.
- Habumureyi, P. D., and M. Zenawi. 2012. "Making Family Planning a National Development Priority." *The Lancet* 380 (9837): 78–80.
- Hardee, K., J. Kumar, K. Newman, L. Bakamjian, S. Harris, and others. 2014. "Voluntary, Human Rights-Based Family Planning: A Conceptual Framework." *Studies in Family Planning* 45 (1): 1–18.
- Hardee, K., K. Newman, L. Bakamjian, J. Kumar, S. Harris, and others. 2013. "Voluntary Family Planning Programs that Respect, Protect, and Fulfill Human Rights: A Conceptual Framework." Futures Group, Washington, DC.
- Hargreaves, J. R., L. A. Morison, J. C. Kim, C. P. Bonell, J. D. H. Porter, and others. 2008. "The Association between School Attendance, HIV Infection and Sexual Behaviour among Young People in Rural South Africa." *Journal of Epidemiology and Community Health* 62 (2): 113–19.
- Henderson, J., M. Puri, M. Blum, C. C. Harper, A. Rana, and others. 2013. "Effects of Abortion Legalization in Nepal, 2001–2010." *PLoS One* 8 (5): e64755.
- Hindon, M., and A. O. Fatusi. 2009. "Adolescent Sexual and Reproductive Health in Developing Countries: An Overview of Trends and Interventions." *International Perspectives on Sexual and Reproductive Health* 35 (2): 58–62.
- HIP (High Impact Practices for Family Planning). 2012. "Community Health Workers: Bringing Family Planning Services to Where People Live." USAID, Washington, DC. <http://www.fphighimpactpractices.org/resources/community-health-workers-bringing-family-planning-services-where-people-live-and-work>.
- . Forthcoming. "Making Existing Contraceptive Services Adolescent Friendly." USAID, Washington, DC. <http://www.fphighimpactpractices.org>.
- Horton, S., D. C. N. Wu, and E. Brouwer. 2015. "Methodology and Results for Systematic Search, Cost and Cost-Effectiveness Analysis." Working Paper, *Disease Control Priorities*, 3rd edition, Volume 2. <http://www.dcp-3.org/resources/working-papers>.
- IRH (Institute for Reproductive Health). n.d.a. "CycleSmart™ CycleBeads." Brochure. Georgetown University, Washington, DC. <http://irh.org/resource-library/cyclesmart-cyclebeads-brochure/>.
- . n.d.b. "IRH Awarded Fertility Awareness 'Fact Project' by USAID." Institute for Reproductive Health, Georgetown University, Washington, DC. <http://irh.org/blog/irh-awarded-fertility-awareness-fact-project-by-usaid/>.
- Janowitz, B., J. Stanback, and B. Boyer. 2012. "Task Sharing in Family Planning." *Studies in Family Planning* 43 (1): 47–62.
- Jiang, L., and K. Hardee. 2011. "How Do Recent Population Trends Matter to Climate Change?" *Population Research and Policy Review* 30: 287–312.
- Johnston, H. B., A. Schurmann, E. Oliveras, and H. H. Akhter. 2011. "Scaled Up and Marginalized: A Review of Bangladesh's Menstrual Regulation Programme and Its Impact." In *Social Determinants Approaches to Public Health: From Concept to Practice*, edited by E. Blas, J. Sommerfeld, and A. S. Kurup, 9–24. Geneva: World Health Organization.
- Kanesathasan, A., L. J. Cardinal, E. Pearson, S. Gupta, S. Mukherjee, and A. Malhotra. 2008. "Catalyzing Change: Improving Youth Sexual and Reproductive Health through DISHA, an Integrated Program in India." International Centre for Research on Women, Washington, DC.
- Karim, Q. A., K. Leasek, A. Kharsany, H. Humphries F. Ntombela, and others. 2015. "Impact of Conditional Cash Incentives of HSV-2 and HIV Prevention in Rural South African High School Students: Results of the CAPRISA 007 Cluster Randomized Controlled Trial." International AIDS Conference, Vancouver, July 19–22.
- Karim, A., T. Williams, L. Patkykewish, D. Ali, C. Colvin, and others. 2009. "The Impact of African Youth Alliance Program on the Sexual Behavior of Young People in Uganda." *Studies in Family Planning* 40 (4): 289–306.
- Kim, Y. M., A. Kols, R. Nyakauru, C. Marangwanda, and P. Chibatamoto. 2001. "Promoting Sexual Responsibility among Young People in Zimbabwe." *International Family Planning Perspectives* 27 (1): 11–19.
- Kirby, D. 2011. "Sex Education: Access and Impact on Sexual Behaviour of Young People." UN/POP/EGM-AYD/2011/07, United Nations Population Division, New York.
- Koenig, M. A., J. F. Phillips, R. S. Simmons, and M. A. Khan. 1987. "Trends in Family Size Preferences and Contraceptive Use in Matlab, Bangladesh." *Studies in Family Planning* 18 (3): 117–27.
- Kozuki, N., A. C. Lee, M. F. Silveira, A. Sania, J. P. Vogel, and others. 2013. "The Associations of Parity and Maternal Age with Small-for-Gestational-Age, Preterm, and Neonatal and Infant Mortality: A Meta-Analysis." *BMC Public Health* 13 (Suppl 3): S2. <http://www.biomedcentral.com/1471-2458/13/S3/S2>.
- Kozuki, N., A. C. Lee, M. F. Silveira, C. G. Victora, L. Adair, and others. 2013. "The Associations of Birth Intervals with Small-for-Gestational Age, Preterm and Neonatal, and Infant Mortality: A Meta-Analysis." *BMC Public Health* 13 (Suppl 3): S3. <http://www.biomedcentral.com/1471-2458/13/S3/S3>.
- Lee-Rife, S., A. Malhotra, A. Warner, and A. M. Glinski. 2012. "What Works to Prevent Child Marriage: A Review of the Evidence." *Studies in Family Planning* 43 (4): 287–303.
- Lloyd, C., and J. Young. 2009. *New Lessons: The Power of Educating Adolescent Girls*. New York: Population Council.
- Lou, C., B. Wang, Y. Shen, and E. Gao. 2004. "Effects of a Community-Based Sex Education and Reproductive Health Service Program on Contraceptive Use of Unmarried Youths in Shanghai." *Journal of Adolescent Health* 33: 433–40.
- Lynd, K., J. Blum, N. Ngoc, T. Shochet, P. D. Blumenthal, and others. 2013. "Simplified Medical Abortion Using a Semi-Quantitative Pregnancy Test for Home Based Follow Up." *International Journal of Gynecology and Obstetrics* 121 (2): 144–48.
- Madhavan, S., and D. Bishai. 2010. "Private Sector Engagement in Sexual and Reproductive Health and Maternal and Neonatal Health: A Review of the Evidence." Human Development Resource Center, DFID, London.
- Malarcher, S., O. Meirik, E. Lebetkin, I. Shah, J. Spieler, and others. 2011. "Provision of DMPA by Community Health

- Workers: What the Evidence Shows.” *Contraception* 83 (6): 495–503.
- Martine, G., and D. Schensul, eds. 2013. *The Demography of Adaptation to Climate Change*. New York, London, and Mexico City: UNFPA, IIED, and El Colegio de Mexico.
- Mathur, S., M. Mehta, and A. Malhotra. 2004. “Youth Reproductive Health in Nepal: Is Participation the Answer?” International Center for Research on Women, Washington, DC.
- Mavedzenge, S. N., A. Doyle, and D. Ross. 2011. “HIV Prevention in Young People in Sub-Saharan Africa: A Systematic Review.” *Journal of Adolescent Health* 49 (6): 568–86.
- Meekers, D., G. Stallworthy, and J. Harris. 1997. “Changing Adolescents’ Beliefs about Protective Sexual Behavior: The Botswana Tsa Banana Program.” Working Paper 3, Population Services International, Research Division, Washington, DC.
- Mercy, J., S. Hilis, A. Butchart, M. Bellis, C. Ward, and others. “Interpersonal Violence: Global Impact and the Paths to Prevention.” Forthcoming. In *Disease Control Priorities* (third edition): Volume 7, *Intentional Injury and Environmental Health*, edited by C. N. Mock, R. Nugent, and O. Kobusingye. Washington, DC: World Bank.
- Meuwissen, L. E., A. C. Gorter, and A. J. Knottnerus. 2006. “Impact of Accessible Sexual and Reproductive Health Care on Poor and Underserved Adolescents in Managua, Nicaragua: A Quasi-Experimental Intervention Study.” *Journal of Adolescent Health* 38 (1): 56.
- Michielsen, K., M. Chersich, S. Luchters, P. De Koker, R. Van Rossem, and others. 2010. “Effectiveness of HIV Prevention for Youth in Sub-Saharan Africa: Systematic Review and Meta-Analysis of Randomized and Non-Randomized Trials.” *AIDS* 24 (8): 1193–202.
- Ministry of Health and Population [Nepal], New ERA, and Macro International Inc. 2012. *Demographic and Health Survey 2011*. Kathmandu, Nepal: Ministry of Health and Population, New ERA, and ICF International, Calverton, Maryland.
- Molla, M., A. Aström, and Y. Berhane. 2007. “Applicability of the Theory of Planned Behavior to Intended and Self-Reported Condom Use in a Rural Ethiopian Population.” *AIDS Care* 19 (3): 425–31.
- Moreland, S., and E. Smith. 2012. “Modeling Climate Change, Food Security, and Population Change. Pilot-Testing the Model in Ethiopia.” USAID, MEASURE Evaluation PRH, and the David and Lucile Packard Foundation, Chapel Hill, NC.
- Moreland, S., E. Smith, and S. Sharma. 2010. “World Population Prospects and Unmet Need for Family Planning.” Futures Group, Washington, DC.
- Nakhaee, N., A. R. Mirahmadizadeh, H. A. Gorji, and M. Mohammadi. 2002. “Assessing the Cost-Effectiveness of Contraceptive Methods in Shiraz, Islamic Republic of Iran.” *Eastern Mediterranean Health Journal* 8: 55–63.
- NAS (National Academy of Sciences). 1986. *Population Growth and Economic Development: Policy Questions*. Committee on Population, National Research Council. Washington, DC: National Academy Press.
- Norman, C. 2013. “Utilizing Incentives for Global Family Planning and Reproductive Health Services Update: Altruistic or Euphemism for Population Control?” Master’s Thesis, Global Studies Program, Brandeis University, Waltham, MA.
- Onwujekwe, O., C. Ogbonna, O. Ibe, and B. Ozochukwu. 2013. “Willingness-to-Pay and Benefit-Cost of Modern Contraceptives in Nigeria.” *International Journal of Gynecology and Obstetrics* 122: 94–98.
- Pettifor, A., C. MacPhail, A. Selon, X. Gomez-Olive, J. Hughes, and others. 2015. “HPTN 068 Conditional Cash Transfer to Prevent Infection among Young Women in South Africa: Results of a Randomized Controlled Trial.” International AIDS Conference, Vancouver, July 19–22.
- Phillips, J. F., W. L. Greene, and E. F. Jackson. 1999. “Lessons from Community-Based Distribution of Family Planning in Africa.” Working Paper 121, Population Council, New York. <http://www.popcouncil.org/pdfs/wp/121.pdf>.
- Prata, N., F. Vahidnia, M. Potts, and I. Dries-Daffner. 2005. “Revisiting Community-Based Distribution Programs: Are They Still Needed?” *Contraception* 72 (6): 402–7.
- Prinja, S., A. Nandi, S. Horton, X. Levin, and R. Laxminarayan. 2015. “Costs, Effectiveness, and Cost-Effectiveness of Selected Surgical Procedures and Platforms.” In *Disease Control Priorities* (third edition): Volume 1, *Essential Surgery*, edited by H. T. Debas, P. Donkor, A. Gawande, D. T. Jamison, M. E. Kruk, and C. N. Mock. Washington, DC: World Bank.
- Pulerwitz, J., G. Barker, M. Segundo, and M. Nascimento. 2006. *Promoting More Gender-Equitable Norms and Behaviors among Young Men as an HIV/AIDS Prevention Strategy*. Washington, DC: Horizons Program, Population Council.
- Raymond, E. G., and D. A. Grimes. 2012. “The Comparative Safety of Legal Induced Abortion and Childbirth in the United States.” *Obstetrics and Gynecology* 119 (2 Pt 1): 215–19.
- Renner, R., D. Brahma, and N. Kapp. 2013. “Who Can Provide Effective and Safe Termination of Pregnancy Care? A Systematic Review.” *BJOG* 120 (1): 23–31.
- Richey, M., and R. M. Salem. 2008. *Elements of Success in Family Planning*. Population Reports Series J (57), INFO Project, Johns Hopkins Bloomberg School of Public Health, Baltimore.
- Ringheim, K. 2007. “Ethical and Human Rights Perspectives on Providers’ Obligation to Ensure Adolescents’ Rights to Privacy.” *Studies in Family Planning* 38 (4): 245–52.
- Ross, J., and A. K. Blanc. 2012. “Why Aren’t There More Maternal Deaths? A Decomposition Analysis.” *Maternal Child Health Journal* 16 (2): 456–63. doi:10.1007/s10995-011-0777-x.
- Ross, J., and E. Smith. 2011. “Trends in National Family Planning Programs, 1999, 2004 and 2009.” *International Perspectives on Sexual and Reproductive Health* 37 (3): 125–33.
- Ross, J., and J. Stover. 2013. “Use of Modern Contraception Increases When More Methods Become Available: Analysis

- of Evidence from 1982–2009.” *Global Health: Science and Practice* 1 (2): 203–12. doi:10.9745/GHSP-D-13-00010.
- Royal Society. 2012. *People and the Planet*. London: The Royal Society.
- Rutstein, S. O., K. Johnson, A. Conde-Agudelo, and A. Rosas-Bermudez. 2008. “Further Analysis of the Effects of Birth Spacing on Infant and Child Mortality: A Systematic Review and Meta-Analysis.” Technical Consultation and Scientific Review of Birth Spacing, World Health Organization, Geneva, June 13–15.
- Samandari, G., M. Wolf, I. Basnett, A. Hyman, and K. Andersen. 2012. “Implementation of Legal Abortion in Nepal: A Model for Rapid Scale-Up of High-Quality Care.” *Reproductive Health* 9: 7.
- Schutt-Aine, J., and M. Maddaleno. 2003. *Sexual Health and Development of Adolescents and Youth in the Americas: Program and Policy Implications*. Washington, DC: Pan American Health Organization.
- Seamans, Y., and C. M. Harner-Jay. 2007. “Modelling Cost-Effectiveness of Different Vasectomy Methods in India, Kenya, and Mexico.” *Cost Effectiveness and Resource Allocation* 5: 8.
- Senderwitz, J. 1999. “Making Reproductive Health Services Youth Friendly.” Research, Program and Policy Series. Pathfinder International, FOCUS on Young Adults, Washington, DC.
- Seltzer, J. 2002. *The Origins and Evolution of Family Planning Programs in Developing Countries*. Santa Monica, CA: RAND.
- Simmons, R., and J. Shiffman. 2007. “Scaling-up Reproductive Health Service Innovations: A Framework for Action.” In *Scaling Up Health Service Delivery: From Pilot Innovations to Policies and Programmes*, edited by Ruth Simmons, Peter Fajans, and Laura Ghiron, 1–30. Geneva: World Health Organization.
- Singh, J. S. 2009. *Creating a New Consensus on Population: The Politics of Reproductive Health, Reproductive Rights and Women’s Empowerment*. London: Earthscan.
- Sneeringer, R. K., D. L. Billings, B. Ganatra, and T. L. Baird. 2012. “Roles of Pharmacists in Expanding Access to Safe and Effective Medical Abortion in Developing Countries: A Review of the Literature.” *Journal of Public Health Policy* 33 (2): 218–29.
- Stephenson, R., A. O. Tsui, S. Sulzbach, P. Bardsley, G. Bekele, and others. 2004. “Franchising Reproductive Health Services.” *Health Services Research* 39 (6 Pt 2): 2053–80.
- Stoebenau, K., and T. W. Valente. 2003. “Using Network Analysis to Understand Community-Based Programs: A Case Study from Highland Madagascar.” *International Family Planning Perspectives* 29 (4): 167–73.
- Stover, J., and J. Ross. 2009. “How Increased Contraceptive Use Has Reduced Maternal Mortality.” *Maternal and Child Health* 14 (5): 687–95. doi:10.1007/s10995-009-0505-y.
- Sweat, M. D., J. Denison, C. Kennedy, V. Tedrow, and K. O’Reilly. 2012. “Effects of Condom Social Marketing on Condom Use in Developing Countries: A Systematic Review and Meta-Analysis, 1990–2010.” *Bulletin of the World Health Organization* 90 (8): 613–22A. doi:10.2471/BLT.11.094268.
- Thapa, S., S. Sharma, and N. Khatiwada. 2014. “Women’s Knowledge of Abortion Law and Availability of Services in Nepal.” *Journal of Biosocial Science* 46 (2): 266–77.
- Todd, J. E., P. Winters, and G. Stecklov. 2010. “Evaluating the Impact of Conditional Cash Transfer Programs on Fertility: The Care of the *Red de Protección Social* in Nicaragua.” *Journal of Population Economics* 25 (1): 267–90. doi:10.1007/s00148-010-0337-5.
- Tripney, J., I. Kwan, and K. Bird. 2013. “Postabortion Family Planning Counseling and Services for Women in Low-Income Countries: A Systematic Review.” *Contraception* 87: 17–25.
- Trussel, J. 2011. “Contraceptive Efficacy.” In *Contraceptive Technology*, Twentieth Revised Edition, edited by R. A. Hatcher, J. Trussel, A. L. Nelson, W. Cates, D. Kowal, and M. Policar. New York: Ardent Media.
- UN (United Nations). 1968. “Final Act of the International Conference on Human Rights, Teheran, April 22–May 13.” UN, New York.
- . 2011. *World Population Prospects 2011*. New York: Department of Economic and Social Affairs, Population Division, UN.
- UN Population Division. 2009. “What Would It Take to Accelerate Fertility Decline in the Least Developed Countries?” Policy Brief 2009/1, United Nations, New York.
- . 2013a. *World Abortion Policies 2013*. New York. <http://www.un.org/en/development/desa/population/publications/policy/world-abortion-policies-2013.shtml>.
- . 2013b. *World Contraceptive Patterns 2013*. New York: Department of Economic and Social Affairs, United Nations.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 2009. *UNESCO’s Short Guide to Essential Characteristics of Effective HIV Prevention*. Paris: UNESCO. www.unesco.org/aids
- . 2013. “Schooling for millions of Children Jeopardized by Reductions in Aid.” Institute for Statistics Database, No. 25, UNESCO.
- UNFPA (United Nations Population Fund). 2012. *By Choice, Not by Chance. State of World Population 2012*. New York: UNFPA.
- . 2013. *Motherhood in Childhood. Facing the Challenge of Adolescent Pregnancy*. 2013 State of the World Population Report. New York: UNFPA.
- UNICEF (United Nations Children’s Fund). 2005. “Progress for Children: A Report Card on Gender Parity and Primary Education.” No. 2. UNICEF, New York.
- . 2011. *The State of the World’s Children 2011*. New York: UNICEF.
- USAID/Africa Bureau, USAID/Population and Reproductive Health, Ethiopia Federal Ministry of Health, Malawi Ministry of Health, and Rwanda Ministry of Health. 2013. *Three Successful Sub-Saharan Africa Family Planning Programs: Lessons for Meeting the MDGs*. Washington, DC: USAID.
- Villarruel, A. M., Y. Zhou, E. C. Gallegos, and D. L. Ronis. 2010. “Examining Long-Term Effects of *Cuidate*—A Sexual Risk Reduction Program in Mexican

- Youth.” *Revista Panamericana de Salud Publica* 27 (5): 345–51.
- World Bank and UNICEF. 2009. *Abolishing School Fees in Africa: Lessons from Ethiopia, Ghana, Kenya, Malawi, and Mozambique*. Washington, DC: World Bank.
- WHO (World Health Organization). 1997. “Beyond Acceptability: Users’ Perspectives on Contraception, Reproductive Health Matters.” WHO, Geneva.
- . 2011. *Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2008*, 6th ed. Geneva: WHO.
- . 2012. *Safe Abortion: Technical and Policy Guidance for Health Systems*. Geneva: WHO.
- . 2013. *Responding to Intimate Partner Violence and Sexual Violence against Women: WHO Clinical and Policy Guidelines*. Geneva: WHO.
- . 2014a. *Global Health Estimates for Deaths by Cause, Age, and Sex for Years 2000–2012*. Geneva: WHO. http://www.who.int/healthinfo/global_burden_disease/en/.
- . 2014b. *Trends in Maternal Mortality: 1990 to 2013*. Estimates by WHO, UNFPA, World Bank, and the United Nations Population Division. Geneva: WHO.
- . 2014c. *Health Care for Women Subjected to Intimate Partner Violence or Sexual Violence. A Clinical Handbook*. Geneva: WHO.
- . 2015. *Trends in Maternal Mortality: 1990 to 2015*. Estimates by WHO, UNFPA, World Bank, and the United Nations Population Division. Geneva: WHO.
- Williams, T., S. Mullen, A. Karim, and J. Posner. 2007. *Evaluation of the Africa Youth Alliance Program in Ghana, Tanzania and Uganda: Impact on Sexual and Reproductive Health Behavior among Young People*. Arlington, VA: JSI Research and Training Institute.
- Zuurmond, M. A., R. S. Geary, and D. A. Ross. 2012. “The Effectiveness of Youth Centers in Increasing Use of Sexual and Reproductive Health Services: A Systematic Review.” *Studies in Family Planning* 43 (4): 239–54.