



www.figo.org

Contents lists available at SciVerse ScienceDirect

International Journal of Gynecology and Obstetrics

journal homepage: www.elsevier.com/locate/ijgo

PRECONGRESS WORKSHOP

Meeting the need for modern contraception: Effective solutions to a pressing global challenge

Roy Jacobstein ^{a,*}, Carolyn Curtis ^b, Jeff Spieler ^b, Scott Radloff ^b^a The RESPOND Project, EngenderHealth, NY, USA^b Office of Population and Reproductive Health, US Agency for International Development, WA, USA

ARTICLE INFO

Keywords:

Contraception
 Family planning programs
 Low-resource countries
 Modern contraception
 Sexual and reproductive health
 Unmet need

ABSTRACT

Voluntary family planning is one of the most efficacious and cost-effective means of improving individual health, gender equity, family well-being, and national development. Increasing contraceptive use and reducing unmet need for family planning are central to improving maternal health (UN Millennium Development Goal 5). In less-developed regions of the world, especially Sub-Saharan Africa and South Asia, human and financial resources are limited, modern contraceptive use is relatively low, unmet need for modern contraception is high, and consequently maternal morbidity and mortality are high. However, the international community is showing renewed commitment to family planning, a number of high impact program practices have been identified, and a number of Sub-Saharan African countries (e.g. Ethiopia, Malawi, and Rwanda) have successfully made family planning much more widely and equitably available. The International Federation of Gynecology and Obstetrics (FIGO) has joined with other international and donor organizations in calling for increased funding and more effective programming to improve maternal health and family planning in low-resource countries. Continued engagement by FIGO, its member societies, and its individual members will be helpful in addressing the numerous barriers that impede universal access to modern contraception in low-resource countries.

© 2013 Published by Elsevier Ireland Ltd. on behalf of International Federation of Gynecology and Obstetrics.

1. Background

When made available and accessible, modern contraception is widely used, even in many of the world's least-developed countries. Increasing contraceptive use and reducing unmet need for family planning are central to the achievement of United Nations Millennium Development Goal 5 (MDG 5), improving maternal health [1], and can be seen as essential contributors to achievement of all 8 MDGs [2]. Great progress has been made during the past 4 decades in meeting the contraceptive needs of women and men. In low-resource countries, modern contraceptive use by women aged 15–49 years who are married or in a union (referred to here as MWRA) has risen from negligible levels in the early 1970s to plateau at 55%–57% during 2000–2012 [3,4]. Ninety-two percent of modern contraceptive use in low-resource countries is among MWRA [3]. Fertility has dropped accordingly, from an average total fertility rate (TFR) of 4.7 lifetime births per woman in the early 1970s to 2.6 births per woman in the late 2000s [4]. Increases in contraceptive use account for 75% of the fertility decline in low-resource countries and have substantially reduced high-risk pregnancy and thus maternal mortality [5]. Progress has lagged, however, in Sub-Saharan Africa and South Asia [3–8],

where investment in family planning by national governments and donor agencies has been inadequate, failing to keep pace with demand [3]. In Sub-Saharan Africa, a woman's lifetime maternal mortality risk is 1 in 31, compared with 1 in 4300 in high-resource regions [1].

2. Benefits of family planning

The health benefits of family planning include sizable reductions in maternal morbidity, maternal mortality, infant and child mortality, and abortion [3–5]. In 2008, 342 000 women died of maternal causes, with 99% of maternal deaths occurring in low-resource countries [4]. However, without contraceptive use, maternal mortality would have been 1.8 times higher: contraceptive use averted more than 272 000 maternal deaths, a 44% reduction. In addition, for every instance of maternal mortality, 20 instances of serious morbidity (e.g. obstetric fistula) occur [9]. Use of modern contraception in low-resource countries in 2012 will avert 1.8 million neonatal and infant deaths and 138 million abortions, 40 million of which are unsafe [3]. Complications of abortion cause 13% of maternal deaths [10].

Family planning also confers many social and economic benefits. The ability to realize one's reproductive intentions via access to a wide range of contraceptive methods is a cornerstone of modern life, fundamental to ensuring that women enjoy their full rights and opportunities. At the household level, improved access to family planning services leads to substantial improvements in women's earnings and children's schooling [11]. At the national level, higher modern contraceptive use

* Corresponding author at: The RESPOND Project, EngenderHealth, 440 Ninth Avenue, New York, NY 10001, USA. Tel.: +1 212 5618029; fax: +1 212 561 8067.

E-mail address: rjacobstein@engenderhealth.org (R. Jacobstein).

correlates with lower fertility [12], which enhances economic growth [11]. Conversely, high unwanted fertility (actual fertility in excess of desired fertility) correlates with poverty and represents an inequity [13]. High fertility and poverty correlate with high levels of youth dependency, unemployment, political instability, gender inequality, poor health indicators, and other markers of low socioeconomic development and human misery. Thus, the world's governments have long affirmed the rights of individuals and couples to sexual and reproductive health (SRH), including the right to freely and responsibly choose the number, spacing, and timing of their children, free of discrimination, coercion, and violence [14–16].

3. Use of modern contraception

Worldwide, 56% of MWRA—661 million women—use modern contraception [17]. Asia accounts for over two-thirds of modern contraceptive use, with China and India alone accounting for half of worldwide use. Female sterilization is the most widely used method in the world, and the intrauterine device (IUD) is the most widely used reversible method. Nineteen percent of MWRA (223 million) rely on female sterilization, accounting for one-third (34%) of total modern method use worldwide, and 14% of MWRA (169 million) rely on the IUD, which accounts for 26% of total modern method use. Thus, among women who are married or in union, use of the IUD and female sterilization account together for 60% of the world's use of modern contraception. The share of other modern methods' use includes: the pill, 9% (104 million); the male condom, 8% (90 million); the injectable, 4% (41 million); and male sterilization (vasectomy), 2% (28 million). Use of contraceptive implants has been below 1% worldwide, but is increasing in low-resource countries, with prospects of even greater usage in the next few years because of markedly reduced commodity prices [18].

There are marked differences among regions in modern method use, as well as in the proportion of demand—the sum of modern contraceptive use plus unmet need for modern contraception—being met [8,17]. For example, 73% of MWRA in North America and 67% in Latin America use modern contraception, but only 16% in Sub-Saharan Africa do so [17]. Whereas 80% of demand for modern contraception is met worldwide, including 86% in North America, 81% in Latin America, and 80% in Asia (67% in Southern Asia), only 34% of demand for modern contraception is met in Sub-Saharan Africa.

Variations are also found *within* Africa. The modern method contraceptive prevalence rate (CPR) is 58% in Southern Africa, 54% in Northern Africa (excluding Sudan), and 23% in Eastern Africa, but is less than 9% in Western Africa and less than 7% in Middle Africa [17]. West and Middle African countries with a modern method CPR of 8% or less include Chad (2%, 2004); Guinea (6%, 2005); Democratic Republic of Congo (6%, 2007); Mali (7%, 2006); and Nigeria (8%, 2008) [19]. Southern and Eastern African countries with a modern method CPR of 39% or higher include Kenya (39%, 2008–09); Malawi (42%, 2010); Rwanda (45%, 2010); Swaziland (48%, 2006–07); Namibia (53%, 2006–07); Zimbabwe (57%, 2010–11); and South Africa (60%, 2003–04). Whereas total demand for modern contraception has increased in most countries of Southern and Eastern Africa—for example, from 35% to 60% in Tanzania over 14 years and from 49% to 72% in Rwanda over the past decade—there has been little to no increase in West and Middle African countries [8]. In West and Middle Africa, 45% of married women have never used modern contraception and do not intend to use it, in contrast to 19% of married women in East and Southern Africa.

4. Effectiveness of modern contraception

Effectiveness is a key consideration for contraceptive users (who are using contraception to avoid pregnancy). Effectiveness of a method is measured in terms of the number of unintended pregnancies per

1000 women during the first year of typical use (as opposed to “perfect” use) [20]. With no method use, there would be 850 unintended pregnancies per 1000 women during 1 year. Effectiveness rates of methods commonly used in low-resource countries are: withdrawal, 220 unintended pregnancies per 1000 women; (male) condom, 180 per 1000; pill, 90 per 1000; injectable (Depo-Provera), 60 per 1000; copper-T IUD, 8 per 1000; female sterilization, 5 per 1000; male sterilization (vasectomy), 1.5 per 1000; and implants, 0.5 per 1000 (i.e. 1 unintended pregnancy per 2000 women). In terms of contraceptive failure, withdrawal is a substantial improvement over no method use, but it is inferior to the “resupply” methods commonly used in family planning programs (pills, condoms, and injectables). IUDs, hormonal implants, female sterilization, and vasectomy—collectively referred to as long-acting and permanent methods, or LAPMs—are far more effective still, because they require fewer—often many fewer—correct and consistent human actions. Thus, for example, the copper-T IUD is 11 times more effective than the pill, and the implant is 120 times more effective than the injectable. A recent modeling study concluded that if (only) 20% of African women currently using pills and injectables were to switch to using the more effective contraceptive implant, 1.8 million unintended pregnancies, 576 000 abortions (many of them unsafe), and 10 000 maternal deaths would be averted over 5 years [21].

5. Unmet need for modern contraception

More than 1 in every 4 women (26%) in low-resource countries—222 million overall—have an unmet need for modern contraception [3]. (Withdrawal and periodic abstinence are classified as nonuse of modern contraception and users of these methods are considered to have unmet need for modern contraceptive methods [8,21]). Unmet need in the world's 69 poorest countries increased from 153 million women in 2008 to 162 million women in 2012. Unmet need varies by region, and is generally higher where modern method use is lower and among less educated and more rural populations [3,8,17]. Asia has the greatest *number* of women with an unmet need for modern contraception, 119 million [17]. India alone has 45 million women with an unmet need for modern contraception and Sub-Saharan Africa has 39 million women with an unmet need. However, Sub-Saharan Africa has the highest *proportion* of married women with an unmet need, at 31%, compared with 12% in North America, 15% in Asia, and 16% in Latin America. Unmet need for modern contraception exceeds use of modern contraception in Western Africa, Middle Africa, Eastern Africa, and Western Asia. In Middle Africa, unmet need for modern contraception (37%) is 5 times greater than modern method use (7%), namely 84% of total demand for modern contraception is *not* being met. Similarly, in Western Africa, unmet need for modern contraception (30%) is more than triple the level of modern method use (9%), with 77% of total demand being unmet. Young, sexually active, never-married women often face even greater difficulties than married women in accessing contraception [3]. Forty-four percent of unmarried women who need contraception in low-resource countries are not using a modern method. Unmet need among unmarried women aged 15–49 years in West and Middle Africa is 51% [8]. Seventy-nine percent of unintended pregnancies in low-resource countries occur among women with an unmet need for modern contraception [3]. Half of the estimated 80 million annual unintended pregnancies in low-resource countries end in abortion. If all unmet need for contraception were met, 104 000 maternal deaths would be prevented each year, mainly in Sub-Saharan Africa and South Asia [4].

6. Unmet need and reproductive intentions

Unmet need can be further subdivided according to a woman's or couple's reproductive intentions either to postpone a first or subsequent birth for at least 2 years (unmet need for spacing) or to cease

further childbearing (unmet need for limiting) [8,22]. More than one-quarter (26%) of women in low-resource countries aged 15–49 years are never-married, most of them adolescents and young adults aged 15–24 years [3]. Sixty percent of the population in the world's least developed countries is aged 0–24 years and in a number of Sub-Saharan African countries almost half of the population is under 15 years. This young age structure implies a large and growing need in the future for delaying and spacing births. The imperative to meet the current and future family planning needs of this “youth bulge” should not, however, obscure attention to the contraceptive needs of those with a demand for limiting [23,24]. As desired family size and fertility continue to fall in low-resource countries, women there are spending a greater proportion of their reproductive lives having a demand to limit (as women do in almost all countries of Europe, Southeast Asia, and the Americas). Recent data from a number of Eastern and Southern African countries (e.g. Kenya, Madagascar, Malawi, Namibia, Rwanda, South Africa, and Swaziland) indicate that the demand to limit births not only has risen among married women, but now exceeds demand to space births [8,23,24]. Demand to limit (a reproductive intention) does not equate to need for permanent methods (a method choice), although users of permanent methods have a demand to limit.

7. The purpose and function of family planning programs

The purpose of family planning programs is to provide wide and equitable access to a broad range of modern contraceptive methods and services, thereby enabling women and men to freely and responsibly realize their reproductive intentions (to delay, space, or limit) across their reproductive life cycle. Because family planning programs are complex systems and are situated within broader and even more complex health systems, it is helpful to simplify them conceptually to better understand their structure, function, and dynamics. The following subsections present two ways to conceptualize family planning programs.

7.1. A comprehensive and holistic program model for family planning and sexual and reproductive health

A family planning (or other SRH) program can be usefully subdivided into 3 functional program components: supply, enabling environment, and demand [25]. *Supply* elements include service providers and sites, contraceptive supplies and equipment, and the training, supervision, management, logistics, and referral subsystems needed for regular and reliable provision of a wide range of modern methods in a quality manner. Family planning service providers may be specialist and generalist doctors, midwives, clinical officers, nurses, counselors, peer educators, pharmacists, outreach workers, or community health workers (CHWs). Service sites may be clinical facilities, health and other outreach posts, pharmacies, drug shops, or CHW outlets. An *enabling environment* for family planning requires up-to-date service delivery policies, guidelines, and standards, which must be followed in practice. Strong political commitment and leadership at all levels are also critical, as are adequate financial and human resources, good governance and management, supportive social and cultural norms, and gender equity. On the *demand* side, family planning programs need to present positive attitudes about all modern family planning methods, to promote available family planning services, and to provide accurate information to individuals and communities, counteracting myths and misconceptions where necessary. This requires a range of social and behavioral change interventions: basic health education, counseling, interpersonal communication, peer support, social marketing, and mass media communication. It should also be kept in mind that these program components do not operate in isolation but rather mutually interact, and can be mutually reinforcing. Investments in one program area can yield achievements in another; conversely, deficiencies in any one program component can impede overall progress in achieving greater

and more equitable access to family planning. Thus, it is important to “program holistically” in design and implementation of family planning and other SRH programs; EngenderHealth’s “SEED Assessment Guide for Family Planning Programming” may be a helpful tool in this regard [25].

7.2. The who, what, where, when, and how of family planning

Another useful conceptual subdivision is into “the who, what, where, when, and how of family planning.” Under the rubric of “who,” the client being served is central. The perspectives and work situations of providers are also very important, especially for LAPMs, which are dependent upon the availability, actions, and motivation of skilled providers [26,27]. Besides direct service providers, other important and influential stakeholders in family planning programs are policymakers, program leaders, program managers, supervisors, community leaders, multilateral and bilateral donors, and other international partners [25]. Under the rubric of “what” are the categories of family planning methods (e.g. barrier, hormonal, long-acting reversible, or permanent), their characteristics (e.g. service requirements, parameters of use, length of effectiveness, and common adverse effects), and related service policies, including which cadres can provide which methods. “Where” includes the various sites for family planning service provision, as well as the sectors providing the service (i.e. public, nonprofit private, and commercial private sectors). “When” relates to the timing of method provision with respect to pregnancy and/or delivery (i.e. postabortion, postpartum, or interval). “How” the service will be delivered includes such considerations as whether services entail client fees, whether services are provided via social marketing or community-based distribution (CBD), whether family planning services are integrated with other health services, and whether services will be provided in static facilities or via mobile outreach.

8. Barriers to contraceptive access and use

To provide modern contraception, family planning programs must address the many client-, provider-, and health system-level barriers that result in contraceptive nonuse and unmet need. The most common reasons for contraceptive nonuse cited by clients relate to health, exposure, pregnancy, or opposition [8,28]. Among 52 countries that have had at least one Demographic and Health Survey (DHS) since 2001, the most frequently cited reason for nonuse among women with demand to space or limit is health concerns (29%), namely concern about possible adverse effects or general health concerns about modern contraceptive use [8]. This is followed in frequency, at 18%–19% each, by exposure reasons (i.e. not having sex or infrequent sex), pregnancy-related reasons (e.g. postpartum amenorrhea or breastfeeding), and opposition (e.g. husband is opposed, or religious reasons are cited). At the provider level, long-recognized and often-persistent barriers include lack of knowledge, skills, and motivation (or adequate reward), bias for or against certain methods (e.g. IUDs), poor management of adverse effects, and unjustified limits on provision by certain provider cadres [26–31]. Common health system barriers include inadequate human and financial resources; competing healthcare demands; suboptimal organization of work, for example, failing to integrate family planning services with safe delivery, postabortion care, maternal and child health (MCH) or HIV/AIDS services, or failing to adjust for increased workloads that ensue; geographic inaccessibility; service fees; and stockouts of family planning commodities, equipment, and supplies.

9. Family planning programs: What has worked?

Ten essential elements that contribute to successful family planning programs have been identified by more than 700 international family planning professionals from 98 countries: (1) supportive policies; (2) evidence-based programming; (3) strong leadership and good

management; (4) effective communication strategies; (5) contraceptive security; (6) well-trained and high-performing staff; (7) client-centered care; (8) easy access to services; (9) affordable services; and (10) appropriate integration of services [32]. A related set of “high-impact practices” (HIPs) have recently been identified to help focus resources and program effort for the broadest reach and greatest impact [33]. The HIPs apply either to the enabling environment or to the supply and demand sides of family planning service delivery, and are subcategorized as “proven” or “promising,” based on WHO criteria. Proven HIPs for family planning service delivery (i.e. where evidence exists to recommend widespread implementation) include: providing family planning counseling and services at the same time and location where women receive treatment for abortion-related complications; supporting distribution of a wide range of contraceptive methods through social marketing; and training, equipping, and supporting CHWs to provide a wide range of family planning methods. Promising practices, for which good evidence exists that the intervention will lead to impact, include offering a wide range of family planning methods through mobile outreach services and offering family planning services to postpartum women during routine child immunization contacts. Most of these topics are discussed in the following section.

10. Family planning programs: “No missed opportunities” to expand access and equity

10.1. Postpartum family planning

The postpartum period, defined *programmatically* as the first 12 months after childbirth, is a time of high need for family planning. An analysis of DHS data from 27 countries found that 95% of women who were 12 or fewer months postpartum did not want another birth within 2 years, yet 65% of them were not using contraception [34]. That is, almost two-thirds of postpartum women had an unmet need for contraception—and nearly 40% of *all* unmet need for family planning in these countries was in the first year postpartum. The prenatal and postpartum periods offer many opportunities for, respectively, anticipating and responding to need for family planning, as women have relatively frequent contact with the healthcare system for prenatal care, delivery, postpartum/postnatal care, and infant/child care. For these reasons, a number of international organizations including FIGO have issued a call for collective action to prioritize programmatic attention to postpartum family planning and to increase funding for it [35].

Various contraceptive methods are provided in family planning programs during the immediate postpartum (from birth to 48 hours), early postpartum (4–6 weeks), and/or extended postpartum (up to 12 months) periods. The lactational amenorrhea method (LAM), initiated at birth with exclusive breastfeeding, is 98% effective for up to 6 months postpartum (in the absence of return to menses), and subsequent use of other modern methods is greater among LAM users than among nonusers [36]. Provision of IUDs postpartum, either post-placentally (within 10 minutes of delivery) or prior to discharge from the facility (within 48 hours of delivery), or beginning at 4 weeks postpartum and thereafter (“interval insertion”) has been shown to be safe and acceptable, and has been a successful part of longstanding family planning programs in Mexico, Egypt, Turkey, and China [36,37]. Female sterilization, greatly underutilized in much of Africa, can be safely provided following vaginal delivery or cesarean delivery, or 6 weeks postpartum and thereafter, as is widely done in high-resource countries [17]. Female sterilization prevalence (CPR) has recently risen to 5% or higher in some Eastern and Southern African countries, including Kenya, Malawi, Namibia, South Africa, and Swaziland [19,38]. Postpartum vasectomy services are also feasible [39]. The required 3-month period of reliance on another contraceptive method after a vasectomy dovetails well with the period of postpartum abstinence and infertility [36].

Normative recommendations for use of implants and other progestin-only methods by breastfeeding women prior to 6 weeks postpartum vary considerably. WHO assigns such use a Category 3, risks outweigh benefits [40]. However, the US Centers for Disease Control and Prevention (CDC) assigns Category 2 (benefits outweigh risks) for such use up to 4 weeks postpartum, and Category 1 (no restrictions on use) thereafter [41]; and the UK’s Royal College of Obstetricians and Gynaecologists (RCOG) and National Health Service assign such use by breastfeeding (as well as non-breastfeeding) women at any time a Category 1 [42]. Immediate postpartum provision of implants would likely be relatively easy for family planning programs to implement, and increased availability would likely lead to increased use, given the high interest of postpartum women in spacing or limiting [24,34], as well as recent rises in implant use. The CPR for implants is now greater than 6% in Rwanda (among unmarried as well as married women), greater than 3% in Ethiopia, almost 2% in Kenya, and rising elsewhere as well [19]. Between 2004–05 and 2010–11, use of implants has risen 17-fold in Ethiopia and Rwanda and 10-fold in Malawi [18]. In Zambia, more than 22 000 implants (and 11 000 IUDs) were inserted over 14 months by “dedicated providers,” all midwives [27]. In Mali, 18% of the 12 000 women offered family planning on the day their children received immunization chose an implant or an IUD [36].

Provision of postpartum family planning presents challenges as well as opportunities [35,36]. For health systems, integrating family planning into maternal, neonatal, and child health (MNCH) services often requires restructuring and/or strengthening linkages between services. Provision of integrated services may also entail increased work for MNCH staff, who may also lack the requisite family planning knowledge and skills. The presence of dedicated family planning providers or of MNCH providers trained in family planning counseling and method provision facilitates the provision of client-centered integrated services and helps women meet their reproductive intentions to space or limit future pregnancies. In the Philippines, 1 year after family planning and immunization services were integrated, family planning service volume increased by 70%–80% and immunization services increased by 80%–90% [36]. Secondary analysis of DHS surveys from 27 countries found that unmet need for family planning could be reduced by 50% if family planning were effectively integrated with childhood immunization programs [35].

10.2. Postabortion family planning

Although most women being treated for complications of induced or spontaneous abortion are good candidates for modern contraception, research and situational analyses from 17 low-resource countries paint a disappointing picture: 43% of women seeking postabortion care services were not using a family planning method [43]; nearly 20% had a previous induced abortion [44]; and only 1 in 4 postabortion care clients (25%) leave the facility with family planning, although more than half want it provided to them [45]. Providing family planning counseling and services at the same time and location where women receive treatment for complications related to abortion is a key component of postabortion care [44] and a proven HIP in family planning [33]. However, the family planning component continues to receive less attention than the treatment component of postabortion care [44,46,47]. The most successful models for providing family planning as part of postabortion care entail reorganization of services to ensure that family planning is provided *prior to the client's discharge* from the facility, rather than a referral being given for family planning services to be provided elsewhere. Provision of family planning on-site typically requires training staff in family planning counseling and service provision and otherwise ensuring a supportive environment for the regular and routine delivery of quality family planning (and other reproductive health care), free of stigmatization or other barriers.

When postabortion care services are reorganized, increases in family planning provision and use can be generated, replicated, and

sustained within a short time. For example, in Turkey, a pilot program initiated in a major maternity hospital in Ankara resulted in a first-year increase in family planning provision from 65% to 97%, i.e. women receiving no family planning dropped from 35% to 3% [48]. In addition, the method mix shifted toward highly effective methods more in line with fertility preferences, e.g. IUD use rose from 20% to 49%, and female sterilization from negligible levels to 15%, with a concomitant reduction in total abortions and repeat abortions. A subsequent nationwide rollout to 24 public and private sector facilities also rapidly led to increased, cost-saving, and sustainable postabortion care family planning services. For example, within 2 years, postabortion care family planning rose in 14 hospitals in Istanbul (where up to one-third of all abortions in Turkey are performed) from 37% to 72%, with the 3 public hospitals achieving rates of more than 90%. High levels of postabortion care family planning provision were sustained for more than 7 years.

Decentralization of postabortion care services to lower-level facilities situated closer to women and their communities, with reorganization to ensure on-site provision of family planning services prior to discharge from the facility, has also been successful. For example, after such decentralization in Tanzania, more than 17 000 postabortion care clients were served from 2007–2010 at 193 facilities in 21 districts, with 89% receiving family planning counseling and 83% leaving the facility with a modern family planning method [49]. In Senegal, similar decentralization to 323 facilities (23 health centers and 300 health posts) in 23 districts led to a doubling of postabortion care services. More than 6200 women received treatment of incomplete abortion, the proportion of women being counseled about family planning rose from 46% to 82%, and the proportion leaving the facility with a modern contraceptive method rose almost four-fold, from 15% to 56% [50]. Ensuring the completion of the postabortion care model's family planning component (i.e. counseling and method provision) is a critical aspect of meeting overall unmet need for contraception. Meeting unmet need for modern contraception in low-resource countries would prevent 26 million abortions, 16 million of which are unsafe [4]. Unsafe abortion accounts for 13% of the world's maternal deaths [10].

10.3. Task sharing and task shifting

Task sharing and task shifting for family planning service delivery are practices recommended by WHO that entail the sharing or delegating of tasks from higher-level cadres of health workers to lower-level cadres [51,52]. This terminology is relatively recent, but the practice has been longstanding in family planning programs seeking to increase access to modern contraception more widely and equitably despite critical shortages and suboptimal distribution of health personnel [29,53]. Safe and effective provision of hormonal and clinical methods (LAPMs) has devolved progressively from obstetrician-gynecologists to general doctors to "midlevel" provider cadres (clinical officers, midwives, and nurses). The short-acting "resupply" methods—condoms, pills, and, increasingly, injectables—have long been made available in social marketing and community-based distribution (CBD) programs.

CHWs have provided injectable contraception in more than a dozen countries, including Bangladesh, Bolivia, Ethiopia, Haiti, Madagascar, Malawi, Nepal, Rwanda, Senegal, Uganda, and Zambia [51–55]. A recent systematic review of evidence from 9 of these countries finds that the provision of injectable contraception by appropriately trained and supervised CHWs is safe, effective in reaching new users and underserved populations, and acceptable to clients [54]. Based on this evidence, WHO, FIGO, USAID, and 7 other signatory donor and service-providing organizations recommend that provision of injectable contraception by CHWs be a part of family planning programs in low-resource countries [56]. As well as providing injectable contraception, nurses and midwives have long provided IUDs (and, more recently, implants) in low-resource countries, which has also been endorsed by WHO [51,52]. As noted above, use of hormonal implants is rising in a number of Sub-Saharan African countries. Ethiopia has recently launched a program

to train 15 000 rural community health extension workers (CHEWs) to insert implants [55]. Clinical officers, who routinely perform minor abdominal surgery, provide female sterilization services in a number of Sub-Saharan African countries, including Kenya, Tanzania, and Malawi (described in the following section).

10.4. Mobile outreach

Mobile outreach has attracted interest as a means to broaden access and expand method choice, thereby increasing equity among rural and other underserved populations and communities, to whom mobile services are directed and provided [57]. There is no one model for mobile service delivery, but mobile outreach generally entails teams of family planning service providers making regular, periodic visits to lower-level health facilities or to community facilities, or services are provided in a mobile unit itself. Service providers either come from the public sector or from a private sector partner via public–private partnerships; in either instance, such services are usually donor-funded and are usually free of charge to clients. A range of modern methods is made available, including LAPMs, which typically are not easily provided by resource-strapped family planning programs (compared with the resupply methods). Greater availability of LAPMs is key to expanding method choice and equity, because when they are made available and affordable they are widely used [23,27], as illustrated in the following paragraph.

Mobile services have been shown in a number of countries (e.g. Ethiopia, Malawi, Nepal, Pakistan, Sierra Leone, Tanzania, and Vietnam) to reach more clients, underserved communities, and new users [38,58,59]. In some instances mobile services account for a substantial share of overall national provision of LAPMs. For example, in Nepal, government-run mobile clinics account for 33% of vasectomy prevalence and 20% of female sterilization prevalence [57]. In Tanzania, more than half of all LAMP clients—580 000 women—received their chosen method via mobile outreach services between 2007 and 2010, and use of implants and IUDs tripled (and the modern method CPR increased from 20% in 2004 to 27% in 2010) [59]. Generating demand through community mobilization was an essential component of increasing services, and districts increasingly included mobile outreach in their plans and budgets. In Malawi, one nongovernmental organization, Banja Lo Mtsogolo (BLM, the local affiliate of Marie Stopes International), is credited as the source of supply for one-third of all female sterilizations provided in Malawi, and this may be a substantial underestimate [38]. From 2008 through 2011, BLM provided more than 170 000 female sterilization procedures, 90% of them via mobile outreach, and all procedures were performed by clinical officers, not doctors (Malawi had fewer than 400 doctor-practitioners in 2010). The prevalence of female sterilization in Malawi is now 10%, representing almost 1 in every 4 married users of modern contraception, and equity is high as well: rural use (9%) is close to urban use (12%), and women with no education and those with secondary education have the same level of substantial use (14%) [38].

11. Contraceptive use and method choice in a situation of universal access

There is no "ideal" method mix—choice from among a wide range of contraceptive options has been and must always be the bedrock principle guiding family planning programs [14]. However, it is instructive to consider patterns of method use in countries that have achieved universal access to girls' education, low maternal mortality, universal access to a wide range of modern contraceptive methods, and low fertility. These 4 mutually reinforcing parameters are both major causes as well as indicators of a country's being "developed." In the UK, where sociocultural, gender, and health system constraints to contraceptive use are minimal and consequently use of modern contraception is very high, 81% of women who are married or in union use modern contraception,

only 3% use traditional methods, unmet need is negligible, and the method mix is “balanced” [60]. The most commonly used methods are the pill (22%), condoms (18%), vasectomy (17%), and female sterilization (13%). The IUD is used by 6% of women, injectables by 3%, and other methods (including implants) by 2%. The 4 highly effective LAPMs together account for more than 44% of modern contraceptive use. Widespread demand to limit future births can be inferred from permanent contraception’s 37% share of modern method use. The high use of vasectomy and of condoms, together comprising over 43% of modern method use, suggests a high degree of gender equity and male involvement in the realization of reproductive intentions in the UK.

12. Three “African success stories”: Ethiopia, Malawi, and Rwanda

Despite human and financial resource constraints and competing health burdens, Ethiopia, Malawi, and Rwanda have recently enjoyed success in making modern contraception much more widely and equitably available to their populace. In statements prepared for the July 2012 London Summit on Family Planning, the prime ministers of Ethiopia and Rwanda confirmed their countries’ commitment to family planning as a national development priority [61]. The Government of Malawi has also committed itself to improving access to SRH services, including family planning [62]. Accordingly, contraceptive use has risen notably in all 3 countries across wealth quintiles and education levels, demand for modern contraception has become an individual and societal norm (72% in Malawi, 72% in Rwanda, and 54% in Ethiopia), and fertility has declined [19]. Ethiopia’s modern method CPR has quadrupled, from 6% in 2000 to 27% in 2011; Malawi’s CPR increased by 50% between 2004 and 2010 (from 28% to 42%); and Rwanda’s CPR has risen from 10% in 2005 to 45% in 2010—the fastest rate of increase ever recorded (7% annually), with a concomitant fall in fertility, from 6.1 to 4.6 lifetime births per woman. Unmet need for modern contraception fell in all 3 countries, most substantially in Rwanda, where it declined from 45% to 25% among married women. However, unmet need remains high in all 3 countries (Malawi at 30% and Ethiopia at 27%), and unwanted fertility is substantial. This unmet need is thus an indicator both of family planning program “success” (greater demand generated) and of remaining programmatic challenge. Diversifying the method mix is an additional challenge in all 3 countries. Use of injectables predominates (as it does in almost all Sub-Saharan African countries), accounting for 76% of modern method use in Ethiopia, 61% in Malawi, and 57% in Rwanda. However, implants comprise 14% of use in Rwanda and Ethiopia and female sterilization comprises 21% of use in Malawi. These relatively high proportions of use confirm that despite their being more intrinsically complex clinical methods, long-acting reversible and permanent contraceptive methods can be provided widely by Sub-Saharan African family planning programs, and in that case will be popular with clients.

13. The role of FIGO and its members in helping family planning programs meet unmet need

FIGO has recently joined a number of international and donor organizations in issuing calls to action for increased funding and more effective programming to improve maternal health and family planning in low-resource countries. Specific consensus statements call for: helping women and men attain universal access to family planning [63] as advocated by the 2010 UN World Summit [64]; strengthening the role of nurses and midwives [65]; providing modern contraception to 50 million additional couples by 2015 [66]; giving greater priority to the family planning/reproductive health needs of women in the (extended) postpartum period [35] and those of adolescents as an underserved and vulnerable group (including married adolescents) [66]; promoting family planning service provision after the complications associated with induced or spontaneous abortion as a standard of practice for doctors, nurses, and midwives (in both the public and private health sector)

[44]; and permitting CHWs to provide injectable contraception, thereby expanding access to an important and popular modern method [56].

Leadership by FIGO, its member societies, and its individual members will continue to be valuable in addressing the numerous political, provider-related, and health system barriers to wide and equitable provision of family planning. This will include helping to ensure that optimal policies for family planning service delivery are not only in place but being followed in practice; that appropriate task sharing/task shifting takes place, including to the full range of CHWs; that family planning-related knowledge, counseling, and skills are basic competencies to be acquired in the pre-service, in-service, and postgraduate education for each professional discipline (doctors, midwives, and nurses); that client/user fees are removed at the point of care for women who cannot afford them; and that family planning is promoted as an essential service in individual FIGO members’ clinical practices. Further, individual obstetrician-gynecologists—in their positions of influence and authority as heads of departments at local, district, regional, or national health facilities or as faculty and deans in schools of medicine—can and should champion these consensus approaches that FIGO has endorsed. This will lead to greater and more equitable access to modern contraceptive methods and services for women, men, and adolescents, which thereby will improve the health and well-being of families, communities, and the country as a whole.

Conflict of interest

The authors have no conflicts of interest to declare.

References

- [1] United Nations. The Millennium Development Goal Report 2010, Addendum 2: Goal 5: Improve maternal health. Available at: http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2010/2010_Addendum_Goal5.pdf.
- [2] Cates Jr W. Family planning: the essential link to achieving all eight Millennium Development Goals. *Contraception* 2010;81(6):460–1.
- [3] Singh S, Darroch JE. Adding It Up: Costs and Benefits of Contraceptive Services—Estimates for 2012. New York: Guttmacher Institute and United Nations Population Fund (UNFPA); 2012.
- [4] Ahmed S, Li Q, Liu L, Tsui A. Maternal deaths averted by contraceptive use: an analysis of 172 countries. *Lancet* 2012;380(9837):111–25.
- [5] Cleland J, Conde-Agudelo A, Peterson H, Ross J, Tsui A. Contraception and health. *Lancet* 2012;380(9837):149–56.
- [6] Jacobstein R, Bakamjian L, Pile J, Wickstrom J. Fragile, threatened, and still urgently needed: family planning programs in sub-Saharan Africa. *Stud Fam Plann* 2009;40(2):147–54.
- [7] Cleland J, Ndugwu R, Zulu E. Family planning in sub-Saharan Africa: progress or stagnation? *Bull World Health Organ* 2011;89(2):137–43.
- [8] Westoff C. Unmet Need for Modern Contraceptive Methods. DHS Analytical Studies, No. 28. Calverton, Maryland, USA: ICF International; 2012.
- [9] UNFPA. Maternal morbidity: Surviving childbirth but enduring chronic ill-health. Available at: <http://www.unfpa.org/public/mothers/pid/4388>. [Accessed January 10, 2013].
- [10] World Health Organization. Unsafe Abortion: Global and Regional Estimates of Unsafe Abortion and Associated Mortality in 2008. Geneva: WHO; 2011.
- [11] Canning D, Schultz TP. The economic consequences of reproductive health and family planning. *Lancet* 2012;380(9837):165–71.
- [12] Population Reference Bureau. World Population Data Sheet 2012. Washington, DC: PRB; 2012.
- [13] Gillespie D, Ahmed S, Tsui A, Radloff S. Unwanted fertility among the poor: an inequity? *Bull World Health Organ* 2007;85(2):100–7.
- [14] United Nations. International Conference on Population and Development: Cairo Programme of Action. United Nations International Conference on Population and Development (ICPD). Cairo, Egypt; 1994.
- [15] United Nations. Millennium Declaration. Available at: <http://www.un.org/millennium/declaration/ares552e.htm/>.
- [16] United Nations. The Millennium Development Goals Report 2011. Available at: <http://mdgs.un.org/unsd/mdg/Resources/Static/Data/2011%20Stat%20Annex.pdf>.
- [17] United Nations Department of Economic and Social Affairs, Population Division. World Contraceptive Use 2011. Available at: <http://www.un.org/esa/population/publications/contraceptive2011/contraceptive2011.htm>; 2012.
- [18] Jacobstein R, Stanley H. Contraceptive implants: providing better choice to meet growing family planning demand. *Glob Health Sci Pract*. in press.
- [19] Measure DHS. STATcompiler. Calverton, MD. Available at: www.statcompiler.com; 2012. [Accessed July 31, 2012].
- [20] Trussell J. Contraceptive Efficacy. In: Hatcher RA, Trussell J, Nelson AL, Cates W, Kowal D, Policar M, editors. *Contraceptive Technology: Twentieth. Revised edition*. New York: Ardent Media; 2011.

- [21] Hubacher D, Mavranzeouli I, McGinn E. Unintended pregnancy in sub-Saharan Africa: magnitude of the problem and potential role of contraceptive implants to alleviate it. *Contraception* 2008;78(1):73–8.
- [22] Bradley S, Croft T, Fishel J, Westoff C. Revising Unmet Need for Family Planning. DHS Analytical Studies, No. 25. Calverton, Maryland, USA: ICF International; 2012.
- [23] Wickstrom J, Jacobstein R. Contraceptive security: incomplete without long-acting and permanent methods of family planning. *Stud Fam Plann* 2011;42(4):291–8.
- [24] Van Lith LM, Yahner M, Bakamjian L. Women's growing desire to limit births in sub-Saharan Africa: meeting the challenge. *Glob Health Sci Pract*. in press.
- [25] EngenderHealth. The Supply-Enabling Environment Demand (SEED) Assessment Guide for Family Planning Programming. New York: EngenderHealth; 2011 [Available at: <http://www.engenderhealth.org/files/pubs/family-planning/seed-model/seed-assessment-guide-for-family-planning-programming-english.pdf>].
- [26] Shelton J. The provider perspective: human after all. *Int Fam Plann Perspect* 2001;27(3):152–61.
- [27] Neukom J, Chilambwe J, Mkandawire J, Mbewe R, Hubacher D. Dedicated providers of long-acting reversible contraception: a new approach in Zambia. *Contraception* 2011;83(5):447–52.
- [28] Darroch JE, Sedgh G, Ball H. Contraceptive Technologies: Responding to Women's Needs. New York: Guttmacher Institute; 2011.
- [29] Shelton JD, Angle M, Jacobstein R. Medical barriers to access to family planning. *Lancet* 1992;340(8831):1334–5.
- [30] Bertrand J, Hardee K, Magnani R, Angle M. Access, quality of care and medical barriers in family planning programs. *Int Fam Plann Perspect* 1995;21(2):64–9.
- [31] Stanback J, Thompson A, Hardee K, Janowitz B. Menstruation requirements: a significant barrier to contraceptive access in developing countries. *Stud Fam Plann* 1997;28(3):245–50.
- [32] Richey C, Salem RM. Elements of success in family planning programming. *Population Reports. Series J, No. 57*. Baltimore: INFO Project, Johns Hopkins Bloomberg School of Public Health; 2008 [Available at: <http://www.k4health.org/toolkits/INFO-publications/elements-success-family-planning-programming>].
- [33] USAID. High impact practices in family planning. Available at: http://hips.k4health.org/sites/hips.k4health.org/files/HIP%20List_Eng.pdf; November 18 2011. [Accessed January 17, 2013].
- [34] Ross J, Winfrey J. Contraception use, intention to use and unmet need during the extended postpartum period. *Int Fam Plann Perspect* 2001;27:20–7.
- [35] Maternal and Child Health Integrated Program. Statement for Collective Action for Postpartum Family Planning, Nov 2011. Unpublished. Available at: http://transition.usaid.gov/our_work/global_health/pop/news/issue_briefs/ppfp_statement.pdf
- [36] MCHIP-FP, ACCESS-FP. Update: Annotated Bibliography of Postpartum Family Planning Literature, May 2011. Available at: <https://www.k4health.org/sites/default/files/2011%20PPFP%20Annotated%20Bibliography.pdf>.
- [37] Grimes DA, Lopez LM, Schulz KF, Van Vliet HA, Stanwood NL. Immediate post-partum insertion of intrauterine devices. *Cochrane Database Syst Rev* 2010(5):CD003036.
- [38] Jacobstein R. Lessons from the recent rise in use of female sterilization in Malawi. *Stud Fam Plann* 2013;44(1):85–95.
- [39] Vernon R, Solorzano J, Munoz B. Introducing sustainable vasectomy services in Guatemala. *Int Fam Plann Perspect* 2007;33(4):182–7.
- [40] World Health Organization. Medical eligibility criteria for contraceptive use, 4th edition, 2009. Geneva: WHO; 2010.
- [41] Centers for Disease Control, Prevention. U.S. medical eligibility criteria for contraceptive use, 2010. Adapted from the World Health Organization medical eligibility criteria for contraceptive use, 4th edition. *MMWR Recomm Rep* June 18, 2010;59:1–86.
- [42] National Collaborating Centre for Women's and Children's Health. Long-Acting and Reversible Contraception: the Effective and Appropriate Use of Long-Acting and Reversible Contraception. London: RCOG Press; 2005 [Available at: <http://www.nice.org.uk/nicemedia/live/10974/29912/29912.pdf>].
- [43] Solis F, del Carmen Rojas A, Gadea A, Rivera-Fuentes E, Vernon R. Situation analysis: Integration of family planning services in postpartum, postabortion and prevention of mother to child transmission programs in Nicaragua. Washington, DC: Frontiers in Reproductive Health, Population Council; 2008.
- [44] FIGO, ICM, ICN, USAID. Family planning: A key component of post abortion care. Consensus statement: 25 September 2009. Available at: <http://www.figo.org/news/figo-consensus-statement-family-planning-key-component-post-abortion-care>.
- [45] Kidder E, Sonneveldt E, Hardee K. Who receives PAC services? Evidence from 14 countries. Washington, DC: The Futures Group, POLICY Project; June 2004.
- [46] Curtis C. Meeting health care needs of women experiencing complications of miscarriage and unsafe abortion: USAID's postabortion care program. *J Midwifery Womens Health* 2007;52(4):368–75.
- [47] Global Postabortion Care Desk Review. The Global Health Technical Assistance Project; 2012 [Washington, DC].
- [48] Senlet P, Catagay L, Ergin J, Mathis J. Bridging the gap: Integrating family planning with abortion services in Turkey. *Int Fam Plann Perspect* 2001;27(2):90–5.
- [49] Vogel D, Mielke E, Nelson-Bobbit J. The ACQUIRE Tanzania Project (ATP) Mid-Term Review. Tanzania: USAID; 2011.
- [50] Management Sciences for Health. Scaling up postabortion care services: results from Senegal. Occasional Paper, No. 5. Cambridge, MA, USA: Management Sciences for Health; 2006.
- [51] World Health Organization. WHO recommendations: optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting. Geneva: WHO; 2012 [Available at: http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843_eng.pdf].
- [52] World Health Organization. WHO policy brief. From evidence to policy: optimizing the health workforce for effective family planning services. Geneva: WHO; 2012.
- [53] Janowitz B, Stanback J, Boyer B. Task sharing in family planning. *Stud Fam Plann* 2012;43(1):57–62.
- [54] Malarcher S, Meirik O, Lebetkin E, Shah I, Spieler J, Stanback J. Provision of DMPA by community health workers: What the evidence shows. *Contraception* 2011;83(6):495–503.
- [55] Federal Democratic Republic of Ethiopia Ministry of Health. A situation analysis of family planning in Ethiopia, June 2011; October 2012 [Addis Ababa].
- [56] World Health Organization, USAID, Family Health International. Community-based health workers can safely and effectively administer injectable contraception: Conclusions from a technical consultation. Research Triangle Park (NC): FHI; 2009.
- [57] USAID. Mobile outreach services: expanding access to all modern contraceptives, including long-acting and permanent methods. Unpublished; HIP evidence brief, draft; August 2012.
- [58] Eva G, Ngo TD. MSI Mobile Outreach Services: Retrospective Evaluations from Ethiopia, Myanmar, Pakistan, Sierra Leone and Vietnam. London: Marie Stopes International (MSI); 2010.
- [59] Tanzania Project ACQUIRE. Bringing LA/PMS to rural women: Family planning services through mobile outreach. ATP Brief, No 5. Dar es Salaam and New York: EngenderHealth; 2011.
- [60] Population Reference Bureau. Family Planning Worldwide 2008 Data Sheet; 2008 [Washington, DC].
- [61] Habumuremyi PD, Zenawi M. Making family planning a national development policy. *Lancet* 2012;380(9837):78–80.
- [62] Ministry of Development Planning and Cooperation. RAPID: Population and Development in Malawi. Lilongwe, Malawi: Population Unit, MoDPC; 2010.
- [63] International Federation of Gynecology and Obstetrics, International Confederation of Midwives, International Council of Nurses. The importance of voluntary family planning and its provision by our members. Available at: <http://www.figo.org/files/figo-corp/The%20Importance%20of%20Voluntary%20Family%20Planning%20and%20Its%20Provision%20by%20Our%20Members.pdf>; May 24, 2011.
- [64] United Nations. Resolution 65/1: Keeping the promise: United to achieve the Millennium Development Goals. A/RES/65/1. Available at: www.un.org/en/mdg/summit2010/pdf/outcome_documentN1051260.pdf; October 19, 2010.
- [65] The Partnership for Maternal, Newborn and Child Health. Consensus for Maternal, Newborn and Child Health. Available at: http://www.who.int/pmnch/topics/maternal/consensus_12_09.pdf; November 2009.
- [66] International Confederation of Midwives, International Federation of Gynecology and Obstetrics, International Pediatric Association. Joint Statement on Adolescent Reproductive Health and Adolescent Pregnancy. Unpublished. Available at: <http://www.internationalmidwives.org/Portals/5/ICM%20FIGO%20IPA%20Joint%20Statement%20on%20Adolescents%20-%20Sept%202009.pdf>.