

# Chapter 12

## Fostering Change in Medical Settings: A Holistic Programming Approach to “Revitalizing” IUD Use in Kenya

Roy Jacobstein

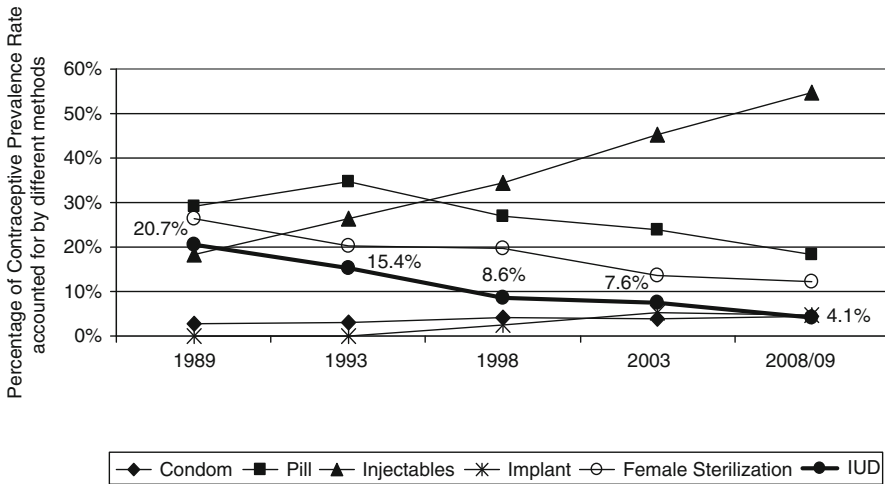
### 12.1 Introduction

The intrauterine device (IUD) is a highly effective, safe, long-acting, and quickly reversible contraceptive method that is suitable for most women who wish to delay a first birth, or space or limit subsequent births (Kaneshiro and Arby 2010; Thonneau and Almont 2008; WHO 2010a). Globally, the IUD is the most widely used temporary contraceptive method, relied upon by over 150 million women (14.3 %) worldwide (Salem 2006; UN 2011). However, despite excellent method characteristics and high prevalence rates in some countries and regions, the IUD is often difficult to access. On the African continent, prevalence varies from as low as 0.5 % in Eastern Africa and much of sub-Saharan Africa, to as high as 22.3 % in Northern Africa (UN 2011). Provider and client myths and misunderstandings about the IUD abound, and there are numerous other access barriers as well. In the fragile, resource-strapped countries of sub-Saharan Africa (Jacobstein et al. 2009), even those with relatively stronger family planning (FP) programs and higher levels of IUD use, such as Kenya, have experienced declines in IUD prevalence overall, and as a proportion of modern contraceptive use (see Fig. 12.1).

Efforts are being undertaken to “revitalize family planning” (Speidel et al. 2009) and to make “underutilized” contraceptive methods such as the IUD more widely available and accessible. To better inform such efforts, this chapter presents a case study of the experience of one capacity-building agency in providing technical assistance for “IUD revitalization” to the Ministry of Health (MOH) in Kisii District, Kenya. Project design and implementation were informed by the latest scientific evidence and international guidance about IUDs; by considerations of how to foster change in medical settings; and by a holistic programming model for FP service

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Data Source: Kenyan Demographic and Health Surveys, various years, [www.measuredhs.com](http://www.measuredhs.com). Secondary Analysis by the RESPOND Project. (About the RESPOND Project, see note 13)

**Fig. 12.1** Time trends for use of IUDs and other contraceptives as a share of modern contraceptive method mix in Kenya, 1989–2003, among married women of reproductive age (MWRA)

delivery. Although the project was modest in scale and in temporal and geographic scope, it generated substantial increases in IUD use and these higher levels of use were sustained for at least 30 months after project activities ceased. Following brief consideration in Sects. 12.2, 12.3, and 12.4 of the IUD’s characteristics and service delivery challenges, the dynamics of successful change, and the nature of medical settings, the Kisii IUD project is presented in detail in Sects. 12.5 and 12.6.

## 12.2 The IUD: Characteristics, Challenges, New Evidence, and Guidance

The IUD is one of the most effective modern contraceptive methods available, with an annual failure rate of 0.8 % per 100 women in the first year of use (UNDP et al. 1997), comparable to that of female sterilization (Trussell 2007). The IUD is also the most cost-effective of all modern methods, with the lowest service costs per couple year of protection (Tumlinson et al. 2011). It can be provided by a number of health cadres and enjoys a high continuation rate, with an estimated 88 % of women still using the method after 1 year; however, its availability is restricted by commodity stock-outs, limited human resources, competing demands on health providers, and sub-optimal organization and management of work, as well as by widespread misperceptions, myths, and biases (Townsend and Jacobstein 2007; Alnakash 2008). Reproductive health programs have to work hard to address these barriers.

Clients and providers alike often hold erroneous beliefs and perceptions about the IUD's safety and mechanism of action. For example, they often think that the IUD works as an abortifacient by preventing implantation, although it works predominantly by preventing sperm from reaching the fallopian tubes (where fertilization occurs) and/or by altering the egg (Mishell 1998; Sivin 1989). Providers sometimes also fear that the IUD may cause or worsen anemia or increase the risk of ectopic pregnancy. However, while some users of copper-bearing IUDs report increased menstrual bleeding, no significant changes in hemoglobin levels have been found<sup>1</sup> (Milsom et al. 1995). Because IUDs are so effective at preventing pregnancy, women using an IUD have a >90 % lower risk of ectopic pregnancy compared to sexually-active noncontraceptors (Mishell 1998; Sivin 1991).

Provider concern is often centered on the nexus of sexually-transmitted infection (STI), pelvic inflammatory disease (PID), and infertility. Providers often fear that insertion of the IUD—or its ongoing presence in a woman at risk of STI—will increase the risk of PID and in turn lead to infertility. They also often have concerns that the IUD may be unsuitable for HIV-infected women (Jacobstein 2007). The latest scientific evidence on these matters is reassuring. While there is slightly increased risk of clinical PID in the first 20 days after insertion, these rates are much lower than providers typically imagine, and after the first 20 days of IUD use, PID rates are comparable to those in non-users.<sup>2</sup> In addition, any possible link between IUD use and infertility is now considered to be “immeasurable” and “not of public health significance” (Skjeldestad 2008; Hubacher et al. 2001).<sup>3</sup> Even in settings of high STI prevalence, risk of clinical PID due to the IUD is very low, with estimates ranging from 0.075 to 0.15 % in sub-Saharan Africa (Stanback and Shelton 2008). Studies of IUD use among women with HIV/AIDS (conducted mainly in Kenya) have found that IUD complication rates are low comparable to non-HIV-infected women (Sinei et al. 1998; Morrison et al. 2001). The IUD is not associated with increased cervical shedding of HIV, which would be a proxy for increased risk of infecting an uninfected male partner (Richardson et al. 1999). Moreover, multiple studies have found that IUD use does not increase the risk of HIV acquisition (WHO 2010b; Morrison et al. 2001).

Reflecting this latest evidence, the World Health Organization's *Medical Eligibility Criteria* (MEC), which gives guidance on contraceptive safety and

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<sup>1</sup>Significantly increased vaginal bleeding sometimes occurred with the older, inert IUDs like the Lippes Loop. However, copper-bearing IUDs can generally be used by women with iron deficiency anemia (WHO 2010a).

<sup>2</sup>The rate of clinical PID the first 20 days post-insertion is 7 cases per 1,000 women-years of use (Farley et al. 1992; Mishell 1998); that is, 993 of 1,000 women having an IUD inserted would *not* get PID in the immediate post-insertion period. Rates of clinical PID after the first 20 days of IUD use range between 0.6 and 1.6 cases/1,000 woman-years of IUD use. These findings are the basis for WHO's recommendation that only one *routine* follow-up visit is needed, 3–6 weeks after insertion (WHO 2004).

<sup>3</sup>Tubal infertility was not associated with IUD use per se, or with duration of use, reasons for removal, or gynecologic symptoms during use; rather, it was associated with presence of antibodies to chlamydia.

appropriate use, indicates that most women are eligible to use an IUD. This includes women who: are postabortion, immediately postpartum, or at farther intervals from childbirth (4 weeks postpartum and beyond); want to delay, space, or limit births; are breastfeeding; are HIV-infected (including those with AIDS on treatment); are anemic; or are of any age and parity, including younger women and those who have not yet had any children (WHO 2010a).<sup>4</sup> This guidance informs national service and training policies, guidelines, and standards, and influences provider practice (Peterson 2006).

### 12.3 The Dynamics of Change

Like any other aspect of reproductive health (or development more generally), those undertaking programmatic efforts to improve knowledge, provider provision, client access, and service quality with respect to the IUD are acting as change agents, and trying to induce others to change their behavior. Yet, change is unsettling to most people.<sup>5</sup> Furthermore, “good changes” are not necessarily adopted—indeed, “knowledge-to-practice” or “research-to-practice” is not only not automatic but is often difficult to achieve. Furthermore, perceptions often differ between programmatic change agents and their intended beneficiaries.<sup>6</sup> The intended recipients of an intervention (e.g., IUD providers or potential clients) have their own “truths” that influence their perceptions and understandings of innovations: they are not simply “empty vessels” waiting to be “filled up” with scientific truth or knowledge of “best

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<sup>4</sup>The MEC has four classification categories: Category 1, “no restriction: use method in any circumstances”; Category 2, “generally use: benefits outweigh risks”; Category 3, “generally do not use: risks outweigh benefits”; and Category 4, “method not to be used”. The MEC schema also distinguishes between providers *with* clinical judgment and providers with *limited* clinical judgment. For the latter group of providers, Categories 1 and 2 are compressed to “Yes” and Categories 3 and 4 to “No.” The MEC largely classifies the IUD in Category 1 or Category 2. Women living in high STI- and HIV-prevalence settings or who are HIV-infected now belong to Category 2 with respect to IUD use, whereas on theoretical grounds these conditions had previously been Category 3. Women with high *individual* risk of STI, which can be determined with a checklist in low-resource settings, are in Category 3. Women with AIDS who are not yet on antiretroviral therapy (ART) are also in Category 3, but women with AIDS who are being treated and are clinically well are in Category 2 and thus good candidates for an IUD if they desire one.

<sup>5</sup>“The art of progress is to preserve order amid change and to preserve change amid order,” philosopher and mathematician Alfred North Whitehead reminds us (Whitehead 1929); in other words, although change may be inevitable, and indeed its pace may be accelerating, people incline towards homeostasis.

<sup>6</sup>Beauty is indeed in the eye of the beholder: often what the development change agent sees as a “beautiful” new way of doing things is perceived as unattractive by the “changee”. In this sense, the type of perspective about change being presented in this chapter can induce a sense of empathy and lead to “bottom-up” programming. As a wise Kenyan midwife/IUD service provider once told the author, “We must walk in their shoes, or we will fail.”

practices.”<sup>7</sup> Behavior change theory can help implementers of FP programs achieve better program outcomes; yet experience shows that proven principles and dynamics of fostering and maintaining behavior change are often not fully factored into program design and implementation. As a result, access barriers are not fully addressed, and little changes.

The Kisii project for improving IUD services, described below, was influenced by the Diffusion of Innovations theory of how, why, and at what rate new ideas and technologies spread (Rogers 2003). This theory posits that three broad dimensions most influence the speed and extent of the change process associated with the adoption of an innovation: (1) the qualities of the innovation or new practice itself (i.e., the “what,” such as a client choosing an IUD for her contraceptive method, a provider providing an IUD, or a program making it more widely available); (2) the characteristics of potential adopters (the “who”); and, (3) contextual factors (the “how,” referring to how adoption may be facilitated or impeded by such factors as a health system’s structures and policies, human and financial resources, and leadership and management). It is also helpful to consider “where” the IUD is to be provided (typically in medical settings) and “when” (since the timing of IUD provision carries different clinical and programmatic implications for work organization and structure).

The category of “what” comprises both the *objective* (scientific) characteristics of the IUD and, critically, its subjective characteristics, i.e., how the IUD is perceived by potential adopters and providers. Five characteristics of an innovation are identified as most likely to determine its rate and extent of adoption: these are its *perceived* (1) benefit; (2) compatibility; (3) simplicity; (4) observability; and (5) “trialability” (Rogers 2003). The single most important determinant of behavior change is the innovation’s perceived benefit, which includes consideration of its *relative* or *comparative advantage* to intended recipients. Perceived benefits may include savings of time or effort, economic gain, or better health, including avoiding unwanted pregnancy and its consequences. Thus when new scientific or programmatic information is conveyed, it is often couched in terms of benefit (e.g., that wider use of the IUD will lead to less aggregate burden on providers, or that it is more convenient, effective, and safe for the client). Providing an IUD or choosing to use one is also more likely to occur if it is perceived as compatible with existing norms, behaviors, and culture (of both the community at large and the medical setting), and if it is perceived as “easy to do.” While contraceptive use in general and IUD use in particular are not highly “observable” at the level of individual provision and receipt of the method, FP programs are generally better served by making their activities visible to opinion leaders, decision makers, and communities (as was done in the Kisii project described below).

The adoption process is also influenced by an individual’s personality characteristics and openness to change. Diffusion theory identifies five categories of

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<sup>7</sup>Typically, if these “truths” are scientifically or factually wrong, the public health professional labels them “myths” or “misconceptions.”

potential adopters: “Innovators,” “Early Adopters,” the “Early Majority,” the “Late Majority,” and “Laggards” and holds that they have discrete, identifiable behavioral and personal characteristics (Rogers 2003). Potential adopters (who may be individual health facilities within a health system, as well as individual FP clients, service providers, program managers and leaders, or community members), layer out in a normal distribution across a population in terms of receptivity to change, time to adoption of new behavior, and likelihood that changed/newly-adopted behaviors will be sustained. Once the innovation is embraced by Innovators and Early Adopters, who typically represent about 15–20 % of the population, the adopter curve arrives at the “tipping point.” Then those who adopt later follow as they become progressively more comfortable with the change. The Late Majority adopters (or “skeptics”) adopt an innovation only when it has become the standard of practice. In the Kisii project and program context, these are health professionals who require local proof, not trusting outside sources of “evidence.”

These categories and characteristics have important implications for program design, the type and nature of program activities, market segmentation, target audiences, and plans for scale-up. For example, an FP program seeking to revitalize IUD use would do well to consider who might choose, provide, support, or impede IUD use, and on what basis. Diffusion theory reminds us that most providers and clients do not adopt new practices because of scientific studies; rather, they are influenced by their “near-peers” who have already adopted the new behavior. Thus, Early Adopters (as distinct from Innovators) are programmatically key: they are the highly-respected and well-networked opinion leaders in a given community (including the community of the medical setting) whose activities are the most closely watched by others, which is crucial to the spread of new practices. They are not only more receptive to change, but they also have the resources, risk tolerance, and willingness to try new things. On the other hand, later adopters of an innovation not only adopt later, but are more likely to discontinue (Rogers 2003).<sup>8</sup>

## 12.4 Medical Settings and IUD Use

The provision of IUDs largely occurs in medical settings such as clinics, health posts, and hospital outpatient departments. Access to IUDs is thus dependent on the nature and dynamics of medical settings, which are typically hierarchical and conservative, with well-established policies, routine practices, and providers acting as “gatekeepers” to services. There is often little perceived need to change service

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<sup>8</sup>This gives rise to what Rogers terms “the Innovativeness-Needs Paradox”: individuals (or units in a system) who most need the benefits of a new idea, e.g., the less-educated or the poor are generally the last to adopt an innovation, and thus one consequence of technological innovation can be to *widen* socioeconomic disparities in social systems.

policies and practices, and thus resistance to proposed changes that an internal change agent or an external technical assistance agency might try to introduce (Berwick 2003; Jacobstein 2009). Furthermore, busy providers, especially in limited-resource settings, often have difficulty accessing the latest scientific knowledge, and may be unaware of the latest findings and recommendations about the benefits and risks of the IUD and other contraceptive methods, as encapsulated in WHO's MEC and other international guidance.

Another germane dynamic in medical settings is that in following the fundamental medical principle of "do no harm" and avoiding iatrogenic (doctor-caused) disease, inadequate attention is generally paid to "the harm of *not* doing," i.e., to the negative consequences of withholding interventions. The substantial risks a woman faces in (unwanted) pregnancy and childbirth are thus not fully considered, while the relative risk of providing methods like the IUD (or hormonal contraception) is erroneously perceived to be high (Jacobstein 2009; Shelton 2000). Similarly, providers often withhold contraceptives from non-menstruating women seeking FP services (Stanback et al. 1997), even though an unwanted pregnancy may pose far larger risk to their health. Yet in contrast to the aforementioned low rates of IUD-associated PID and infertility, a sub-Saharan African woman faces a one in 31 lifetime risk of maternal death. Of the estimated 358,000 maternal deaths worldwide in 2008, nearly 3/5ths of the total (204,000) occurred in Sub-Saharan Africa, which had the world's highest maternal mortality ratio (MMR) of 640 maternal deaths per 100,000 live births (WHO et al. 2010). Further, for every instance of mortality there may be 20 instances of injury, infection, disability, or disease (Nanda et al. 2005).<sup>9</sup>

A range of cognitive, economic, sociocultural, political, geographic, and health system barriers to quality, access and use are common with respect to IUDs. Some barriers to FP that are manifested in medical settings have been grouped as *medical barriers*: well-intentioned but inappropriate policies or practices based at least partially on a medical rationale which impede or prevent clients from receiving contraception (Shelton et al. 1992). Among the most common and difficult medical barriers to IUD availability, access and use are: provider bias; inappropriate eligibility restrictions on who can receive an IUD (e.g., by age, parity, or marital status); mistaken application of "contraindications" (inconsistent with the WHO MEC); "process hurdles" (e.g., unnecessary lab tests or mandatory return visits); and unjustified restrictions on which health system cadres can provide a method (Bertrand et al. 1995; Stanback and Twum-Baah 2001; Shelton et al. 1992). Poor side effects counseling and/or management are also barriers that arise in the medical setting and limit adoption and continuation of the IUD (RamaRao 2003; Bertrand et al. 1995). All of these barriers are more prevalent with "provider-dependent" clinical methods like the IUD, and thus an understanding of how to change provider behavior is helpful.

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<sup>9</sup>In striking contrast, there are only 14 maternal deaths per 100,000 live births in industrialized countries (WHO et al. 2010).

## 12.5 The Kisii Project: Holistic Programming in Action

### 12.5.1 Background

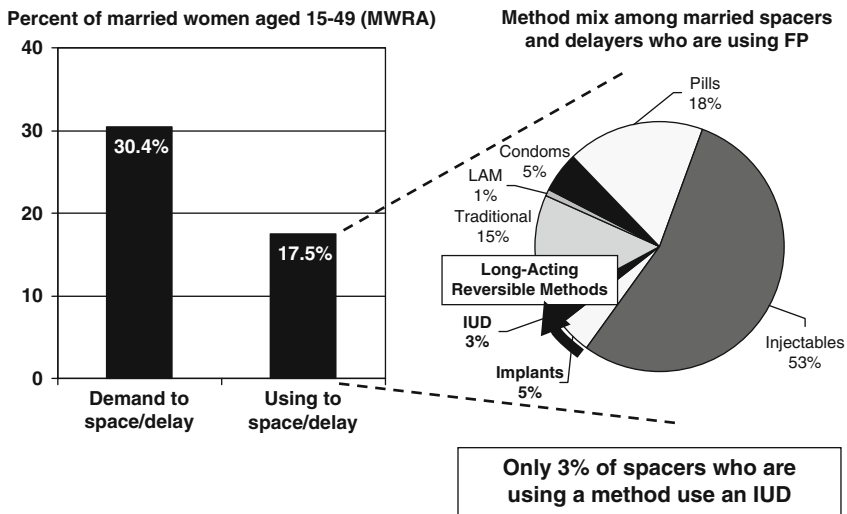
At the turn of the century, many FP programs in sub-Saharan Africa were considered “fragile,” as reflected in low contraceptive prevalence rates or stalled progress (Jacobstein et al. 2009; Westoff and Cross 2006). In Kenya, FP program performance measures improved steadily between 1972 and 1989 before tapering off in the 1990s (Ross and Smith 2010). Modern method use rose from 18 % of currently married women in 1989 to 27 % in 1993, then more slowly to 31.5 % in 1998, and remained unchanged in 2003. As seen in Fig. 12.1, the same period saw declines in the IUD’s share of the method mix. (The IUD predominantly used in Kenya, as in most countries with donor-supported national FP programs, is the Copper T 380A). Among currently married women, 3.7 % used the IUD in 1989, accounting for one in five (20.7 %) married users of modern contraceptive methods. By 2003, IUD prevalence fell to 2.4 %, representing less than one in 13 married women (7.6 %) who were using modern contraception. At the same time, 25 % of married women reported having an unmet need for contraception (CBS 2004), and long-acting and permanent methods including the IUD were underutilized (ACQUIRE Project 2006).

In addition, secondary analysis of 2003 Kenya DHS (KDHS) data conducted by the RESPOND Project (see Figs. 12.2 and 12.3), which gives the context just preceding the Kisii project’s period of operation (January 2005 to January 2007), suggests that at the aggregate level there is a ‘sub-optimal fit’ between method use and reproductive intentions among both “spacers” (who want to space a next birth or delay a first birth at least 2 years) and “limiters” (who wish to limit further childbearing altogether).<sup>10</sup> While there is no “ideal” method mix, as individual and program circumstances vary—and it is of paramount importance that FP programs provide informed and non-coerced choice from a full range of methods to the clients that they serve—an aggregate “goodness of fit” with reproductive intentions and with access (or lack thereof) can be inferred by comparing the method mix in countries such as Kenya (and most of sub-Saharan Africa) with the method mix in countries that provide complete access to a full range of contraceptive methods via universal health coverage. In the United Kingdom, for example, where there is full access to a wide range of methods, the modern contraceptive prevalence rate is 84 %, with 40 % of all women using a highly effective clinical method,<sup>11</sup> including 10 % who use the IUD (UN 2011). By contrast,

<sup>10</sup>This pattern of high unmet need, limited method availability, and suboptimal fit of methods used with reproductive intentions (as well as, in consequence, excess fertility and high maternal mortality) persisted in Kenya in 2008 (KNBS 2010), and is a typical pattern for sub-Saharan African family planning programs.

<sup>11</sup>Data is not generally available that is stratified by reproductive intention (i.e., for limiters and spacers), thus the use of highly effective clinical methods among limiters is likely to be higher than 40 %, as there is a “dilution” effect when all women comprise the denominator.





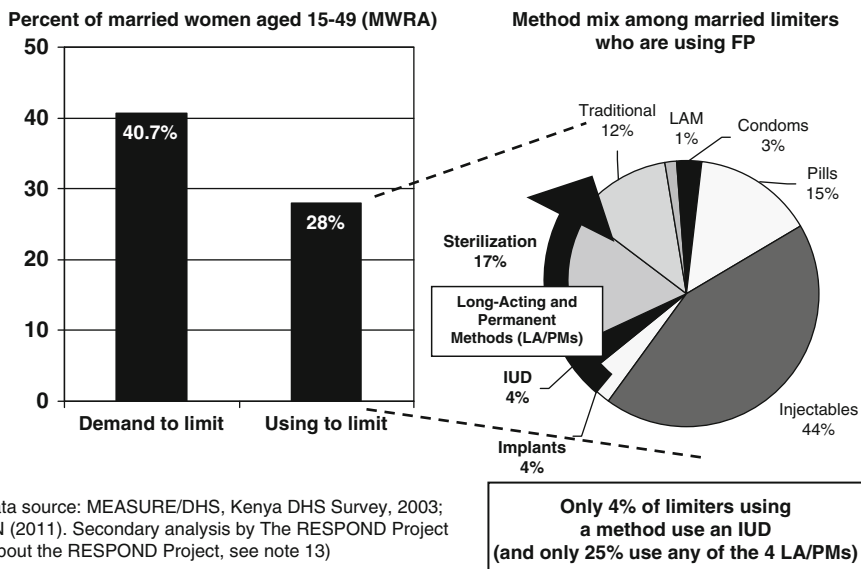
Data source: MEASURE/DHS, Kenya DHS Survey, 2003; UN (2011).  
 Secondary analysis by The RESPOND Project (About the RESPOND Project, see note 13)

**Fig. 12.2** Reproductive intentions, FP use, and method mix, among married spacers, Kenya, 2003

as seen in Fig. 12.2, among spacers and delayers in Kenya (30.4 % of married women), only 3 % of those actually using a method were using an IUD,<sup>12</sup> whereas 15 % of spacers and delayers using a method were using traditional methods. An additional 12.9 % of all married spacers and delayers (i.e., those not using a method at all) had unmet need.

The situation was similar with limiters, as seen in Fig. 12.3. One in eight limiters (12.7 %) used no method at all (i.e., had an unmet need), and of limiters actually using a method, only 1 in 25 used an IUD (and only one in four used *any* of the four clinical methods), whereas among women using a method to limit, one in eight was using a traditional method. Again, this is in notable contrast to the levels and patterns of contraceptive use found in the United Kingdom and other countries that provide complete access to a wide range of methods, and thereby women have little unmet need and a better fit of method characteristics with their reproductive intentions.

<sup>12</sup>The low IUD use in Kenya (and elsewhere in sub-Saharan Africa) occurs for many reasons, as discussed in Section IV of this chapter. One additional reason for low IUD use among delayers has been the prevailing practice (the received “wisdom”) in medical settings that “IUDs are not indicated for women who have not yet had a child.” Also, some FP providers and programs are reluctant to provide methods with long duration of action (e.g., 12 or more years with the copper-T 380A) to women who indicate that they might want another child, albeit after 2–3 years of spacing. That is, “long-acting” is conflated with “long-term” and thus the intrinsic method characteristic is confused with how long a woman might choose to use the method.



**Fig. 12.3** Reproductive intentions, FP use, and method mix, among married limiters in Kenya, 2003

### 12.5.2 Chronology and Overview of Project Interventions

The “plateauing” of contraceptive use, coupled with persisting high unmet need, prompted the Kenyan MOH to launch a national initiative in 2003 to “revitalize” FP, with a focus on “underutilized” methods such as the IUD (Fischer 2005). In 2004, Kenya’s IUD Task Force, led by the MOH, launched an IUD revitalization initiative in seven districts. The initiative involved national-level advocacy, as well as community outreach and building of capacity to provide IUD services. Among the seven districts that the IUD Task Force identified for programmatic intervention was Kisii District of Nyanza Province in southwestern Kenya, near Lake Victoria and Uganda. Nyanza Province is the third most populous of Kenya’s eight provinces, and Kisii the eighth most populous of its 47 districts, with a population of 1.15 million (among Kenya’s overall population of 38.6 million) (KNBS 2009). In Kisii, IUD prevalence was even lower than the national average (0.5 % vs. 2.4 %) and unmet need was even higher (35 % vs. 25 %) (CBS et al. 2004).

In late 2004, the ACQUIRE Project,<sup>13</sup> led by EngenderHealth, was asked to provide IUD-related technical assistance to Kisii District. The project began doing so

<sup>13</sup>ACQUIRE is an acronym for Access, Quality and Use in Reproductive Health. The ACQUIRE Project was funded by USAID’s Office of Population and Reproductive Health to focus on facility-based services and clinical contraception, especially long-acting and permanent methods of contraception (LA/PMs). The ACQUIRE Project was a partnership among several agencies that worked from 2003 to 2008. In 2008 it was succeeded by the RESPOND Project, with a similar mandate and also led by EngenderHealth. Within the LA/PMs, IUDs and hormonal implants are grouped as “long-acting reversible methods,” and female sterilization and vasectomy as “permanent methods”. “Long-acting” is preferred to “long-term,” for reasons discussed in endnote 12.

from January 2005 to January 2007, working with District-level MOH leadership and staff to establish sustainable systems and services for IUD provision (ACQUIRE Project 2006; CBS 2004). In May 2005, after an initial stakeholder meeting, a “performance needs assessment” (PNA) was conducted to identify areas of greatest programmatic need. A formal, data-driven process that compares desired to actual performance and analyzes the nature of “performance gaps” (EngenderHealth 2006; Kisii District MOH 2005), the PNA was conducted by managers and service providers from the Kisii District MOH and Kisii District Hospital in collaboration with ACQUIRE Project staff. Using data from facility audits of each of the project’s 13 service sites, interviews with providers and clients, and focus group sessions with women and men in the project’s catchment area, the PNA identified barriers to IUD access, quality, and use in Kisii, their root causes, related systems challenges, and possible solutions.

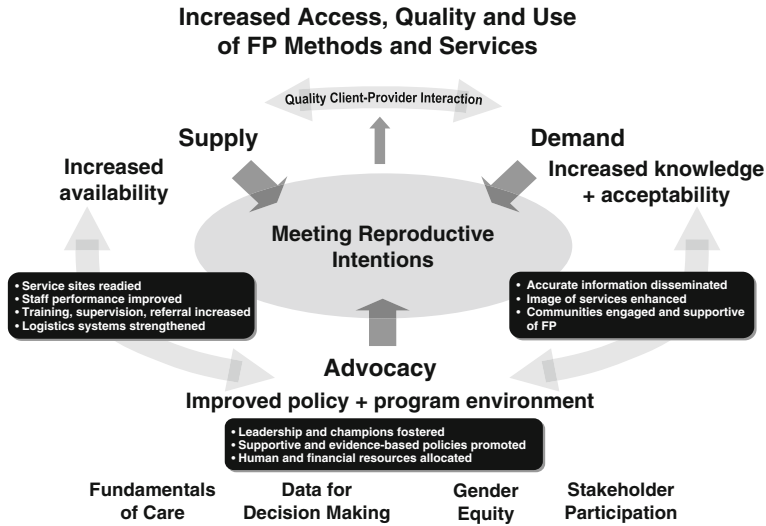
IUD-specific findings from the PNA included that: the IUD was only being provided at the hospital level in Kisii (whereas it is easily and quite appropriately provided in clinic and even community settings via “mobile services”); costs of supplies, equipment, and provider time for counseling, insertion, and removal were limiting health system capacity; providers lacked motivation to provide the IUD; supervision was not aimed at improving provider performance; and myths and misconceptions about the IUD were widespread at both the provider and client levels (Kisii District Ministry of Health 2005). These problems were addressed through closely-linked activities aimed at improving supply, demand, and service policies and practices. The activities were undertaken and coordinated in accord with a model of holistic programming for service delivery. Bimonthly service results were monitored and correlated with key program inputs, as well as with major external events that disrupted services, such as stock-outs, serious political unrest, transfer of staff trained in IUD service provision to other duties and locations, and health system restructuring. Results were further tracked for 30 months after project implementation ended, thus affording a sense of the longer-lasting change that arose.

### ***12.5.3 The Holistic Programming Approach Followed in Kisii***

A holistic model for FP programming (see Fig. 12.4) served as a conceptual framework for the design and implementation of the IUD-related activities in Kisii District. The Supply–demand–Advocacy (SDA) Program Model<sup>14</sup> reflects EngenderHealth’s four decades of experience in providing technical assistance for FP service delivery in clinical settings (ACQUIRE Project 2007). Central to the SDA Program Model is the service interaction that ideally takes place between a knowledgeable, empowered client and a skilled, motivated, well-supported FP service provider at a suitable site.

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<sup>14</sup>The SDA Program Model for FP/RH Service Delivery was subsequently elaborated upon to accommodate other health sector activities besides FP, and to expand beyond service delivery activities per se. In the process, the SDA Program Model became the Supply-Enabling Environment-Demand (SEED) Programming Model for Sexual and Reproductive Health. The basic elements of both the SDA Model and the SEED Model are similar.



Data source: The ACQUIRE Project's Program Model for Family Planning/Reproductive Health Service Delivery: "More Services to More People in More Places". 2007. The ACQUIRE Project/EngenderHealth.

Fig. 12.4 The ACQUIRE Project's program model for FP/RH service delivery

The purpose of these interactions is for women and men to be able to realize their reproductive intentions throughout their reproductive life cycle; in the aggregate, this also helps FP programs achieve their goals of increasing access, quality, and use of FP/RH methods and services on a sustainable basis. Good (“quality”) client-provider interactions are enabled by well-functioning supply-side and demand-side program elements that are operating within a supportive (i.e., enabling) policy and program environment. The SDA Model envisions potential synergy among program elements which can be fostered via a coordinated package of mutually reinforcing interventions. The next section gives a sense of how the individual elements of the model helped guide program activities in Kisii.

### 12.5.4 Key Activities and Outcomes, by Program Model Component

#### Supply-Side Interventions

On the supply-side, the PNA revealed insufficient provider capacity and service infrastructure in Kisii District, as well as substandard IUD service practices. These included widespread biases against the IUD, outdated training, and insufficient equipment and supplies. To address these deficiencies, a number of activities were undertaken. Knowledge updates that focused on the “fundamentals

of care”<sup>15</sup>—safety, quality assurance and improvement, and informed choice—conveyed the latest scientific findings and proven programming practices. Ways to change provider perceptions and practices that impeded client access to IUDs were identified for implementation by the stakeholders. Providers were trained in IUD insertion and removal, FP counseling, and infection prevention, and supervisors were trained in facilitative supervision. Gaps in needed equipment (e.g., IUD kits and sterilization equipment for infection prevention) were addressed at all 13 service sites, which were otherwise readied to provide IUDs. Logistics systems for procuring and distributing IUDs, related equipment (e.g., uterine sounds) and expendable supplies were strengthened, and links between service sites and the community were enhanced. Periodic monitoring visits were also conducted in tandem with MOH staff, with regular reports drawing attention to service system factors and outputs.

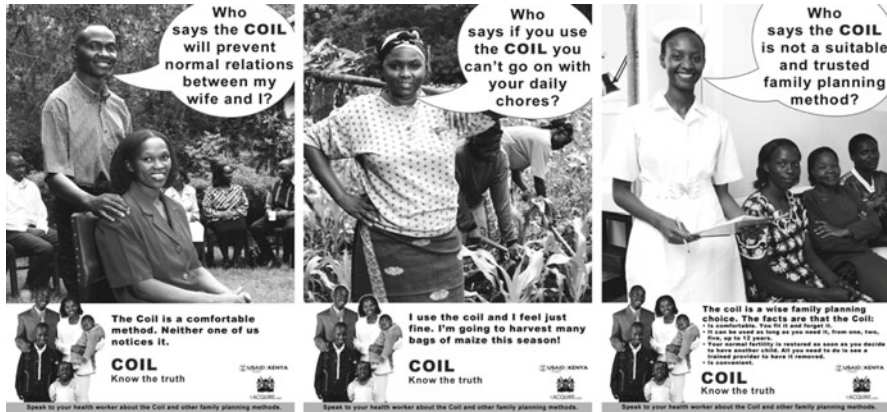
Overall, 555 providers were trained at 34 training “events” (e.g., knowledge updates, counseling workshops), and 28 service providers received IUD insertion and removal skills updates. In addition, 72 female and male peer educators from faith-based organizations, women’s organizations, and youth groups, and 388 community-based distribution (CBD) agents and their supervisors received basic or comprehensive FP counseling training. These peer educators and CBD agents subsequently served as an important information source in their communities and as a key link between women in the community and the newly-strengthened FP- and IUD-service sites (ACQUIRE Project 2008a).

### **The Enabling Programmatic Environment**

During the project period, significant policy and advocacy efforts were undertaken in Kisii to further enable an environment conducive to FP service delivery in general, as well as to the IUD in particular (as an underutilized method). Sensitization workshops were conducted, IUD advocacy briefs were disseminated, and national FP service guidelines were updated according to the latest WHO guidance. This involved cultivating stakeholder buy-in, participation, and support; identifying, mobilizing, and “nurturing” IUD champions at the district and community levels; and promoting district-level implementation of Kenya’s updated, WHO-informed, national FP/RH policies, guidelines, and protocols.

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<sup>15</sup>Ensuring the “Fundamentals of Care” is one of the SDA Model’s four “cross-cutting imperatives.” The others are to: use relevant evidence for decision-making in program strategy, design, implementation, and evaluation; promote gender equity, as gender norms and power dynamics often constrain women from accessing methods and services they want and need (Doyal 2000); and ensure widespread stakeholder engagement and “ownership.” Important stakeholders whose championship of FP is needed include political, religious and other opinion leaders; program leaders and managers, at national, regional, and district levels the medical community; clinic managers and FP service providers; advocacy groups; community organizations; and individual FP clients. Also implicit in the Model is the need to use the dynamics of change to design and implement program interventions that lead to greater service quality, access, and sustainability. As can be seen in this chapter, all of these aspects were addressed in the IUD-related work in Kisii.



**Fig. 12.5** Demand-side programming intervention: IUD-related posters, Kisii Project: “Now You Know the Truth!” (Note: These posters were developed by the ACQUIRE Project/EngenderHealth as part of the Kisii Project to revitalize IUD use in Kenya)

## Demand-Side Interventions

The demand-side effort in Kisii was robust, and structured in accord with how best to change behavior and attitudes, as well as to increase knowledge. Much of the overall effort centered on IUD-specific demand-side interventions that integrated marketing and community mobilization and was directed at: (1) improving accurate knowledge among clients, potential clients, providers, and communities by addressing the benefits of FP and IUDs, and by directly counteracting myths, misunderstandings, and misperceptions about the method; (2) improving the IUD’s image; and, (3) informing the public where quality IUD and other FP services could be accessed. Mass media and community outreach interventions using satisfied users and IUD champions were sequenced with supply-side interventions and paced with increases in supply-side (service) capacity.

A demand creation campaign was formally launched in July 2006 and conducted for 6 months. This centered on the pretested slogan aimed at combating myths: “Now you know the truth.” The campaign used local, regional, and national radio and was supported by 10,000 leaflets, 6,000 brochures, and 1,200 posters. Positive images (see Fig. 12.5) conveyed concepts such as: the IUD’s convenience, effectiveness, and safety; the stamina and well-being of IUD users; male involvement and a satisfied couple’s happy and mutually supportive relationship; and (your provider will be) a friendly, motivated (female) IUD provider who is “standing up” to challenge the myths and negative perceptions about IUDs (that may be) held by her peers. Advertisements were broadcast in local languages during peak listening periods, and a weekly talk show was mounted featuring IUD advocates (e.g., doctors, peer educators, and satisfied IUD clients and their husbands), which offered listeners an opportunity to phone in and ask questions to local and national medical experts.

Community outreach and mobilization were conducted with women's and men's clubs, youth and religious groups, peer and health educators, and CBD agents. Community leaders (elders, religious leaders, and opinion and other community leaders), CBD agents, and peer educators were also educated and/or trained in FP/IUD basics. Constructive male engagement was promoted in recognition of the crucial role men play in supporting or impeding their partner's access to FP, in furtherance of project survey findings that 70 % of men believed that they shared FP responsibility equally with their partner and would be willing to consider their partner's use of an IUD if they had information about the method. Additionally, gender norms inhibiting access to FP services were challenged. All messaging ended with a call to action, encouraging women and their partners to visit their health care provider together.

The multifaceted communications effort delivered approximately 250,000 exposures to IUD-related messages among the people living in Kisii District, 45 % of whom reported hearing or seeing such a message. Approximately 50,000 people in the communities served, including 21,000 men, were informed about the IUD by female and male peer educators from faith-based organizations, women's organizations, and youth groups at 2,700 community "events" (e.g., "street theatre" performances at community fora and marketplaces). A number of male champions emerged and actively promoted FP within the community at large. Interviews with numerous providers, community volunteers, and survey respondents indicated that the project led to men talking about FP much more, seeking more information on particular contraceptive methods, and even visiting health care sites to talk about FP with providers, which generally did not happen prior to the initiative (Republic of Kenya 2008).

Additionally, CBD agents from the MOH served as referral links between women, communities, and the newly strengthened FP service sites. Nearly one in five residents of Kisii District reported having attended a community session focused on the IUD. The cumulative evidence suggests that such demand-side activities facilitated a closer working relationship between the community and clinic staff. These activities also increased the depth and accuracy of client and community knowledge; improved the acceptability and image of FP; informed clients and communities about when, where, and how services could be obtained; engaged them in defining their FP/RH needs and asserting their rights, and encouraged users to serve as supportive advocates for higher-quality, more-accessible FP/RH and other health services. The consideration of modern contraception, if not its actual use, increasingly became both a community norm and an informed individual choice (ACQUIRE Project 2008a).

Overall, the Project's demand-side, supply-side, and enabling-environment interventions, relied on salient considerations of the dynamics of change (as discussed in Sect. 12.3) and the nature of medical settings (as discussed in Sect. 12.4). On the demand-side, the entire arc of mass media, community-level, and individual-level behavior change communications followed diffusion theory principles. For example, messages and images alike were not only mutually reinforcing, but they focused on known (project-determined and/or project-verified) perceptions of

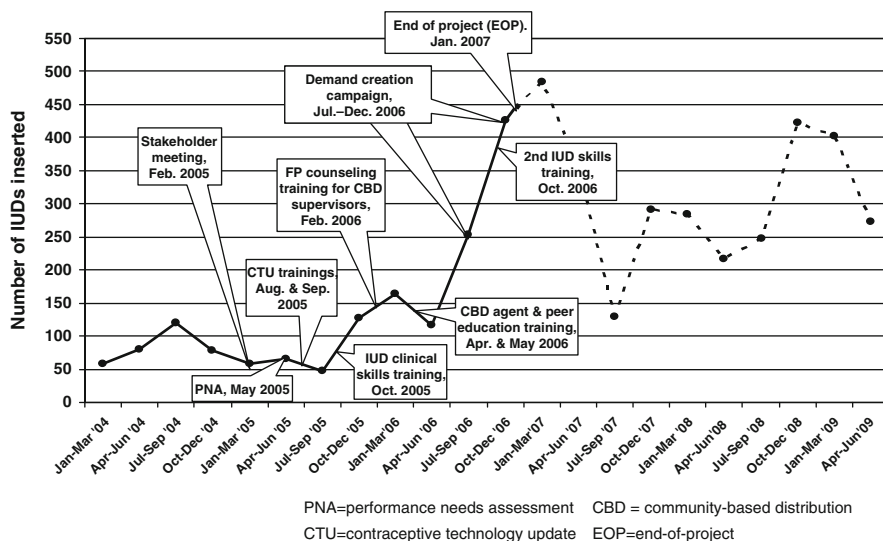
benefit, sociocultural appropriateness, and feasibility (simplicity), at the levels of the individual provider, individual client, contraceptive couple, community, and medical setting. Also, the demand creation campaign spanned enough time to allow pulsed repetition of effective images and messages, and thus greater impact in terms of generating positive behavior and attitude change among clients, potential clients, supportive partners, and sympathetic providers alike. On the supply-side, already active and locally influential providers who were Early Adopter IUD champions were used as trainers/change agents and experts available to the public, and organized into an informal network. The trainers as well as the trainees themselves identified the cognitive, structural and practice barriers to be addressed in their own medical settings. Furthermore, they were engaged over the life of the project, since “change takes time” and one-off training (or policy-advocacy) events alone often yield very little in terms of changed provider or program practices. The use of champions in both the supply enhancement and demand creation efforts—both providers and clients, on posters, in mass media, and as experts available to the public—enabled project implementers to “walk the talk.”

## **12.6 Achievements: Sustained IUD Service Utilization and Other Positive Programmatic Changes**

The Kisii project was a modestly-funded pilot project of relatively short duration, entailing technical assistance to the district-level public sector for an underutilized and often-misunderstood clinical contraceptive method. IUDs were provided in the context of free and informed choice from among a wide range of available modern contraceptive methods. The project followed a holistic programming model, paying attention to both supply-side elements (e.g., knowledge transfer and skills training) and demand-side elements (e.g., mass media, community-level engagement, and interpersonal communication). Interventions were sequenced and coordinated, with demand-side activities only undertaken once the facilities were equipped and the providers and community workers were trained, so that the increased demand that was created could be met. As can be seen in Fig. 12.6, which plots quarterly IUD insertion totals against project inputs, IUD utilization spiked after each set of interventions, most notably during the robust demand creation campaign from July to December 2006.

Overall, the Kisii project achieved considerable success with respect to improving knowledge, attitudes, and practices. Almost half of the residents of Kisii District reported hearing or seeing an IUD-related mass media message, and 50,000 people were informed about the IUD at community-level events. Knowledge of the IUD increased and a positive attitude toward the method was fostered. For example, a representative household survey conducted in 2006 by a Kenyan market research firm found that 93 % of married women and 85 % of married men in Kisii had knowledge of the IUD, compared to overall national knowledge levels of 75 % for married women and 62 % for married men; in addition, three out of five female





**Fig. 12.6** IUDs inserted in Kisii Project, by quarter and key programmatic inputs (Jan 2005–Aug 2009)

**Table 12.1** IUDs inserted in Kisii, before, during, and after Kisii Project (2005–2009), Kisii District, Kenya

Year	Description	Annual total	Monthly average
2004	Baseline, year before project	338	28
2005	First project year	300	25
2006	Second project year	959	80
2007	First year post-project	1,260	105
2008	Second year post-project	1,172	98
2009	Third year post-project (first 8 months only)	787 (8-month total)	98

Data source: Kisii District Service Statistics, 2004–2009

respondents and one of two male respondents agreed that the IUD is a “trusted method of FP” (ACQUIRE Project 2008b).

From the standpoint of changed and improved practices in medical settings, IUD provision and use more than tripled compared to baseline levels, and these gains continued on a sustained basis for more than 30 months after project activities ceased in January 2007, as reflected in Table 12.1’s summary of annual insertions and monthly averages, as well as in Fig. 12.6. The annual number and monthly average number of IUD insertions at project sites almost tripled during the second (and final) project year, rising from 338 annual insertions in the baseline year of 2004 to 959 in 2006 (during the second half of which the mass media demand creation campaign was conducted). Annual use rose further still in 2007 and 2008, after formal project activities ceased. Average use peaked at 105 IUD insertions per month in

2007, and then remained at 98 IUD insertions per month for the following 20 months through August 2009 (the last data collection point), a greater than threefold increase compared to the baseline averaged level of 28 monthly IUD insertions.

In addition, positive changes in service quality and access extended beyond the IUD. Specifically, visible improvements were made in the supervision system; linkages between the community and the project sites increased; male engagement in FP increased; and project sites reported having served 33 % more new FP clients (for all contraceptive methods) in the first quarter of 2008 compared to the same period in 2007; (ACQUIRE Project 2008a).

It is also noteworthy that these improvements took place and have been sustained in a difficult (and unfortunately typical) milieu. The usual programming vicissitudes in public health systems such as commodity stockouts and other resource shortages, staff transfers, and competing health service demands from diseases such as HIV/AIDS and malaria, were compounded by jolts from district restructuring and political unrest and strife. That the increases nonetheless occurred, and continued, underscores both the high degree of unmet need for FP in Kenya and the great interest among women and men in accessing effective, safe, and convenient contraception that helps them meet their reproductive intentions to space births for at least several years, or to limit further childbearing.

## 12.7 Lessons Learned

The results presented in this chapter suggest that meaningful increases in IUD provision and uptake, and other positive service changes, can be fostered and sustained in medical settings initially likely to be resistant to such change, especially if the changes can be conveyed in such a way that their benefits and appropriateness can be readily and widely perceived. Furthermore, these positive changes can be fostered even in—and by—the resource-strapped public sector, and notwithstanding many myths and misperceptions being widespread among both providers and clients. The results also suggest that in order to increase access for provider-dependent clinical methods like the IUD, it is helpful (and feasible) to follow a holistic and sequenced systems approach that addresses barriers in each domain (e.g., the medical setting and its intrinsic resistance to change; and the community, with its gender-based barriers). This entails the coordinated programming of mutually reinforcing supply-side and demand-side activities in accord with evidence-informed principles of the dynamics of successful behavior change.

Efficacious aspects of following this holistic programming approach that is grounded in the realities of the medical setting as well as the dynamics of behavior change include: (1) robust attention to demand-side elements; (2) forging stronger links between communities and facilities; (3) equipping facilities, training staff, and addressing unwarranted service policy restrictions (e.g., which skilled cadre can provide a given FP method); (4) working to address provider-level factors such as their knowledge base, belief systems, structure of work, and rewards; and

(5) engaging men as supportive partners and FP champions. Doing so can create a better image of FP methods and services, increase demand for, and use of, modern contraception, as well as increase system capacity. The holistic programming approach embodied in the SDA model and Kisii project has thus not only been further refined and widely adopted within EngenderHealth's various SRH programs and internal strategic plans (see endnotes 14 and 15), but such an approach is also at the heart of recent FP/RH service delivery projects designed by donors such as USAID (the U.S. Agency for International Development), the UK's Department for International Development (DFID), and the Bill and Melinda Gates Foundation. Furthermore, it is inherent in newer paradigms that relate to working in complex systems such as health systems (and their medical settings) (Pourbohloul and Kiény 2011).

Not unlike many donor-funded FP/RH projects, the "IUD revitalization" project in Kisii was of a more modest size and limited scope and duration than would have been ideal. The project was anticipated to become part of a larger set of activities when it was planned and implemented. While it was not called a "pilot project" or "demonstration project" per se, this is in effect what the Kisii project was. Yet project implementers had quite limited ability to convene and involve—let alone subsequently to fund and assist—those potential stakeholders from other districts and regions who might "view" the Kisii project, be involved in it, and subsequently adopt and adapt it as a high impact practice elsewhere, as part of a larger program of scale-up.

In addition, while the results support the utility of a holistic approach to service delivery programming that is informed by evidence of what variables most contribute to behavior change (by providers, clients, and communities), implementing such an approach is often difficult for FP programs. Indeed, the World Bank has recently identified the lack of integration and coordination of supply and demand interventions as typically deficient in country social sector programs (Peters et al. 2009).<sup>16</sup> Such programming not only entails advocacy and "demonstration" by donors and technical assistance agencies, but ongoing commitment of scarce human and financial resources for FP program subsystems (e.g., supervision, training, and logistics) by the resource-strapped public sector (whether or not the services themselves are provided in a public, private, or NGO setting). The need for these systems that ensure safety, choice, and quality is particularly strong for the longer-acting and/or permanent (clinical) methods of FP like the IUD.

Finally, it is important to note that the increase in IUD use in the Kisii project occurred in a context of strong government and donor support to "revitalizing FP," which undoubtedly contributed in important ways to improving the enabling environment. One reflection of this increased governmental and donor attention to FP has been the resumption in rising contraceptive prevalence seen in the 2008–2009 DHS (KNBS 2010). In this latest DHS, which spans the time period during which

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<sup>16</sup>"All case studies show demand-side interventions and demand creation to be largely neglected—an omission bound to influence implementation" (Peters et al. 2009).

the Kisii project was operative, modern method CPR is 39.4 %, up from 2003's stalled level of 31.5 % (unchanged from 1998). That is, the Kisii project was operating during a time of generally increasing contraceptive uptake in Kenya. On the other hand, both IUD prevalence and the IUD's share of overall contraceptive use continued their more than 20-year decline in Kenya (see Fig. 12.1). IUD use among married women fell to 1.6 % in 2008–2009, which represents 4.1 % of modern method contraceptive use.<sup>17</sup>

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<sup>17</sup>For the first time, the prevalence of hormonal implants (1.9 %) surpassed that of IUDs, a trend that may well continue, given increasing donor, program and client interest in implants, and the availability in Kenya of a much less expensive implant (KNBS 2010).

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