

# The Role of Public-Sector Family Planning Programs in Meeting the Demand for Contraception in Sub-Saharan Africa

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**CONTEXT:** Commonly used indicators of contraceptive behavior in a population—modern contraceptive prevalence (mCPR), unmet need for contraception, demand for contraception and demand satisfied—are not well-suited for evaluating the progress made by government family planning programs in helping women and men achieve their reproductive goals.

**METHODS:** Trends in these measures in 26 Sub-Saharan African countries between 1990 and 2014 were examined. Trends in a proposed new indicator, the public-sector family planning program impact score (PFPI), and its relationship to mCPR and the family planning effort score were also assessed. Case studies were used to review public family planning program development and implementation in four countries (Nigeria, Ethiopia, Rwanda and Kenya).

**RESULTS:** The four commonly used indicators capture the extent to which women use family planning and to which demand is satisfied, but shed no direct light on the role of family planning programs. PFPI provides evidence that can be used to hold governments accountable for meeting the demand for family planning, and was closely related to policy developments in the four case-study countries.

**CONCLUSIONS:** PFPI provides a useful addition to the indicators currently used to assess progress in reproductive health and family planning programs.

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The Millennium Development Goals (MDGs) included several health goals, of which Goal 5 was to “improve maternal health.”<sup>1</sup> Target 5B for this goal was to “achieve, by 2015, universal access to reproductive health.” Several indicators, including contraceptive prevalence and unmet need for family planning, were used to monitor progress toward this target. The subsequent Sustainable Development Goals (SDGs), to be achieved by 2030, have a single comprehensive health goal (Goal 3), to “ensure healthy lives and promote well-being for all at all ages.”<sup>2</sup> One of its targets, 3.7, is to “ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.” The family planning indicator for this target is the “proportion of women of reproductive age (15–49 years) who have their need for family planning satisfied with modern methods.”

To make progress on the MDG and SDG targets for reproductive health, many countries have invested in voluntary family planning programs. A key rationale for these programs is to assist women and men in achieving their reproductive goals by providing access to a range of contraceptive methods, as well as information about these methods and their benefits.<sup>3</sup> Investments in these programs are intended to address the substantial unsatisfied demand for contraception that results in unplanned pregnancies.

Each year about 73 million unintended pregnancies occur in the developing world (of which 49% end in induced abortions), with detrimental health and economic effects for many women, children and families.<sup>4</sup>

In this article, we first examine trends in widely used MDG and SDG indicators of contraceptive behavior to determine those most suitable for assessing progress in improving women’s ability to implement their reproductive preferences; this is of interest because the related indicators in the MDGs and the SDGs differ.<sup>1,2</sup> We focus on Sub-Saharan Africa, where the level of contraceptive use is well below half the levels in Asia or Latin America,<sup>5</sup> unmet need remains high<sup>5–7</sup> and family planning programs are often weak.<sup>8</sup> Next, we propose a new indicator to assess the role of public family planning programs in satisfying demand for contraception, which the standard MDG and SDG indicators are not designed to estimate. Finally, we discuss case studies of family planning program development and related policy changes in four countries to add context to the findings on trends in the role of the public family planning programs.

## METHODS

Several indicators can be used to quantify dimensions of contraceptive behavior among women of reproductive age.<sup>7</sup> The best known are contraceptive prevalence and unmet need for contraception—both of which were used to

monitor progress on MDG Goal 5B. Contraceptive prevalence is defined as the proportion of women in union (i.e., married or in a consensual union) currently practicing contraception. In this article, we use “modern contraceptive prevalence rate” (mCPR) to refer to the prevalence of modern method use; traditional methods are less effective, and family planning programs put little or no emphasis on their introduction or promotion.\* Unmet need for modern contraception refers to the proportion of women in union who are fecund and want to stop or delay childbearing, but are not using a modern method.†

Two closely related measures—demand for contraception and proportion of demand satisfied—are also widely used; the latter is an indicator for SDG target 3.7. Demand for contraception is the proportion of women in union who want to stop or delay childbearing, calculated as the sum of unmet need and mCPR. Demand satisfied is calculated as mCPR divided by demand; the term “satisfied” refers only to whether a modern method was used and not to the user’s satisfaction with the method.

To begin our analysis, we examined trends in these four indicators from 1990 to 2014 in Sub-Saharan African countries to assess their advantages and disadvantages in measuring women’s ability to achieve their reproductive goals. Annual estimates of these indicators for women in union are available from the United Nations, and are based on models fitted to available estimates from Demographic and Health Surveys (DHS) and other national sources.<sup>5</sup> We used estimates for 26 Sub-Saharan African countries with populations greater than 2.5 million and at least one DHS survey;‡ the exclusion of smaller populations makes the unweighted regional averages of indicators more representative of the respective regions.

None of the indicators discussed above estimate the role of family planning programs in meeting demand for contraception. Measuring the contribution of public-sector programs is important because states that have signed on to global human rights conventions are obliged to meet their people’s right to sexual and reproductive health, including family planning.<sup>9</sup> Therefore, we examined trends in a new indicator, the

\*Modern methods include female and male sterilization, the pill, the IUD, the injectable, the implant, vaginal barrier methods, male and female condoms, the Standard Days Method and emergency contraception; traditional methods include rhythm (periodic abstinence), withdrawal, prolonged abstinence, breast-feeding and douching.

†Women are considered to have an unmet need for contraception if they are currently married, are not using a method, are able to become pregnant (fecund) and do not want a child in the next two years or at all. Women who identify their current pregnancy as unintended, or who are not using a contraceptive method and have not resumed menstruation after unintended pregnancy are also considered to have an unmet need.<sup>4</sup>

‡Also excluded are Eritrea, because a war with Ethiopia distorts its record, and Togo, because the unprecedentedly high level of traditional method use in 1988 and then extremely sharp decline are anomalous and affect the calculations of indicators in this study. While the United Nations provides estimates of contraceptive behavior for all countries, we excluded countries with no DHS survey, because a DHS survey is needed to estimate the proportion of modern contraceptive users who rely on public-sector services.

public-sector family planning program impact score (PFPI), and its relationship with mCPR, to examine whether it might better serve the purpose. PFPI assesses the effect of the public-sector program on the proportion of demand satisfied, and is calculated as the product of the proportion of demand satisfied and the proportion of contraceptive users relying on public-sector services. The value of PFPI—expressed as a proportion—can range from 0% in countries where there is no public-sector family planning program to 100% in countries where a highly accessible and high-quality public-sector program serves all women with a demand for contraception.

An estimate of the proportion of contraceptive users relying on public-sector services in each country is derived from responses of modern contraceptive users to a survey question about the source of their method. The questionnaire lists possible sources, divided into public medical (e.g., hospital, clinic, fieldworker), private medical (e.g., NGO, physician, pharmacy) and private other (e.g., shop, friend); the categorization of sources differs by country and is made on the basis of discussions with in-country experts to insure that the names of sources correspond to the sources available in the country.<sup>10</sup>

Next, because PFPI is an indicator of a public-sector family planning program’s ability to satisfy demand, it was of interest to compare it with Family Planning Program Effort (FPE), a measure used since the early 1970s to gauge the strength of national programs.<sup>8,11,12</sup> To obtain this score, knowledgeable observers in a country answer questions about a variety of program characteristics and policy actions. Their responses on four dimensions of program strength—policies, services, evaluation and method access—are combined to yield an overall FPE score. Over the past three decades, the FPE score for countries has been measured in eight cycles. We use FPE scores from 2014, which in Sub-Saharan Africa ranged from 22 in South Sudan to 74 in Rwanda.<sup>8</sup>

The FPE methodology relies on selecting several knowledgeable observers for each country at each cycle. Thus, differences between countries and across cycles can be expected simply because the experts may be different. In addition, the questions included in the index have been refined and changed over time. As a result, differences between FPE scores of countries and trends for individual countries should be interpreted with caution.

Although no gold standard exists for assessing whether PFPI accurately measures the impact of a country’s public family planning program, comparing trends in family planning policy and program development in individual countries with trends in PFPI will give some insight. Here, we do so for four countries with different trajectories of contraceptive prevalence: Nigeria, which made little progress in regard to family planning between 1990 and 2014; Ethiopia and Rwanda, which have recently experienced a rapid increase in mCPR; and Kenya, which has a high prevalence that rose fairly steadily between 1990 and 2014.

## RESULTS

### Trends in Contraceptive Behavior

The unweighted averages for three of the four studied indicators rose in Sub-Saharan Africa between 1990 and 2014: for mCPR, from 7% to 27%; for demand for contraception, from 41% to 54%; and for demand satisfied, from 13% to 45%. In contrast, unmet need for modern contraception declined, from 34% to 27%. These trends were all approximately linear (Figure 1).

The averages, however, conceal large variations at the country level. When we examined mCPR in 26 individual countries, we identified three clusters (Figure 2). In three countries (Kenya, South Africa and Zimbabwe), mCPR was already well above 10% in 1990 and continued to rise slowly over the period. In seven countries (Ethiopia, Madagascar, Malawi, Rwanda, Tanzania, Uganda and Zambia), prevalence improved rapidly from less than 10% in 1990 to greater than 30% by 2014. And in the remaining 16 countries (mostly in Western and Central Africa), little progress in prevalence was made, although most countries experienced at least a slight increase. Trends in demand for contraception and demand satisfied among individual countries were also all upward, and countries fell into similar clusters (not shown).

In contrast, the trends in unmet need were less clear. Unmet need declined overall between 1990 and 2014 in 20 countries, and rose or was unchanged in the remaining six (Figure 3). Some countries with an overall decline experienced short-term increases. Because unmet need is the difference between demand for modern contraceptives and prevalence of modern contraceptive use, rising unmet need implies that demand is increasing more rapidly than prevalence.

The contrast between trends in unmet need and demand satisfied is notable. In general, one would expect unmet need to decline when the proportion of demand satisfied rises (as shown in Figure 1 for the averages); however, this is not always the case in individual countries. Figure 4 plots the change in a country's unmet need between 1990 and 2014 by change in its demand satisfied over the same period. We would expect these variables to be inversely correlated; however, while demand satisfied increased in all countries (i.e., all changes were positive), unmet need declined in only three-quarters. In the exceptions, demand increased more rapidly than use, so that unmet need and demand satisfied both rose—providing inconsistent signals about whether women's ability to achieve their reproductive goals is improving. (In theory, the gap between demand and use could increase so rapidly that the proportion of demand satisfied also declines, but we did not observe that in our data set).

### The Role of Family Planning Programs

The trends in PFPI for the 26 African countries show a range of patterns (Figure 5). Two countries (South Africa and Zimbabwe) had a PFPI consistently above 50%. Other countries (Ethiopia, Kenya, Malawi, Rwanda

and Zambia) had much lower initial scores that rapidly improved after 2000. And countries with the lowest scores (below 10%; e.g., Benin, Cameroon, Congo-Kinshasa, Cote d'Ivoire, Guinea and Nigeria) experienced little or no improvement throughout the period, which reflects little public-sector activity.

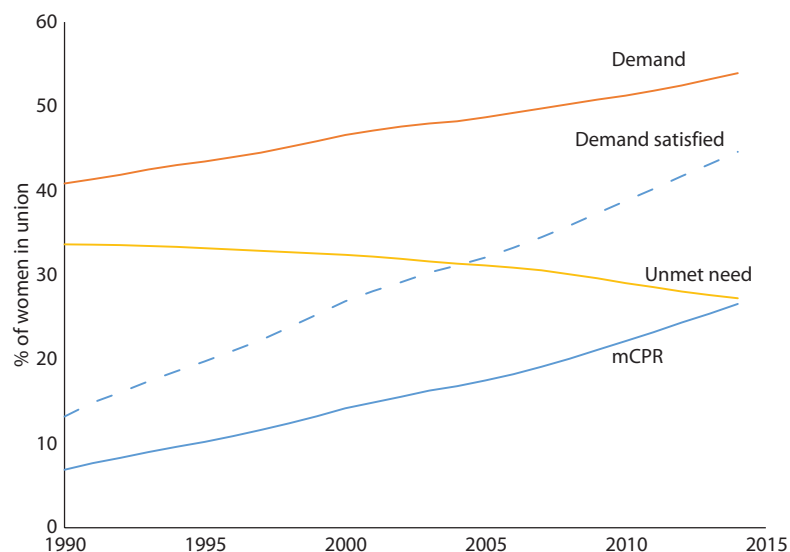
In every country, however, a significant proportion of contraceptive users relied on the private sector for contraceptive services. Figure 6 illustrates countries' demand for contraception in 2014, separated into three components: the proportion met by the public sector (PFPI), the proportion met by the private sector and unmet need. On average, the value of PFPI was 30% (ranging from 5% in Congo-Kinshasa to 69% in South Africa); 14% of demand was covered by the private sector (ranging from 5% in Chad to 30% in Kenya), and 55% was unmet need (ranging from 15% in Zimbabwe to 83% in Congo-Kinshasa). The public sector averaged more than twice as many users as the private sector.

One would expect a positive correlation between countries' mCPR and their PFPI value. We plotted countries' mCPR by their 2014 PFPI and found that the relationship was positive and roughly linear ( $R^2=0.8$ ; Figure 7). However, a number of countries deviated substantially from the best-fitting line. For example, Niger—with an above-average PFPI of 35%, but prevalence of only 13%—fell below the regression line; this is because, of the countries included in this study, Niger has one of the lowest levels of demand. At the other end of the spectrum, Kenya fell above the line because of high prevalence (56%) relative to its PFPI (44%); this can be explained by the substantial role of the private sector in Kenya (see Figure 6).

### PFPI and FPE

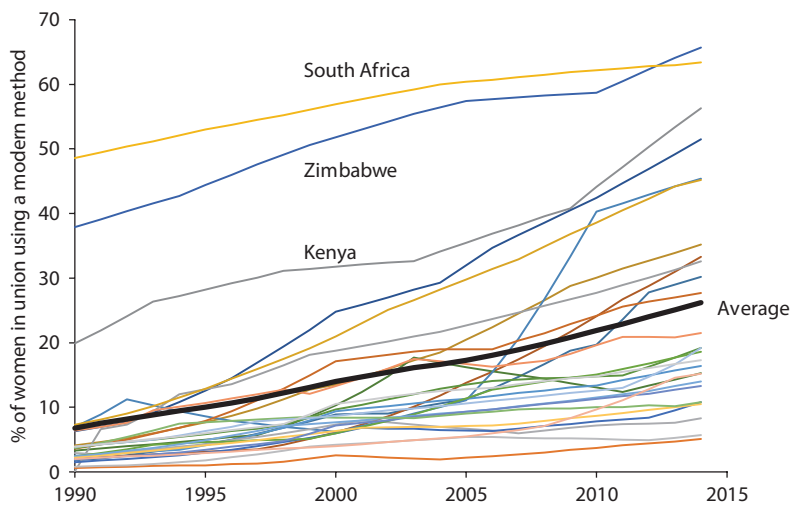
To compare PFPI and FPE, we plotted the 2014 values of PFPI by FPE for the 22 Sub-Saharan African countries for which both indicators are available (Figure 8). As

**FIGURE 1. Averaged indicators of contraceptive behavior for 26 Sub-Saharan African countries, 1990–2014**

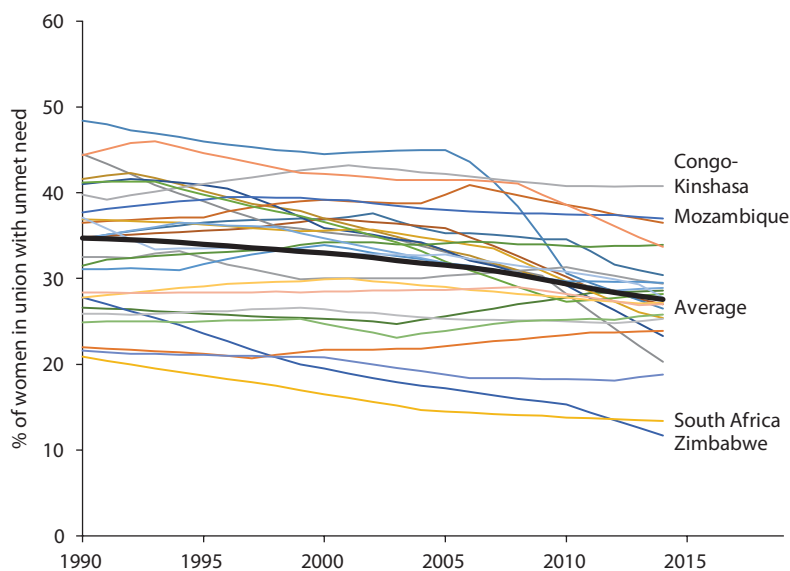


Note: mCPR = modern contraceptive prevalence rate.

**FIGURE 2. Trends in modern contraceptive prevalence rate in 26 Sub-Saharan African countries, 1990–2014**



**FIGURE 3. Trends in unmet need for modern methods, 26 Sub-Saharan African countries, 1990–2014**



expected, they were positively associated, although the correlation was fairly weak ( $R^2=.4$ ) and several countries were outliers. For example, Zambia had one of the lowest FPE scores (44), which suggests little program effort; however, it had one of the highest PFPI values (52%). The most extreme, negative outlier was Benin, which had a high FPE score (58), but one of the lowest PFPI values (10%); Benin's low PFPI can be attributed to low values of both demand satisfied and the proportion of contraceptive users relying on public-sector services (23% and 43%; Appendix Table 1). In both cases, mCPR—45% for Zambia and 11% for Benin—was more consistent with the country's PFPI than with its FPE score. Each of the four FPE subcomponents was positively associated with PFPI, but the correlation varied by component (not shown): It

was lowest for evaluation ( $R^2=.1$ ), intermediate for policies and services (0.2 and 0.3, respectively), and highest for method access (0.5).

The key reason why PFPI and FPE values for a particular country differ is that these indicators measure different things and are derived from different data. FPE is an indicator of effort that measures a range of program activities. In contrast, PFPI indicates the extent to which such activities have satisfied demand for contraception. Furthermore, PFPI aims to measure the impact of public-sector programs, whereas FPE includes private-sector activities (e.g., in the component that measures access to services).

Given these differences between FPE and PFPI, it is not surprising that their correlations with prevalence differ: mCPR is more highly correlated with PFPI than with FPE ( $R^2$  of .80 and .19, respectively). One would expect PFPI to have a higher correlation because it assesses impact. In addition, the low correlation between FPE and prevalence could reflect the range of aspects of family planning programs measured by FPE, and also could be partly due to error in its measurement.

### Country Case Studies

- **Nigeria.** The government of Nigeria—Africa's most populous country—has long acknowledged the link between population and development, but has been ambivalent about implementing its population and development policies, particularly the provision of family planning services. Nigeria's experience highlights the challenges of implementing population policies in a decentralized country that is ethnically and religiously diverse.

Nigeria's family planning history dates back to 1964, when the Planned Parenthood Federation of Nigeria was created. With support from a dynamic minister of health, Nigeria established its first population policy in 1988, which aimed to improve standards of living and quality of life, promote health and achieve lower population growth rates. It also sought to reduce the total fertility rate from six to four children per woman by 2000, and make family planning services accessible and affordable.<sup>13</sup>

Implementation of the policy during the military regime between 1993 and 1998 was poor; however, interest in population policy was renewed following Nigeria's return to civilian rule in 1998, and included continued concern about the impact of rapid population growth on poverty and food security, and increased awareness of the links among population, development and the environment. The 2004 National Policy on Population for Sustainable Development sought to increase mCPR by at least two percentage points per year<sup>14</sup>—an ambitious goal that did not reflect past trends and was not achieved.

In 2012, at the London Summit on Family Planning, Nigeria's Minister of State for Health pledged to enhance access to and use of essential services, including family planning, and to achieve the goal of a contraceptive prevalence rate (i.e., modern and traditional use) of 36%



by 2018; however, this goal seems out of reach, given that contraceptive prevalence was only 4% in 1990 and 10% in 2013.<sup>15</sup> In addition, national averages hide great regional disparity: In 2013, the contraceptive prevalence rate ranged from 3% in the North East region to 38% in the South West region.

Cultural barriers—including husbands’ opposition and objection on religious grounds—are widely cited by women and others as obstacles, particularly in the north;<sup>16</sup> however, access to family planning also varies by state, and high unmet need is widespread. Program implementation has remained problematic. The World Economic Forum observed that “Nigeria’s commitments announced at the London 2012 Summit are yet to be fully implemented despite initial optimism.”<sup>17</sup>

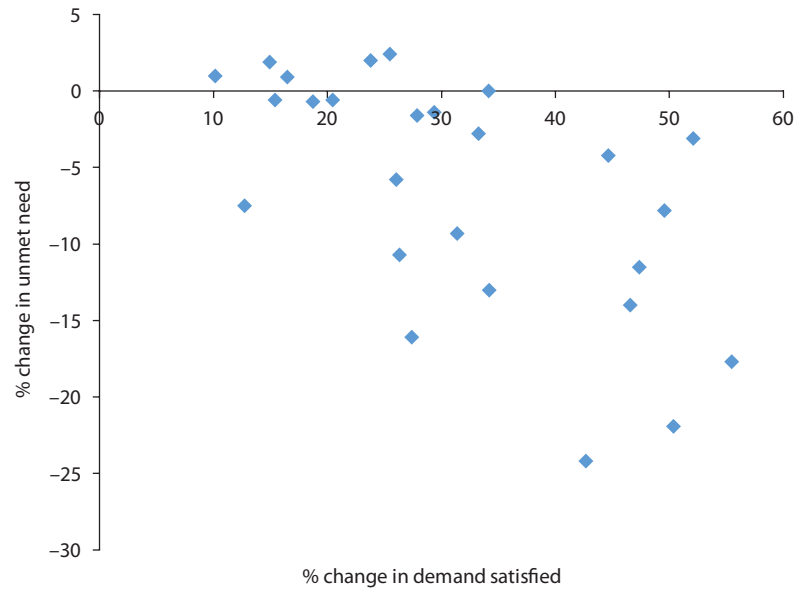
Within this context, results from the Nigeria Urban Reproductive Health Initiative (funded by the Bill & Melinda Gates Foundation and implemented between 2009 and 2014) show that family planning programming can be successful in Nigeria.<sup>18</sup> The private sector is playing a significant role in providing contraceptives (Figure 6), but significantly stronger efforts from the government are required to satisfy demand by expanding access and ensuring equity. Given the record of government neglect, it is not surprising that the PFPI has remained very low, reaching only 9% in 2014 (Figure 5).

• **Ethiopia.** Africa’s second most populous country had lackluster progress in family planning before 1990. However, mCPR more than doubled between 1990 and 2000 (from 3% to 6%), and then doubled again between 2005 and 2011 (from 14% to 27%);<sup>19</sup> mCPR was 35% in 2016, the year of the latest DHS. Although Ethiopia’s private sector has experienced growth, its public sector has contributed the most to increasing the proportion of demand for family planning that is satisfied. The country exemplifies the effect of government commitment and wide-scale expansion in access to family planning services through improved health services,<sup>20</sup> which is reflected in the sharp rise in PFPI, from 11% in 2000 to 45% in 2014 (Figure 5).

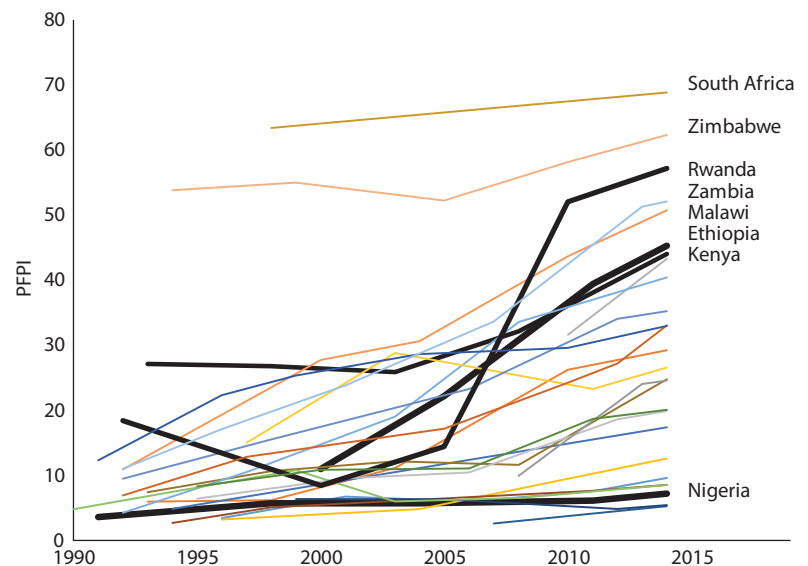
As in many other countries, family planning services have been available through the International Planned Parenthood affiliate—the Family Guidance Association of Ethiopia—since the 1960s; public-sector services started in the 1980s. Ethiopia’s first population policy was formulated in 1993, and subsequent policies linked population and family planning with development. Then-Prime Minister Meles Zenawi was not supportive of family planning when he took power in 1995, but by 2005 was convinced that it played an important role in fostering development.<sup>20</sup> He empowered his Minister of Health, Tedros Adhanom Ghebreyesus (who served until 2012 and is now the secretary general of the World Health Organization), to fully implement family planning. Dr. Tedros expanded family planning by mobilizing support from donors and targeting subnational regional authorities to allocate resources for family planning.

Ethiopia’s Health Extension Plan—the government’s flagship health program—was launched in 2003 and

**FIGURE 4. Change in the proportion of women with unmet need, by change in the proportion with demand satisfied, 26 Sub-Saharan African countries, 1990–2014**



**FIGURE 5. Trends in the public-sector family planning impact score, 26 Sub-Saharan African countries, 1990–2014**

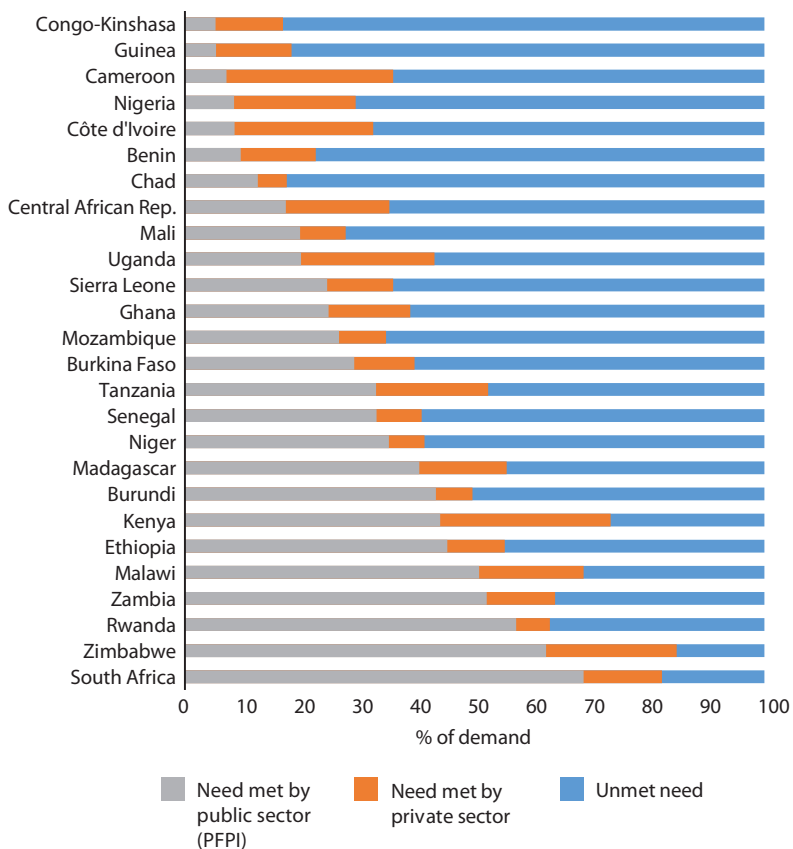


Notes: PFPI = public-sector family planning program impact score, calculated as the product of the proportion of demand satisfied and the proportion of contraceptive users relying on public-sector services; PFPI can range from zero (in countries where there is no public-sector family planning program) to the value of demand satisfied (in countries where a highly accessible and high-quality public-sector program serves all clients with a demand for contraception).

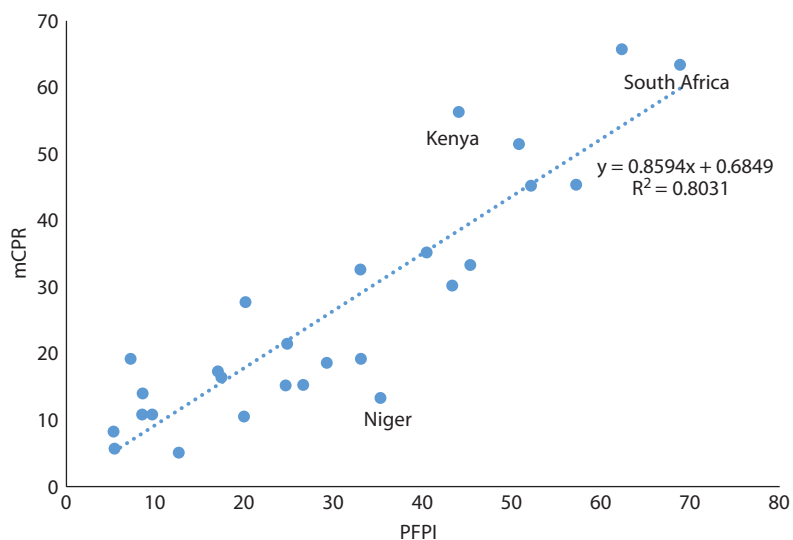
expanded access because family planning was included in the public sector’s package of essential services. Subsequently, family planning information and services became widely accessible in both rural and urban areas.<sup>21</sup> Health promotion, prevention and primary curative care, including family planning, are provided by paid female health extension workers assigned to rural health posts and supported by volunteer community health workers;<sup>21</sup> health extension workers also serve urban areas.

The government faces continuing challenges in finding strategies to reduce unmet need; maintain a sufficient

**FIGURE 6. Components of demand for contraception, by increasing public-sector family planning impact score, 26 Sub-Saharan African countries, 2014**



**FIGURE 7. Modern contraceptive prevalence, by public-sector family planning impact score, 26 Sub-Saharan African countries, 2014**



Notes: PFPI = public-sector family planning program impact score. mCPR = modern contraceptive prevalence rate.

supply of contraceptives; stem the turnover of health staff and address staff shortages, particularly in rural areas; train health extension workers in implant removal; and improve monitoring and evaluation.<sup>19</sup> Despite heavy reliance on donor funding, the creation of a budget line for family planning commodities and the removal of the import tax

on contraceptives—both in 2007—demonstrate Ethiopia’s commitment to ensuring supplies to meet its population’s family planning needs.<sup>19</sup>

• **Rwanda.** Demand satisfied can grow dramatically given government commitment to family planning, as exemplified by Rwanda’s experience. Between 2000 and 2014, the country’s PFPI grew from 8% to 57%, the most rapid rise in any African country (see Figure 5). In addition, Rwanda’s mCPR increased from 4% to 45% between 2000 and 2010, leading to its family planning program being hailed as “a phenomenal success.”<sup>19</sup>

Rwanda has succeeded over the past decade as a result of strong political will and commitment, as well as community mobilization and rebuilding the health system following a period of genocide.<sup>19</sup> At the 2012 London Summit on Family Planning, President Paul Kagame expressed his vision for Rwanda to become a middle-income country in the context of equipping women and men to plan their families.<sup>22</sup>

The government became involved in family planning in the 1980s, and a 1990 National Population Policy set ambitious goals of reducing the total fertility rate and increasing mCPR by 2000.<sup>23,24</sup> Family planning was deemphasized after 1994’s genocide (resulting in a temporary decline in the PFPI), but efforts were revived in the mid-2000s. A system of accountability for family planning through performance-based contracts\* maintains focus on expanding access to services and on behavior change communication through the media and interpersonal communication. Under Rwanda’s National Family Planning Policy, all ministries are responsible for developing action plans.<sup>25</sup> A family planning performance indicator—the percentage of the population using modern contraceptives—was introduced in 2006 and is frequently cited as a priority for district managers. The government also emphasizes the need for high-quality services.<sup>26</sup>

In 2005, 73% of users received family planning from the public sector; by 2014, the proportion was 91%.<sup>27</sup> Increased access to and use of family planning resulted from a community health insurance program that was expanded to include family planning and performance-based financing for high-quality clinical family planning services, as well as from expansion of community-based services, including the provision of injectables by community health workers.

Rwanda’s national family planning program still faces supply-side issues, including health worker shortages, stockouts, the need for training and support to help providers offer quality services, and a lack of clarity about policies governing payment for services at the local level.<sup>28</sup> Although mCPR has risen since 2010, to 48% in 2014 among women in union,<sup>27</sup> the pace of increase has slowed. To achieve further growth, the program requires

\*Performance-based contracts refer to agreements in which payments made to households and providers depend on their performance on predetermined indicators.

attention to supply issues. In addition, demand-side challenges remain because the mean ideal family size is still moderately high, at 3.4 children for women and 3.0 for men in 2014.<sup>27</sup>

• **Kenya.** Trends in contraceptive use in Kenya reflect variations in political and financial support for the country's family planning program over time. By 1990, Kenya's mCPR was 20%—much higher than in most other African countries (see Figure 2). This high prevalence resulted from Kenya's relatively strong national family planning program in the 1980s, which enjoyed presidential support and was implemented through provision of family planning services and information, education and communication (IEC) programs designed to promote a small family norm. Government political support for family planning continued into the early 1990s, along with international financial support for contraceptive commodities, services and IEC campaigns. During the 1990s, however, international funding shifted to HIV and AIDS, resulting in cutbacks in family planning support. This shift affected the national family planning program, since donors supported much of its implementation.<sup>29</sup> The 1998 DHS still showed rising prevalence, but by 2003, contraceptive use had stalled (mCPR, 33%).<sup>30</sup>

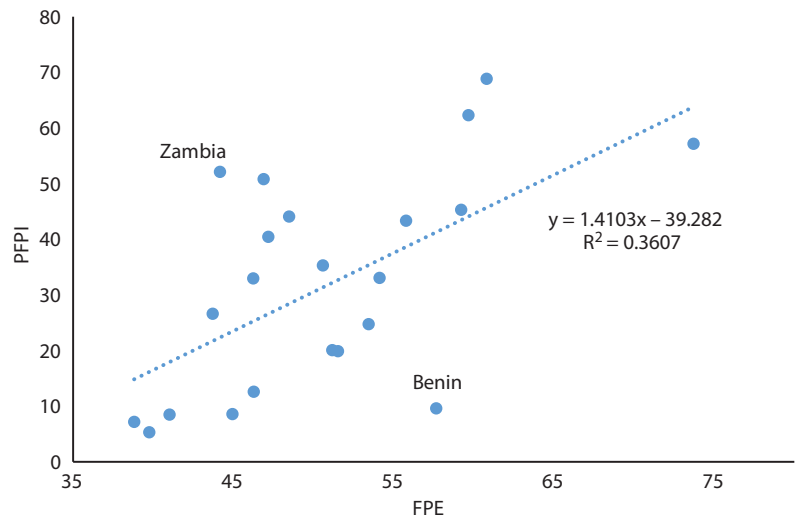
Efforts to revitalize Kenya's family planning program following the 2003 DHS findings included advocacy by the National Council for Population and Development and other partners, and increased government financial support to reduce donor dependence. Family planning was integrated into Kenya's Vision 2030, which was launched in 2008, and a new population policy was issued in 2012. A budget line for contraceptive commodities was established, and a renewed commitment was made to community-based distribution, including provision of injectable contraceptives by community health workers; IEC campaigns were also invigorated.<sup>29</sup>

Implementation of the family planning program is now taking place within the context of decentralization initiated in Kenya's 2010 constitution, although there is some lack of clarity on roles and responsibilities at the national and county levels. Advocacy at the county level has begun to show results, with two counties providing financial support for family planning in their 2016 budgets.<sup>31</sup> With renewed attention to and government funding of the national family planning program, along with expansion of services in the public and private sectors, mCPR among women in union rose to 39% in 2008 and to 53% in 2014.<sup>32</sup> The program's neglect in the 1990s and subsequent reinvigoration are reflected in trends in PFPI, which declined to a low of 26% in 2003 before rebounding to 44% in 2014 (see Figure 5).

## DISCUSSION

On the basis of our review of trends in indicators of contraceptive behavior, we conclude that mCPR and demand are not suitable for measuring the degree to which women are able to achieve their childbearing goals through

**FIGURE 8. Public-sector family planning impact score, by family planning effort score, 22 Sub-Saharan African countries, 2014**



Notes: PFPI = public-sector family planning program impact score. FPE = family planning effort.

contraceptive use; two countries can have the same level of demand or the same prevalence, and in one, demand is largely unsatisfied, whereas in the other, most demand is satisfied. Unmet need and demand satisfied are better for the purpose; however, unmet need shows inconsistent trends, which is presumably one of the reasons why it was dropped as an indicator for the SDGs. Thus, like the SDGs, we consider demand satisfied to be the best of the four indicators to assess progress in women's ability to achieve their reproductive objectives.

PFPI provides a useful addition to the indicators currently used to assess progress in reproductive health as measured by the related MDG and SDG targets. PFPI allows countries to track the impact of their public-sector programs and provides evidence that can be used to hold governments accountable for meeting their obligations to satisfy demand for family planning. An advantage of PFPI is that it is derived from survey data such as the DHS; this means that time series of PFPI are measured with the same methodology in all countries and surveys, thus making longitudinal and cross-sectional analyses straightforward. In addition, PFPI can be estimated at the subnational level to assess variation by geographic area or by socioeconomic status; this allows the identification of a country's underserved areas and underserved population groups, thus providing policymakers with valuable evidence that can improve program effectiveness.

However, PFPI does not give a full assessment of the impact of public family planning programs. First, it does not account for the role of public assistance to the private sector. Government efforts often benefit contraceptive use in the private sector through actions such as creation of regulations to facilitate distribution and import of contraceptives, and through demand-generating activities such as media outreach. In countries

where these support activities occur, PFPI will tend to underestimate the public program impact.

Second, the public sector provides subsidized contraceptive commodities and services. These compete with the private sector and, as a result, the private sector may be smaller than it would be in the absence of the public sector. These two factors are not easy to measure, and we did not attempt to do so here. Instead, given that one is positive and one negative, we assumed that they offset each other. In reality, this offset is unlikely to be exact and, therefore, PFPI must be considered an approximate indicator of public program impact. Nevertheless, the value of tracking PFPI over time is clear, given the obligation of governments to promote and provide family planning. To obtain a complete picture of how demand for contraception is being satisfied in countries, PFPI should be supplemented with information on private-sector provision of contraceptives.

Contraceptive behavior varies widely among African countries. At one end of the spectrum are the majority of countries with low mCPR (lower than 10% in 2014), and at the other end are a few countries with high prevalence (greater than 60%). Our analysis indicates that public-sector family planning programs play a critical role—as measured by PFPI—in satisfying demand for contraception in a number of countries. Our case studies of Nigeria, Ethiopia, Rwanda and Kenya illustrate that the trends in PFPI are consistent with the program implementation developments in each country. In Kenya and Rwanda, we see the effects of wavering government support in the 1990s, followed by renewed investments that were ultimately successful. Nigeria's low, flat PFPI reflects a lack of government commitment. In contrast, Ethiopia shows that an investment in a nationwide family planning program with full political support can be successful even in one of the continent's poorest countries.

As our estimates of PFPI indicate, many Africans still live in countries where public-sector family planning programs are weak or nonexistent; reasons for this include social and religious opposition, and lack of resources and political will. In addition, even though family planning programs have been implemented successfully in countries outside of Africa, there have been concerns that these programs could have less impact in Sub-Saharan Africa because of the pronatalist beliefs common in the region. Our estimates show that these concerns are largely unfounded. In the few African countries where substantial investments in public-sector family planning programs have been made, sharp increases in PFPI and contraceptive use have followed.

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## RESUMEN

**Contexto:** Los indicadores comúnmente usados relativos al comportamiento anticonceptivo en una población—la prevalencia de uso de métodos anticonceptivos modernos (PMAm), la necesidad insatisfecha de anticoncepción, la demanda de anticoncepción y la demanda satisfecha—no son adecuados para evaluar el progreso realizado por los programas gubernamentales de planificación familiar a la hora de ayudar a que las mujeres y los hombres logren sus metas reproductivas.

**Métodos:** Se examinaron tendencias en estas medidas en 26 países de África subsahariana entre los años 1990 y 2014. También se evaluaron las tendencias en un nuevo indicador propuesto, el puntaje del impacto del programa de planificación familiar del sector público (IPFP) y su relación con la PMAm, así como el puntaje del esfuerzo de planificación familiar. Se usaron estudios de caso para revisar

el desarrollo e implementación de programas públicos de planificación familiar en cuatro países (Nigeria, Etiopía, Ruanda y Kenia).

**Resultados:** Los cuatro indicadores comúnmente usados captan el grado en el que las mujeres usan la planificación familiar y la medida en que la demanda está satisfecha, pero no dan claridad acerca del rol de los programas de planificación familiar. El IPFP aporta evidencia que puede usarse para responsabilizar a los gobiernos en cuanto a la satisfacción de la demanda de planificación familiar, y estuvo estrechamente relacionado con el desarrollo de políticas en los cuatro países que sirvieron de estudios de caso.

**Conclusiones:** El IPFP representa una adición útil a los indicadores actualmente usados para evaluar el progreso en materia de salud reproductiva y en los programas de planificación familiar.

## RÉSUMÉ

**Contexte:** Les indicateurs usuels de comportement contraceptif d'une population—le taux de prévalence contraceptive moderne (TPCm), le besoin non satisfait de contraception, la demande de contraception et la demande satisfaite—ne conviennent pas particulièrement à l'évaluation des progrès réalisés par les programmes de planification familiale mis en œuvre par les gouvernements pour aider les femmes et les hommes à atteindre leurs objectifs de procréation.

**Méthodes:** Les tendances de ces mesures dans 26 pays d'Afrique subsaharienne, entre 1990 et 2014, ont été examinées. Celles d'un nouvel indicateur proposé, la cote d'impact du programme de planification familiale du secteur public (IPFP), et son rapport au TPCm et à la cote d'effort de planification familiale ont également été évalués. Des études de cas ont servi à l'examen de l'élaboration et de la mise en œuvre du programme public de planification familiale dans quatre pays (Éthiopie, Kenya, Nigéria et Rwanda).

**Résultats:** Les quatre indicateurs usuels captent la mesure dans laquelle les femmes pratiquent la planification familiale et la demande est satisfaite, mais ils ne révèlent pas directement le rôle des programmes de planification familiale. La cote IPFP apporte l'élément probant pouvant servir à responsabiliser les gouvernements face à la demande de planification familiale; elle s'est révélée étroitement liée à l'évolution des politiques dans les quatre pays à l'étude.

**Conclusions:** La cote IPFP apporte un complément utile aux indicateurs actuels d'évaluation des progrès en santé reproductive et des programmes de planification familiale.

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**APPENDIX TABLE 1. Selected indicators of contraceptive behavior, 26 Sub-Saharan African countries, 2014**

Country	CPR	mCPR	PS	Unmet need	Demand	Demand satisfied	PFPI	FPE
Benin	16.9	10.8	42.6	37.0	47.9	22.5	9.6	57.7
Burkina Faso	19.6	18.6	73.7	28.2	46.9	39.7	29.2	u
Burundi	32.5	30.2	87.3	30.4	60.9	49.6	43.3	55.8
Cameroon	32.1	19.2	20.0	33.9	53.4	36.0	7.2	38.8
Central African Rep.	22.8	16.4	49.3	29.5	46.5	35.3	17.4	u
Chad	6.0	5.1	71.6	23.9	29.0	17.6	12.6	46.3
Congo-Kinshasa	21.5	8.3	31.1	40.8	49.1	16.9	5.3	39.8
Côte d'Ivoire	19.2	14.0	26.3	28.9	43.1	32.5	8.5	45.0
Ethiopia	34.4	33.3	82.0	27.0	60.3	55.2	45.3	59.2
Ghana	26.1	21.5	63.7	33.7	55.3	38.9	24.8	53.4
Guinea	6.8	5.7	29.4	25.3	31.0	18.4	5.4	u
Kenya	59.3	56.3	59.9	20.3	76.6	73.5	44.0	48.5
Madagascar	43.5	35.2	72.8	27.6	63.4	55.5	40.4	47.2
Malawi	53.5	51.5	73.8	23.3	74.9	68.8	50.7	46.9
Mali	10.9	10.5	71.6	27.2	37.8	27.8	19.9	51.5
Mozambique	16.5	15.3	76.6	28.6	44.1	34.7	26.6	43.7
Niger	14.7	13.3	85.3	18.8	32.2	41.3	35.2	50.6
Nigeria	15.1	10.8	28.9	25.8	36.7	29.4	8.5	41.0
Rwanda	52.3	45.4	90.8	26.5	72.1	63.0	57.2	73.7
Senegal	20.9	19.2	80.9	27.8	47.0	40.9	33.0	54.1
Sierra Leone	15.8	15.2	68.4	27.0	42.3	35.9	24.6	u
South Africa	64.3	63.4	83.6	13.4	77.0	82.3	68.8	60.8
Tanzania	38.2	32.6	63.0	29.4	62.3	52.3	33.0	46.2
Uganda	31.0	27.7	46.6	36.5	64.3	43.1	20.1	51.2
Zambia	50.0	45.2	81.6	25.4	70.8	63.8	52.1	44.2
Zimbabwe	66.6	65.7	73.4	11.7	77.4	84.9	62.3	59.7

Notes: u=unavailable. CPR=contraceptive prevalence rate. mCPR=modern contraceptive prevalence rate. PS=proportion of contraceptive users relying on public-sector services. PFPI=Public-sector family planning program impact score. FPE=Family planning effort. Sources: references 5 and 12.