

## **Contraceptive method preference dynamics and fulfillment in urban Kenya, Nigeria, and Senegal**

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### **Abstract** (200 words)

Contraceptives are not an undifferentiated good: each method has unique attributes that limit substitution with other methods. Women develop preferences for contraceptives based on these attributes, and these preferences guide women's decision to use contraception. The proposed study aims to assess contraceptive method preference dynamics by measuring the stability of women's contraceptive preferences, identify factors associated with preference stability, and measure the preference-use match. Using data from a cohort of women of reproductive age living in urban Kenya, Nigeria, and Senegal, we find women have unstable contraceptive preferences. Over two years, 42.8% changed their preferred contraceptive. Women mainly prefer long-acting methods over short-acting and traditional contraception. Among those preferring long-acting contraception, 18.2% shifted their preferences towards short-acting contraception and 8.6% to traditional contraception. The largest shifts are registered among those preferring short-acting contraception. Between baseline and endline, 28.1% of the women matched their baseline contraceptive method preferences at follow-up, 50.3% adopted a different method, and 21.7% remained as never users. Adopters of long-acting contraception registered the highest matching. Method preferences are not stable and they are not always satisfied. Identifying the factors that shape the stability and satisfaction of contraceptive preferences can help family planning providers improve access to contraception.

## **Theoretical focus**

Contraceptives are not an undifferentiated good: each method has unique attributes that limit substitution with other methods, such as its effectiveness, side effects, duration, and protection against sexually transmitted infections. Women develop preferences for contraceptives based on these attributes, and according to economic theory, these preferences guide women's decision to choose and use contraception. Yet, little is known about how these preferences evolve, their fulfillment, and their effect on contraceptive discontinuation and adoption.

Research on women's fulfillment of contraceptive preferences is limited. While there is some research from high-income settings, there is much less in developing contexts (Aiken, Lohr, Aiken, Forsyth, & Trussell, 2017; He, Dalton, Zochowski, & Hall, 2017; Rominski, Sk Morhe, Maya, Manu, and Dalton, 2017). In the U.S., 36% of women reported a preference-use mismatch, mainly affecting women from the lowest socioeconomic status and those preferring less effective methods (He et al., 2017). Aiken et al. (2017) studied contraceptive method preferences in a sample of women seeking pregnancy termination in England and Wales. They found that 91% of women obtained their chosen method after pregnancy termination, with greater fulfillment among users of long-acting contraception. The National Academy of Sciences report on FP (2016) highlighted the role of women's contraceptive method preferences and decision-making in family planning as a way to better understand real-world decisions, even though the report does not provide preference estimates.

The proposed study aims to assess the stability of women's contraceptive method preferences and identify its predictors. This study also aims to measure how often women are able to fulfill their contraceptive method preferences and predict fulfillment based on individual and health system characteristics.

## **Data**

Data comes from the Measurement, Learning & Evaluation (MLE) project that evaluated the Urban Reproductive Health Initiative (URHI) program. URHI aimed to improve the reproductive health of the urban poor by increasing accessibility, quality, and use of family planning services through a set of interventions, on both the demand and supply sides. MLE is a multi-country study that collected three rounds of data between 2010 and 2015 from a cohort of women of reproductive age (18-49)—data were structured as baseline, midterm, and endline. The study also collected information from health facilities using a facility audit and a pharmacy audit. For this study, we include data from 11 cities located in Kenya, Nigeria, and Senegal.

## **Research Methods**

The first outcome of interest measures the stability of contraceptive method preferences. It is captured through two questions that were repeatedly asked at every survey round. Women were first asked if they “intended to use a method to delay or avoid pregnancy within the next twelve months.” And if this question was affirmative, women were asked: “what method would you prefer most to use if you do use a method

in the future?” Women could choose one method out of a 12-item list, and if their preferred method was not listed, they could name it. Having three rounds of data allows us to assess the stability of contraceptive preferences over two years and one year by comparing baseline to endline and midterm to endline, respectively. These two variables take the value of one if preferences do not change between survey rounds and zero otherwise. To identify the predictor variables of preference stability, we will construct a logistic regression model based on individual and health system characteristics and baseline preferences.

The second outcome of interest measures the matching of women’s most preferred contraceptive method stated at baseline with the contraceptive method reported using at follow-up (if she is using contraception at midterm or endline). Similar to stability, we will construct a logistic regression model based on individual and health system characteristics and baseline preferences.

Our sample is limited to include only women who were ever users of contraception but were not using any method at the baseline interview. As with any longitudinal study, MLE-URHI lost some of the women at the follow-up interviews; we will construct inverse probability weights to control for attrition.

### **Preliminary and Expected Findings**

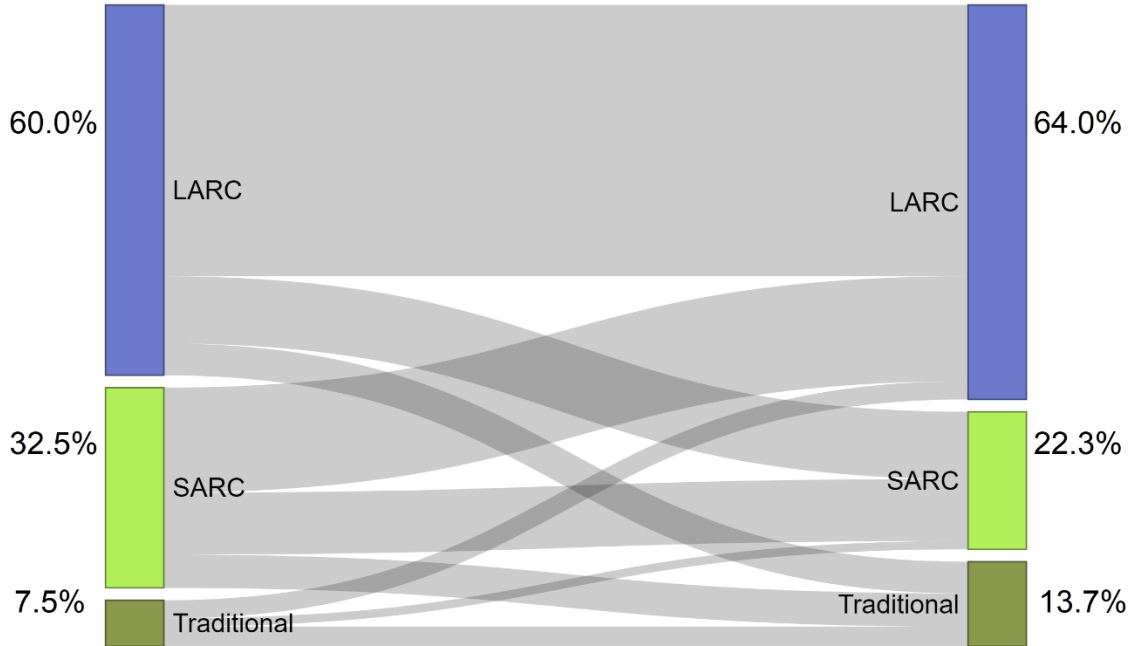
Preliminary results show that most women preferred a long-acting contraceptive method at baseline and midterm, 60% and 41.8%, respectively. Contrary to what economic theory suggests, women’s contraceptive method preferences were not stable (see Figure 1). Over two years (baseline and endline), we find that 42.8% of women changed their preferred contraceptive. This change was slightly larger over one-year, 53.4%. In both comparisons, the group of women who chose a long-acting contraceptive as their preferred method at either baseline or midterm was less likely to change their preferences at follow-up than those choosing short-acting and traditional contraception as their preferred method. In this group, change happened in 26.7% (33.5%) of the women between baseline-endline (midterm-endline), 18.2% (15.9%) shifted their preferences towards a short-acting contraceptive method, and 8.6% (17.6%) to traditional contraception. Women who chose short-acting contraceptives as their preferred method at baseline or midterm were more likely to change their preferences at follow-up than any of the other contraceptive groups. In this group of women, 69.1% changed their preferences between baseline-endline and 69.3% between midterm-endline.

We find that between baseline and endline, 28.1% of the women matched their baseline contraceptive method preferences at follow-up, 50.3% adopted a different method, and 21.7% remained as never users. The highest matching was among women who adopted long-acting contraception. Similar results were produced when we compare baseline to midterm data.

Our next step is to estimate the logistic regression models to predict preference stability and preference-use matching. We hypothesize that family planning counseling will be a significant predictor of both outcomes given the role they play in helping women choose contraception and that we will identify other significant characteristics from the health system.

Figure 1: Contraceptive method preference dynamics in Kenya and Nigeria comparing baseline to endline (n = 816) and midterm to endline (n = 421)

### Contraceptive Preferences, Baseline-Endline



### Contraceptive Preferences, Midterm-Endline

