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CAMEROON: Can Discounts and Better Counseling Increase the Use of Contraceptives?

Every day, hundreds of women around the world die from a maternal cause. For women living in sub-Saharan Africa, the risk is especially high: 1 in 38 women over age 15 will die during childbirth or from related causes in their lifetime. While many potential solutions exist, one seemingly simple one is to make it easier for women to access modern contraception. Contraception reduces the number of children a woman has in her lifetime, increases spacing between children, and prevents early pregnancy, all of which improve a woman's chances of survival from having children. The use of contraception can have many other benefits as well, such as higher lifetime earnings for women who delay pregnancy, and health and economic benefits for the children themselves.

Source: Luca Parisotto

Despite these benefits, millions of women lack access to sexual and reproductive care around the world. In low-income countries, many factors deter women and girls from accessing contraception, including cost, challenges in obtaining relevant information about the benefits and side effects, stock-outs at hospitals and clinics, and negative views toward adolescents and unmarried women using contraception.

In Cameroon, the World Bank's Strategic Impact Evaluation Fund supported an evaluation to identify and test innovative approaches that eased constraints related to the costs of contraception and the relevance of information about different methods provided by healthcare providers. Working with a hospital in Yaoundé, Cameroon, researchers designed a counseling app that ranked contraceptive methods using women's medical history and preferences and offered a method for the woman to discuss with the nurse first. This personalized digital counseling approach was tested against another approach—also delivered via an app—which mimicked the status quo in which providers listed all methods and asked the women which method they would like to discuss first. Those in both groups were also randomly selected to get discounts on contraception.

Researchers found that personalized digital counseling was very effective, leading to a three-fold increase in the use of long-acting reversible contraceptives. Discounts also increased use when offered alone, but the impact wasn't as large as personalized counseling and they didn't have any additional impact on those who received personalized counseling. The findings suggest that technology-enabled personalized recommendations can potentially be as effective in increasing unfamiliar contraception use as providing large subsidies.

NIMBLE EVALUATION

This policy note is based on "Can personalized digital counseling improve consumer search for modern contraceptive methods?", by Susan Athey, Katy Bergstrom, Vitor Hadad, Julian C. Hamison, Berk Özler, Luca Parisotto, and Julius Dohbit Sama. *Science Advances* 9.40 (2023): eadg4420.

NIMBLE EVALUATION

Context

This evaluation was conducted at the Hôpital Gynéco-Obstétrique et Pédiatrique de Yaoundé, a women's and children's hospital in the capital of Cameroon. In Cameroon, the maternal mortality rate is 529 per 100,000 live births and about 69 percent of births are attended by skilled health staff.

The Yaoundé hospital offers both long-acting contraceptives (the copper intrauterine device and birth control implants) and short-acting contraceptives (oral and injectable contraceptives). The average woman in the study was 29 years old and 10 percent of the women were under the age of 20. The women had 2.75 children on average, and 25 percent reported wanting no more children. Before the study, 88 percent of participants were using no contraceptive method, and only 3 percent reported using a long-acting reversible contraceptive.

Before designing the study at this hospital, researchers used focus group discussions and individual interviews to gain an understanding of the barriers to contraceptive use in Cameroon more generally. Side effects were neither well-communicated nor well-managed between health providers and their patients, and women were generally supportive of contraceptives but reluctant to receive advice about their use.

Did you know?

- *Every day, approximately 810 women die from preventable causes related to pregnancy and childbirth*
- *94 percent of all maternal deaths occur in low and lower-middle-income countries*
- *Roughly two-thirds (196,000) of maternal deaths are in Sub-Saharan Africa*
- *Young adolescents (ages 10-14) face a higher risk of complications and death as a result of pregnancy than other women.*

Source: WHO, 2017 data

Evaluation

Researchers used a randomized controlled trial to evaluate the impacts of providing discounts on long-acting reversible contraception and to compare different counseling approaches. The study took place among 784 women of childbearing age (15-49 years old) who visited the hospital's family planning unit or maternity and gynecology wards during the study period (June 9, 2020 to March 9, 2021). Women were not invited to participate if they were pregnant, wanted to become pregnant within the next year, or had already been exposed to the program.

While all eligible clients were randomly assigned to different prices, not everyone was assigned to one of the two experimental counselling arms. Just under half of the eligible women who visited the hospital had a method in mind and didn't want to discuss other methods, so they were directed to discuss and/or renew their preferred method and did not take part in the counseling experiment.

Clients who did not have a specific method in mind or were willing to discuss other methods were randomly assigned to either a personalized counseling approach or the standard counseling approach. Using a tablet-based app developed by the research team, trained healthcare providers conducted family planning counseling sessions with the clients. During a structured discussion, the providers used the app to record the clients' fertility plans, needs, and preferences regarding contraceptive methods. With the personalized approach, the app takes the personal information that the client has provided and, using an algorithm, reveals the most suitable method. The provider suggests to the client that they discuss this method first. With the standard approach, the provider asks the client to decide which method they'd like to discuss first, choosing from the full, unranked set of

modern contraceptives.

In both approaches, the tablet-based app addresses potential biases that health providers might have in recommending a method of contraception to women. The woman is always free to choose whether she wants to discuss a particular option in more detail or not. The only difference is that during the counseling session, the personalized version of the app suggests an initial order of discussion based on the predicted suitability of the method for the woman.

After choosing their method, the clients were presented with the cost of the method, which was randomly generated to be either full price (CFA 4000 or approximately USD 7.25), at mid-level prices (CFA 2000 or 1000; USD 1.80 or 3.60), or at low-level prices (free or CFA 150, USD 0.25) for long-acting reversable contraceptives. Randomized discounts for short-acting contraceptives were discontinued because take-up of these contraceptives was so low.

Using data collected through the app, researchers measured the impact of the discounts and app-based counseling sessions on contraception uptake.

Findings

The personalized approach offered through the tablet-based app tripled the adoption of long-acting reversible contraceptives.

Among women who were randomized into the full-price group, approximately 11 percent of women randomized into the standard approach adopted long-acting reversible contraception. More than 35 percent of women randomized into the personalized counseling model adopted it at full price.

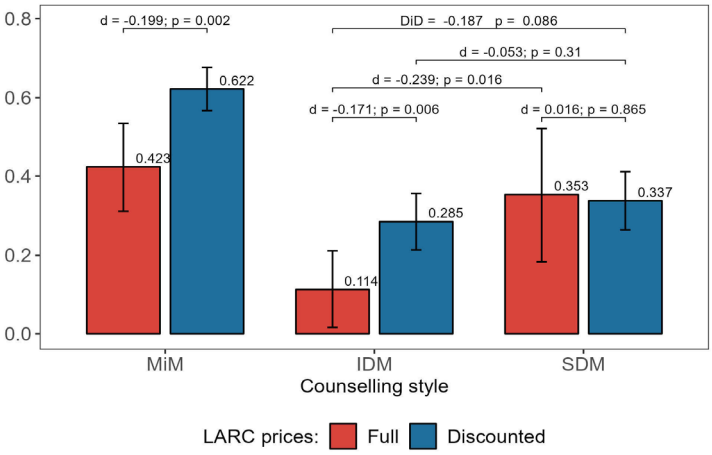

Figure: Fraction of clients who adopted a long-acting reversible contraceptives (LARC).

Source: Figure 2 in Athey et al. (2023).
Notes: The figure shows the fraction of clients who adopted a LARC during the study period under Discounted and Full LARC prices across counseling styles. The lines above the bars show the estimate (d) and P value (P) from a t-test of the difference in means between the two indicated groups. The bar labeled DiD indicates the difference-in-differences estimate between the two randomized counseling interventions (IDM-SDM) and LARC price discounts (Full-Discounted).

Offering discounts for long-acting reversible contraceptives was very effective in increasing their adoption and decreasing the likelihood that patients adopted no modern method.

For clients who came to the hospital with a specific contraceptive method in mind, 42 percent adopted long-acting reversible contraception at full price. But discounts increased the share of these clients adopting the contraception to 62 percent. Discounts had a similar impact on clients who did not have a specific contraceptive method in mind and who received standard counseling: 11 percent adopted the long-acting reversible contraception at full price, but receiving a discount increased the share to 29 percent.

The discounts on long-acting contraception did not lead women to switch from short-acting methods like the pill or injectables, as the take up of short-acting methods stayed the same. Instead, the discounts decreased the likelihood of adopting no modern method by around 8 percentage points (for the standard counselling) and by around 14 percentage points (for the personalized counselling).

Younger women were more affected by discounts, suggesting cost is a key barrier to contraception adoption for this group.

Only 12.5 percent of women under age 20 adopted long-acting reversible contraception at full price. Offering a dis count increased take-up by close to 35 percentage points

(increasing take-up by nearly 200 percent). In contrast, 34 percent of women older than 20 adopted the methods at full price. Offering discounts increased take-up by 12 percentage points, representing an increase in adoption of 35 percent, which was still sizable but much smaller than what was observed among the younger women.

Discounts had no further impact on the adoption of contraceptives for women already receiving personalized counseling through the app.

Strikingly, for women who received personalized counseling, the discounts had no additional impact. The full-price and discounted groups had adoption rates of 35 and 34 percent, respectively, which were not statistically different.

NIMBLE EVALUATION

Conclusion

A simple change in family planning counseling led to increases in contraception adoption that were equal to the effect of offering free contraception. This counseling approach took women's preferences, needs, and experiences into account and pointed them to a contraceptive method that made sense for them. This approach also increased the total number of methods discussed in detail during the visit –– tripling the adoption of long-acting reversible contraception even at full price. These results point to a potentially cost-effective approach for increasing contraception use in a way that supports women's satisfaction or autonomy.

Younger women, single women, and those who had recently given birth were more likely than the average woman to adopt contraception if it was discounted, suggesting that discounts may be most cost-effective when targeted to vulnerable women.

More broadly, this research speaks to the importance of integrating family planning services into primary healthcare given the sizable impacts of both the discounts and counseling offered in this setting.

This study was part of SIEF's portfolio of nimble evaluations – rapid, low-cost evaluations designed to uncover insights on implementation. In the next phase of study, researchers will use adaptive evaluation methods to quickly identify the optimal discount and counseling combinations for different populations of women seeking family planning services.

The Strategic Impact Evaluation Fund, part of the World Bank Group, supports and disseminates research evaluating the impact of development projects to help alleviate poverty. The goal is to collect and build empirical evidence that can help governments and development organizations design and implement the most appropriate and effective policies for better educational, health, and job opportunities for people in low and middle income countries. For more information about who we are and what we do, go to: http://www.worldbank.org/sief.

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