Evaluating the Impact of Digital Self-care on Contraceptive Uptake & Continuation in Madhya Pradesh, India

The overarching goal of this research is to inform how digital platforms can expand access to family planning self-care by producing evidence on how well the askNivi chatbot, which refers users to relevant products and services, can support uptake and continuation of family planning.

In the next decade, over one-third of India's population will be between ages 18 and 29. This age group experiences the highest rates of unmet need for family planning and child birth spacing.[1] Educating this group about available contraceptive options, guiding them to sites where they can obtain additional counseling and family planning methods, and supporting contraceptive continuation are essential components to voluntary use of family planning. But in India, only 18% of health workers reported ever talking to female non-users about family planning.[2] In Madhya Pradesh, this number is slightly higher, at 20%.[3]

The WHO defines self-care as "the ability of individuals, families and communities to promote health, prevent disease, maintain health, and cope with illness and disability with or without the support of a health worker."[4] WHO has developed guidelines for self-care interventions, ranging from self-testing for HIV to self-administration of injectable contraception. With increasing phone ownership across the subcontinent and a developed digital landscape, digital tools for FP are a promising way to support India's citizens to plan their reproductive lives, showing great potential to support self-care through the provision of information, tailored tools for method selection, individualized recommendations, links to services and contraceptive products, and follow-up support.

RESEARCH FOR SCALABLE SOLUTIONS

This research is supported by the USAID-funded Research for Scalable Solutions Project (R4S). R4S conducts implementation science research to improve the efficiency, cost-effectiveness and equity of family planning programs in Africa and Asia.

STUDY PARTNERS

- **FHI 360** provides strategic vison, technical leadership, and financial management and oversight of the overall implementation of the study.

- **Nivi** provides technical leadership on the study design, implementation, and analysis as well as access to the platform for research purposes.

- **USAID** provides funding, oversight, and guidance to the study team.

- **ChangeScape** provides technical leadership on study implementation, with a focus on data collection.
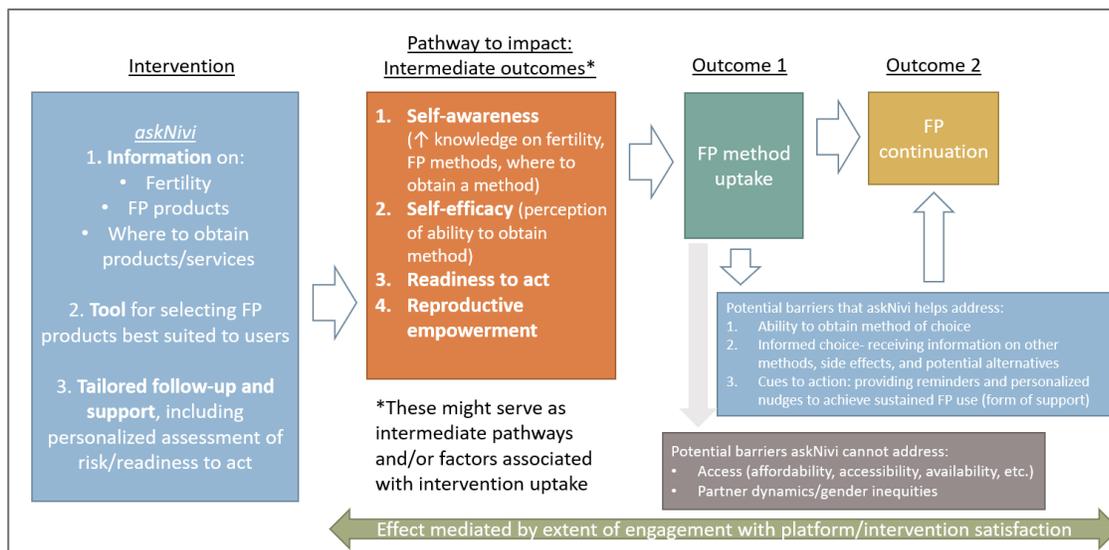
askNivi

askNivi's text/dialogue-based service is available whenever and wherever people want to chat, via popular messaging applications such as Facebook Messenger and WhatsApp. In India, askNivi is currently available in English and Hindi and has been used by over 1.9 million users in 32 states and union territories with the largest numbers in Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Maharashtra, Gujarat, Delhi, Haryana, and Punjab. askNivi deploys its chatbot as a series of health journeys that determine baseline readiness and intent; provide relevant health information, assessments and decision support conversational tools; and referrals to services and products based on the user's expressed preferences. Referrals are to providers (at both public and private health facilities) and pharmacies (both brick-and-mortar and online), based on individual users' method options. Post-referral journeys cover multiple situations ranging from feedback on experience with a provider or a particular method (satisfaction, side effects), and should a user need it, assistance in finding a new method to maintain informed and voluntary contraceptive continuation.

To provide evidence as to how well askNivi supports women who have an unmet need to adopt or continue their use of family planning, FHI360 and partners will conduct this study within two metropolitan areas of Madhya Pradesh-- Bhopal and Indore. Bhopal, the capital of Madhya Pradesh with a population of approximately 2 million people, has the highest unmet need for family planning in the state.[5] Indore is the most populous metropolitan area in Madhya Pradesh with approximately 3 million residents, and has the highest prevalence of oral contraceptive pill use in the state, a potentially important indication of access to and interest in FP methods that can be obtained through self-care strategies.[5]
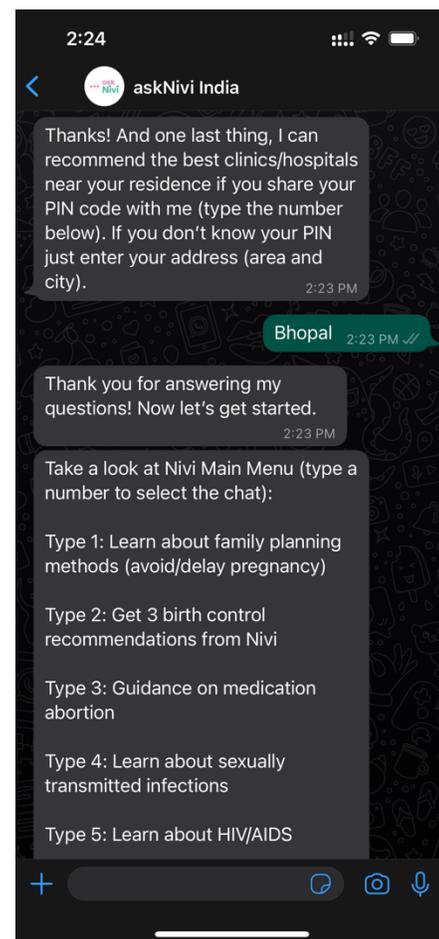
askNivi Theory of Change

❯ Study Objectives, Population, and Design

The evaluation of askNivi will generate rigorous evidence about the chatbot's ability to increase knowledge and impact behavior change through contraceptive uptake and continuation. The innovative study involves multiple components and data collection methods to address five objectives:

Objective	Population (and approximate sample size)	Method/Design
1. Estimate the impact of askNivi on modern contraceptive uptake	Women with unmet need (n=~1350)	Randomized encouragement design, with data collected at baseline and at 2 months post-enrollment (RED). Half of the participants will receive an encouragement to try askNivi; the other half will not receive an encouragement to try askNivi.
2. Assess the impact of askNivi on contraceptive continuation	FP adopters who used askNivi (n=~160)	Randomized controlled trial with subset of RED participants, with data collected at 6- and 12- months after method adoption. Half of the participants will be randomized to receive askNivi follow-up support after method adoption whereas the other half will not receive the follow-up support.
3. Understand the role of askNivi in supporting method uptake and continuation from a user perspective	FP adopters and non-adopters who use askNivi (n=16) AND FP continuers and discontinuers who use askNivi (n=16)	In-depth qualitative interviews with subset of RED participants between 6 and 12 months
4. Describe characteristics of existing FP users who engage with askNivi, their (dis)satisfaction with their current method, behaviors including method switching or discontinuation, and how they engage with the chatbot	Existing FP users (n=200)	Observational study using questionnaire at baseline and 2-months post-enrollment and backend data from the Nivi platform
5. Estimate the financial cost of askNivi per new FP adopter	N/A	Calculate based on cost data from Nivi (subscription fees, marketing, and content management fees) and proportion of new FP adopters who use askNivi and those who do not (from randomized encouragement design)

The primary target population for this study is young women with an unmet need for family planning who can access digital health services. We will recruit women who meet the following inclusion criteria for the randomized encouragement design:

- Age 18 to 29

- Resides within the pincode of the recruitment sites or within any of the adjacent pincodes

- Owns a mobile phone and has an active WhatsApp account

- Literate (able to read and write in English or Hindi)

- Has an unmet need for family planning (unmet need defined as: women who are sexually active, not pregnant, are not currently using a modern contraceptive method, and do not wish to become pregnant 1) at all or 2) within the next two years or 3) do not know when or if they want another child)

Among women with unmet FP need, the primary outcome will be uptake of a modern contraception method within 2-months following randomization. Intermediate outcomes include self-awareness, self-efficacy, intent to use family planning, and reproductive empowerment. We anticipate data collection to commence by July 2022 and to last for approximately 20 months. To receive study updates, please contact sbrittingham@fhi360.org.

> This study will provide critical evidence regarding the effectiveness of a client-facing digital FP tool on contraceptive uptake and method continuation, which has both local and global implications for the digital health/family planning community.

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