

RESEARCH INSIGHT

Planning frictions and the incomplete take-up of health investments: The case of HPV vaccination



THE MAIN TAKEAWAY

A time-specific planning prompt raised HPV second-dose completion by 8.67 percentage points, compared with 4.58 points for an ownership reminder; the three treatments containing a planning prompt were statistically indistinguishable.

WHY THIS STUDY MATTERS

Starting a health investment does not guarantee completing it. Parents may accept a first vaccine dose yet fail to return because they must remember, choose a feasible time, coordinate the visit, and act after a delay. This intention–action gap is especially relevant for multi-dose vaccination schedules. The study compares two behavioral approaches. An ownership reminder says that a vaccine is reserved for the recipient, potentially making noncompletion feel like giving up something already assigned. A planning prompt instead suggests a concrete day and time, making an occasion for action focal without assigning an appointment or restricting alternatives.

HOW THE STUDY WAS CONDUCTED

The researchers randomized 5,907 parent records, each linked to one girl aged 9–17 who had received a first HPV dose but had not completed the schedule, into six groups: pure control, unrelated-message placebo, ownership reminder, planning prompt, and two combined treatments with an ownership reminder 24 hours or two hours before the suggested time. Randomization was blocked by location and age group and balanced further on insurer and health-system characteristics. The six-week SMS campaign ran from May 4 to June 11, 2022. Completion through July 30 was measured for the full randomized sample in Bogotá's administrative vaccination registry. The estimates are intention-to-treat effects because message delivery and reading were not observed.

Project snapshot

KEYWORDS

Planning prompts, Ownership reminders, HPV vaccination, Health investments, Randomized controlled trial

BEHAVIORAL THEMES

Behavioral health, Vaccination, Follow-through

RESEARCH DESIGN

Individual randomized controlled trial with six mutually exclusive arms

STUDY PERIOD

SMS campaign: May 4–June 11, 2022; outcome window through July 30, 2022

5,907 parents, each linked to one girl aged 9–17 with an incomplete HPV schedule

LOCATION

Inside and outside Bogotá, Colombia

PARTNERS

Implemented with support from Bogotá's Health Secretariat, the Colombian League Against Cancer, the Inter-American Development Bank, and the American Cancer Society

ETHICS AND PREREGISTRATION

Universidad del Rosario IRB approval DVO005 1663-CV1287; administrative records handled under applicable confidentiality protections · AEA RCT Registry AEARCTR-0009705

READ THE FULL STUDY

BEER-LAB.ORG

The covered working paper is included with this publication package.

Key findings

Four results that summarize the study's most decision-relevant evidence.

01

Planning roughly doubled completion

The planning prompt increased second-dose completion by 8.67 percentage points relative to a pure-control rate of 8.63%, an increase of about 100% over the control mean.

02

Ownership helped, but less

The ownership reminder increased completion by 4.58 percentage points, about 53% over the control mean. The planning effect was significantly larger ($p=0.010$).

03

Combining messages added no detectable gain

Combined planning and ownership messages increased completion by 7.94–9.10 percentage points, but their effects were statistically indistinguishable from planning alone ($p=0.778$).

04

The direct implementation cost was low

The planning prompt cost an estimated US\$0.38 per additional completion under the study's common cost assumption, versus US\$0.72 for ownership; these are communication costs within existing infrastructure.

EVIDENCE AT A GLANCE

+8.67 pp

Effect of the planning prompt on second-dose completion

5,907

Randomized parents linked to girls with incomplete schedules

US\$0.38

Direct implementation cost per additional completion with planning

From evidence to action

FOR POLICYMAKERS

Where registries identify incomplete schedules, health authorities can test time-specific prompts that make a feasible return visit salient without imposing a formal appointment.

FOR IMPLEMENTERS

Adding an ownership reminder did not improve on planning alone in this setting and created a second contact in the combined arms. Simpler messages may therefore be a useful starting point for implementation.

FOR RESEARCHERS

Future work should let families choose a time, compare suggestions with formal appointments, observe message delivery, and measure planning constraints directly before extending the intervention to first-dose take-up or other settings.

QUESTIONS FOR THE NEXT STUDY

Would allowing families to choose the suggested time improve fit? How does a planning prompt compare with a formal appointment? Which measured planning constraints predict the largest gains?

STUDY TEAM

Julian Peña is at Universidad del Rosario and Stanislaio Maldonado is at Tecnológico de Monterrey. The intervention was developed and implemented with support from public-health and research partners in Colombia and internationally.

Julian Peña and Stanislaio Maldonado

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The views expressed in this brief are those of the authors and do not necessarily reflect the positions of partner organizations or funders.