

Lotteries are an effective strategy for increasing COVID-19 vaccine uptake: experimental evidence from Pakistan

Submission date 20/07/2026	Recruitment status No longer recruiting	☐ Prospectively registered
Registration date 26/07/2026	Overall study status Completed	☐ Protocol
Last Edited 22/07/2026	Condition category Infections and Infestations	☐ Statistical analysis plan
		☐ Results
		☐ Individual participant data
		☒ Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Principal investigator, Scientific, Public

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Study information

Scientific Title

Lotteries are an effective strategy for increasing COVID-19 vaccine uptake: experimental evidence from Pakistan

Study objectives

To examine the effect of behaviorally informed messages (vaccine mandates, side-effects minimization, vaccine manufacturer choices) and financial incentives (cash-prize lottery) on behavioral commitment to register for and receive COVID-19 booster or primary vaccination.

Ethics approval required

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Ethics approval(s)

Approved 20/10/2022, Research and Development Solutions (RADS) (Suite # 3, 2nd Floor, Ali Akbar House, G-8 Markaz, Islamabad, Lahore, 54600, Pakistan; +92 51 8436877; info@resdev.org), ref: no reference provided

Primary study design

Interventional

Allocation

Randomized controlled trial

Masking

Open (masking not used)

Control

Placebo

Assignment

Parallel

Purpose

Prevention

Study type(s)**Health condition(s) or problem(s) studied**

COVID-19 vaccine hesitancy and vaccination/booster uptake

Interventions

A five-arm randomized controlled trial where participants were assigned to a control group or one of four behavioral treatment arms: (1) vaccine mandates emphasizing travel and work requirements, (2) side-effects minimization focusing on safety, (3) vaccine manufacturer options (Pfizer or Moderna), and (4) a cash-prize lottery entry for PKR 30,000.

Randomization procedure: Enumerators collected data through a digital data collection platform, SurveyCTO. Randomization was carried out at the individual level via SurveyCTO. SurveyCTO generated a randomized sequence for placing respondents into treatment and control arms and that was utilized.

Participants were asked a series of questions to understand vaccine preferences, and their demographic and behavioral characteristics. During the course of the questions, they were exposed to one of the 4 treatments (or not if they were in the control group). At the end of the survey participants were offered "opt in" booster shots; enumerators asked the participants if

they were willing to sign up for the booster shot (or primary vaccination for those who were not previously vaccinated) during their visit to the hospital that day. Participants could then walk over to the vaccination site within the same hospital. So, exposure to the treatment message was one time i.e. only at the time of the survey.

Follow-up survey: A short follow-up survey with a subset of 744 randomly selected participants was conducted via telephone on February 14, 2023. Due to budget constraints, we were only able to contact a random subset of respondents. There were two outcome variables which measured the 'uptake' of the COVID-19 booster shot: (i) immediate vaccination i.e., if the participant got vaccinated on the same day, and (ii) subsequent vaccination i.e., if the participant got vaccinated a few days later.

Intervention Type

Behavioural

Primary outcome(s)

1. Behavioral commitment to register for getting boosted measured using a binary variable indicating whether the respondent consented to sign up for same-day vaccination during their hospital visit at Immediate / On-the-spot (measured immediately following exposure to the treatment messages during the hospital visit)

Key secondary outcome(s)

1. Immediate vaccination measured using if the participant got vaccinated on the same day (yes /no) via a phone survey at follow-up

2. Subsequent vaccination measured using if the participant got vaccinated a few days later (yes /no) via a phone survey at follow-up

Completion date

14/02/2023

Eligibility

Key inclusion criteria

1. Individuals visiting a large, urban hospital for routine care
2. Have not previously received one or both doses of the booster shot, or have not previously been vaccinated against COVID-19

Healthy volunteers allowed

Yes

Age group

Mixed

Lower age limit

18 Years

Upper age limit

90 Years

Sex

All

Total final enrolment

1564

Key exclusion criteria

Participants who did not meet the routine care or booster-unvaccinated criteria

Date of first enrolment

21/12/2022

Date of final enrolment

14/02/2023

Locations

Countries of recruitment

Pakistan

Sponsor information

Organisation

Institute of Development and Economic Alternatives (IDEAS)

Funder(s)

Funder type

Funder Name

International Growth Centre

Alternative Name(s)

The IGC, IGC

Funding Body Type

Private sector organisation

Funding Body Subtype

International organizations

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be available upon request from Dr. Hina Khalid hkhalid@hbku.edu.qa

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Other files	Blog post		20/07/2026	No	No
Other publications	Policy brief		20/07/2026	Yes	No