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Barriers to vaccination decision in north-eastern Nigeria.

Submission date
18/02/2019

Recruitment status
No longer recruiting

Registration date
19/02/2019

Overall study status
Completed

Last Edited
17/12/2020

Condition category
Infections and Infestations

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Despite the huge benefits of preventing diseases at low cost, the persistent low vaccine take-up remains hard to explain. The relevance of psychological factors as barriers to vaccination has been commonly documented in Africa, without rigorous evidence. This study conducts a field experiment explicitly designed to evaluate psychic and monetary costs as potential barriers to tetanus vaccine take-up among women of childbearing age in 80 villages in Adamawa state, in rural Nigeria.

Who can participate?
Women aged 15 to 35 and had not received a tetanus vaccine less than six months prior to the baseline survey.

What does the study involve?
We have three interventions; 1) condition under which a respondent can receive the cash incentives (clinic visit s. clinic visit + vaccination), 2) amount of cash incentives (low, middle, and high), and 3) priming intervention (control flipcharts vs. " scared-straight" intervention)

What are the possible benefits and risks of participating?
The possible benefits include the tetanus-toxoid vaccination and cash incentives. Through receiving the tetanus-toxoid vaccination, they can be protected against tetanus. If the respondents are pregnant, vaccination can also protect their new-born baby from neonatal tetanus.
There are side effects of the tetanus-toxoid vaccination such as swelling of the body part of the injection, fever, and headache. However, these side effects are expected to be at minimal.

Where is the study run from?
This is a single-site study. We cover 10 health clinics which covers 80 villages in Jada local government areas in Adamawa state, Nigeria. The lead center is Adamawa Primary Healthcare Development Agency based in Yola, the capital city of Adamawa state.

When is the study starting and how long is it expected to run for?
March 2013 to August 2013

Who is funding the study?
This project was supported with research grants from the Institute for Research on Women & Gender, the Rackham Graduate School, the Department of Afroamerican and African Studies, the Department of Economics, and the Center for the Education of Women at the University of Michigan; the Japan Society for the Promotion of Science; and Yamada Scholarship Foundation.

Who is the main contact?
Ryoko Sato, rsato@hsph.harvard.edu

This study evaluates the relative importance of psychic costs of vaccination compared to monetary costs through a field experiment that randomizes several factors affecting tetanus vaccine take-up among women in rural Nigeria. We conducted our study in 80 villages in Adamawa state, which is in the northeastern region of Nigeria.

To capture monetary costs as potential barriers to vaccination, we randomized the amount of cash incentives provided to women whose condition was simply to attend a clinic. To capture psychic costs of vaccination as potential barriers, we gave a group of women their cash incentives with the additional condition of receiving a vaccine at the clinic. Because the only difference between these two conditions is whether or not a woman was is required to receive a vaccine for cash rewards upon arrival at the clinic, the difference in clinic attendance between these two groups captures the psychic costs of vaccination. Furthermore, if those women whose condition for cash provision was clinic attendance refused to take the vaccine after showing up at the clinic, this is directly attributed to the psychic costs of vaccination.
Finally, to examine the effect of priming on vaccination, we randomized a disease message: either a “scared-straight” message, which emphasizes the severity of tetanus, or a control message, which provides the same information on tetanus without emphasis on the severity of the disease.

Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

Protocol serial number
HUM00063832

Study information

Scientific Title
Psychic vs. Economic Barriers to Vaccine Take-up: a Field Experiment in Nigeria in Northeastern Nigeria

Study objectives
It is expected that psychological factors are major barriers to vaccination, and that cash incentive and emphasizing the severity of the disease increase vaccine take-up

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 09/11/2012, University of Michigan Health Sciences and Behavioral Sciences Institutional Review Board (2800 Plymouth Road, Bldg. 520, Rm. 1169, Ann Arbor, MI 48109-2800; +1 (734) 936-0933; irbhsbs@umich.edu), ref: HUM00063832

Study design
Interventional single-centre study randomised controlled trial

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
We studied the uptake of tetanus-toxoid vaccine.

Interventions
To capture monetary costs as potential barriers to vaccination, we randomly chose the amount of cash incentives provided to women whose condition was simply to attend a clinic. To capture psychic costs of vaccination as potential barriers, we gave another group of women their cash incentives with the additional requirement of receiving a vaccine at the clinic. As the only difference between these two conditions is whether or not a woman was is required to receive a vaccine for cash rewards upon arrival at the clinic, the difference in clinic attendance between these two groups captures the psychic costs of vaccination. Furthermore, if those women whose condition for cash provision was clinic attendance refused to take the vaccine after showing up at the clinic, this is directly attributed to the psychic costs of vaccination.
Finally, to examine the effect of priming on vaccination, we randomized a disease message: either a “scared-straight” message, which emphasizes the severity of tetanus, or a control message, which provides the same information on tetanus without emphasis on the severity of the disease.

There were 9 groups in the study:
group 1) clinic visit condition + control flipcharts + 5 naira
group 2) clinic visit condition + control flipcharts + 300 naira
group 3) clinic visit condition + control flipcharts + 800 naira
group 4) vaccination condition + control flipcharts + 5 naira
group 5) vaccination condition + control flipcharts + 300 naira
group 6) vaccination condition + control flipcharts + 800 naira
group 7) vaccination condition + scared-straight flipcharts + 5 naira
group 8) vaccination condition + scared-straight flipcharts + 300 naira
group 9) vaccination condition + scared-straight flipcharts + 800 naira

Participants were randomised into groups upon enrollment. Baseline survey forms contained randomisation information in the middle page: interviewers randomly picked one of the baseline survey forms (without looking at the middle page) and initiated the baseline interview.

Intervention Type
Behavioural

Primary outcome(s)
The primary outcome is the take-up of the tetanus-toxoid vaccination measured by observation at health clinics.

Key secondary outcome(s))
The risk perception is measured by interview at baseline and at follow-up survey (right after the intervention).

Completion date
31/07/2013

Eligibility

Key inclusion criteria
Female, between the ages of 15 and 35

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Adult

Sex
Female

Total final enrolment
1660

Key exclusion criteria

Received the tetanus-toxoid vaccine within 6 months prior to the study

Date of first enrolment
01/03/2013

Date of final enrolment
31/03/2013

Locations

Countries of recruitment
Nigeria

Study participating centre
Adamawa State Primary Health Care Development Agency
Wuro Jabbe
Jimeta
Nigeria
NA

Sponsor information

Organisation
University of Michigan

ROR
https://ror.org/00jmfr291

Funder(s)

Funder type
Research organisation

Funder Name
Japan Society for the Promotion of Science

Alternative Name(s)
KAKENHI, JSPS KAKEN, JSPS Grants-in-Aid for Scientific Research, Gakushin, , Nihon Gakujutsu Shinkō Kai, JSPS

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
Japan

Funder Name
Department of Afroamerican and African Studies, University of Michigan

Alternative Name(s)
Department of Afroamerican and African Studies, UM Department of Afroamerican and African Studies, U-M Department of Afroamerican and African Studies, U-M LSA Department of Afroamerican and African Studies, UMich Department of Afroamerican and African Studies, DAAS, DAAS, UM

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
United States of America

Funder Name
Institute for Research on Women and Gender, University of Michigan

Alternative Name(s)
Institute for Research on Women and Gender, Institute for Research on Women & Gender, University of Michigan, IRWG

Funding Body Type
Government organisation

Funding Body Subtype
Research institutes and centers

Location
United States of America

Funder Name
Horace H. Rackham School of Graduate Studies, University of Michigan

Alternative Name(s)

Rackham Graduate School, Rackham U-M

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
United States of America

Funder Name
Center for the Education of Women, University of Michigan

Funder Name
Yamada Scholarship Foundation

Funder Name
Department of Economics, University of Michigan

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available due to the sensitive and identifiable nature of the data.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	16/12/2020	17/12/2020	Yes	No