How can we encourage people to wear masks consistently and properly?

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FIRST LARGE-SCALE RCT **EVALUATING THE EFFECT OF MASK-WEARING ON COVID-19**

trial: 342,183

adults in 600

villages in

rural

Bangladesh

A partnership between





mask (cloth

vs. surgical)

tested a portfolio of encouragement strategies to identify the precise combination needed to increase mask-wearing



Second Stage: Documented effects on COVID-19 seroprevalence



randomized

controlled

trial (RCT) evaluation

The research team gratefully acknowledges **GiveWell**, which recommended a grant from the Effective Altruism Global Health and Development Fund to support this research.



THE RESULTS

The NORM model increased mask use, physical distance, and reduced COVID. **Surgical masks** were particularly **effective**, reducing 35% of infections in people over 60





Source: Jason Abaluck et al., "Impact of Community Masking on COVID-19: A Cluster-Randomized Trial in Bangladesh," Science, December 2, 2021, https://www.science.org/doi/abs/10.1126/science.abi9069.



Impact of community masking on **COVID-19: A cluster-randomized** trial in Bangladesh

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We conducted a cluster-randomized trial to measure the effect of community-level mask distribution and promotion on symptomatic SARS-CoV-2 infections in rural Bangladesh from November 2020 to April 2021 (N = 600 villages, N = 342,183 adults). We cross-randomized mask type (cloth vs. surgical) and promotion strategies at the village and household level. Proper mask-wearing increased from 13.3% in the control group to 42.3% in the intervention arm (adjusted percentage point difference = 0.29 [0.26, 0.31]). The intervention reduced symptomatic seroprevalence (adjusted prevalence ratio = 0.91 [0.82, 1.00]). especially among adults 60+ years in villages where surgical masks were distributed (adjusted prevalence ratio = 0.05 [0.45, 0.85]). Mask distribution and promotion was a scalable and effective method to reduce symptomatic SARS-CoV-2 infections.

As of Sectomber 2011, the COVID-19 pandersic has taken the physical distancing

lives of more than 4.3 million people. Inspired by the growing body of scientific evidence that face masks have the potential conducted a charter-randomized controlled trial covering SAES-CoV-3 informations as a result of our intervention. While dreakets (15-27) vacuines new constrain the surread of \$485-CoV-5 in the longterra, it is antikely that a substantial fraction of the population in low- and middle-income countries will have access to action about the value of mask-wearing, mask promotion and vacuines before the end of 2021 (3). Developing scalable and in-person reminders at mosques, markets, and other public effective researce of combuting COVID-19 is thus of first-order policy integrance

from community-based randomized-controlled trials, as well

We designed our trial to encourage animeraal maskwearing at the community level, rather than mask-wearing to slow the spread of the disease and sare lives (3-36), we among only those with symptoms. We encouraged even healthy individuals to wear made since a substantial share 343.183 adults in 600 villages in rural Randadesh with the of COVID-10 transmission monas from asymptomatic or predual goals of (a) identifying strategies to increase community- symptomatic individuals (34), and masks may protect wide mask-wearing, and (b) tracking changes in symptomatic healthy wearers by reducing the inhalation of acrosole or After piloting, to settled on a care intervention package

that combined household mask distribution with communiplaces, and role-modeling by public officials and community leaders. We also tested several other strategies in sub-same The World Health Organization declined to recommend plas, such as asking people to make a vorbal commitment

mask adoption until June 2020, citing the lack of evidence resulting opportunities for social signaling, tort messages, and providing village-level incontives to increase mask-wearing as concerns that mask-wearing would create a false sense of The selection of strategies to test was informed by both our scuartly (i2). Critics argued these who were masks would en- plot results and research in public health, psychology (i8gaps in compensating behaviors, such as failing to physically 30), economics (22-3.0), marketing (34-34), and other social distance from others, resulting in a net increase in transmis- sciences (27) on product promotion and dissemination stratnion (25). We directly test this hypothesis by measuring legies. We tested many different strategies because it was

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Jason Abaluck et al., "Impact of Community Masking on COVID-19: A Cluster-Randomized Trial in Bangladesh," Science, December 2, 2021, https://www.science.org/doi/abs/10.1126/science. abi9069



Real-world evidence shows face masks reduce covid-19's spread

A study from Bangladesh found they help even if many don't wear them



The Washington Post Democracy Dies in Darkness

World

Massive randomized study is proof that surgical masks limit coronavirus spread, authors say



Massive study of Bangladesh shows surgical

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Home / Health / Coronavirus

masks limit Covid spread

ile photo of people wearing masks walking on a street in Dhaka amid the Covid-19 pandemic Meher

The randomized trial was conducted among over 340,000 people across 600 villages

An enormous randomized research involving more than 340,000 people across 600 villages in Bandladesh has found -- some of the strongest real-world evidence vet -- that masks can help slow the spread of Covid-19

The Economist

The Washington Post



The Atlantic

"the Bangladesh study is still perhaps the most important research done during the **pandemic** outside of the vaccine clinical trials."

THE IMPACT

Our team is currently working with partners in Bangladesh, India, Nepal, and Pakistan to scale-up NORM to **more than 100 million people**.







We have delivered over

- 56 million masks to Bangladesh
- 20 million masks to Pakistan

THE IMPACT

World Health Organization and **US Centers for Disease Control and Prevention** updated their recommendations for mask use, partly citing our *Science* study



COVID-19 Infection Prevention and Control

Living guideline Mask use in community settings 22 December 2021



CDC Centers for Disease Control and Prevention



COVID-19

Science Brief: Community Use of Masks to Control the Spread of SARS-CoV-2

Updated Dec. 6, 2021

Summary of Recent Changes

Last updated December 6, 2021

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Data were added from studies published since the last update. These studies address the association of mask
wearing with new infections, including infections related to SARS-CoV-2 variants of concern. All of these studies
demonstrated a benefit.

· A section was added on mask wearing among children.

A strategy that combines face masks with large-scale vaccination is now needed



THE NEXT STEPS OF OUR RESEARCH

1 RCT in Bangladesh to test the effectiveness of masks on asymptomatic COVID and omicron

RCTs in Sierra Leone, India, Pakistan to promote vaccinations in remote, rural areas



Funded by: BILL&MELINDA GATES foundation Why are **Vaccination Rates** Lagging in Low- and Middle-Income **Countries**?

VACCINE DISTRIBUTION



The high global demand for vaccines and limited supply have benefited **countries with payment capacity** and geopolitical importance



VACCINE HESITANCY?

nature medicine

Article | Open Access | Published: 16 July 2021

COVID-19 vaccine acceptance and hesitancy in lowand middle-income countries

Julio S. Solís Arce, Shana S. Warren, Niccolò F. Meriggi, Alexandra Scacco, Nina McMurry, Maarten Voors, Georgiy Syunyaev, Amyn Abdul Malik, Samya Aboutajdine, Opeyemi Adeojo, Deborah Anigo, Alex Armand, Saher Asad, Martin Atyera, Britta Augsburg, Manisha Awasthi, Gloria Eden Ayesiga, Antonella Bancalari, Martina Björkman Nyqvist, Ekaterina Borisova, Constantin Manuel Bosancianu, Magarita Rosa Cabra García, Ali Cheema, Elliott Collins, Filippo Cuccaro, Ahsan Zia Farooqi, Tatheer Fatima, Mattia Fracchia, Mery Len Galindo Soria, Andrea Guariso, Ali Hasanain, Sofía Jaramillo, Sellu Kallon, Anthony Kamwesigye, Arjun Kharel, Sarah Kreps, Madison Levine, Rebecca Littman, Mohammad Malik, Gisele Manirabaruta, Jean Léodomir Habarimana Mfura, Fatoma Momoh, Alberto Mucauque, Imamo Mussa, Jean Aime Nsabimana, Isaac Obara, María Juliana Otálora, Béchir Wendemi Ouédraogo, Touba Bakary Pare, Melina R. Platas, Laura Polanco, Javaeria Ashraf Qureshi, Mariam Raheem, Vasudha Ramakrishna, Ismail Rendrá, Taimur Shah, Sarene Eyla Shaked, Jacob N. Shapiro, Jakob Svensson, Ahsan Tariq, Achille Migondo Tchibozo, Hamid Ali Tiwana, Bhartendu Trivedi, Corey Vernot, Pedro C. Vicente, Laurin B. Weissinger, Basit Zafar, Baobao Zhang, Dean Karlan, Michael Callen, Matthieu Teachout, Macartan Humphreys, Ahmed Mushfiq Mobarak 🖾 & Saad B. Omer 🖂 -Show fewer authors

Nature Medicine (2021) | Cite this article



Covid-19 vaccine acceptance is higher in most low and middle income countries (average 80%), compared to high income countries

Childhood vaccine acceptance is very high in most low and middle income countries

Vaccine hesitant individuals are most concerned about side effects (safety)



LAST-MILE DELIVERY CHALLENGES

In Sierra Leone, it takes (on average) 3 hours to get to a vaccination center each way, and it costs 6.5 USD each trip





THE RESEARCH QUESTIONS

- 1. Is improving **access sufficient** to ensure increases in vaccination rates in remote, rural areas?
- 2. Is a **social mobilization** campaign to sensitize the community a **cost-effective**

complement to improving access?





THE RESEARCH DESIGN

Control Group

2

3

Last Mile Delivery (LMD) Mobile Vaccination Team Visits Village on motorbikes



LMD + Social Mobilization

Information campaign, involve village leaders, prepare community before mobile vaccination team visits.

THANK YOU

