

# Correspondence

## COVID vaccination in the world's largest refugee camp – reaching women

Last year's vaccination campaign in the refugee camp in Cox's Bazar, Bangladesh, which houses some 900,000 Rohingya refugees who fled genocide in Myanmar in 2017, led to more than half of the eligible population being fully vaccinated in 4 months (see [go.nature.com/3q7ukca](https://go.nature.com/3q7ukca)). Vaccine uptake was notably successful among women.

Among marginalized people, the vaccination rate for women is usually lower than for their male counterparts (see, for example, [go.nature.com/3i6wask](https://go.nature.com/3i6wask)). This is down to gender-specific misinformation and gender gaps in accessing information and vaccination centres, for example. Nevertheless, more than 80% of women in the target group for COVID-19 vaccines were vaccinated in the first month of the Cox's Bazar programme (see [go.nature.com/3kfopy2](https://go.nature.com/3kfopy2)).

Engagement with community leaders over gender-based barriers to vaccination led to education programmes designed to combat false rumours. This in turn led to the recruitment of female vaccinators, and to vaccine misinformation being discussed at women-only radio listeners' clubs and religious group-study sessions.

As a health-care researcher who has worked with Rohingya refugees, I think this reflects the importance of including women themselves in such campaigns.

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## Liberal-arts education helps scientists think and communicate

Routinely including liberal-arts courses in scientific education can help students to define and tackle social as well as scientific issues – and to communicate them effectively (see, for example, G. Mulgan *Nature* **602**, 9; 2022). Scientists can then be better equipped to act as interpreters and advocates when interacting with policymakers and the public.

Scientists should be thinkers, basing their work on carefully described problems derived from broader perspectives (G. Bosch *Nature* **554**, 277; 2018). That can help them to see how their research touches the lives of fellow citizens. And because the broader public increasingly holds them accountable, an ability to communicate clearly is essential, particularly in fields such as medicine, environmental science and technology.

We recognize that our proposal might not sit comfortably with the present educational climate, in which admittance to scientific training programmes is based heavily on research experience. Such expectations reward early differentiation and specialization, but not necessarily the quality of questions asked, their context, and the underlying reasons for studying specific topics in our interconnected world.

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## Votes show Swiss public still supports some animal research

Urgent demands for COVID-19 treatments during the pandemic seem to have altered the Swiss public's view of the importance of research animals.

Since the 1980s, the number of research animals used annually in Switzerland has fallen from 2 million to half a million (see [go.nature.com/3w5d6tt](https://go.nature.com/3w5d6tt)). But in a referendum last month, only 21% of 2,394,476 voters nationwide were in favour of an all-out ban on animal experimentation (see [go.nature.com/3tivlzh](https://go.nature.com/3tivlzh)). And 75% of 53,421 voters in the canton of Basel City – cradle of the Swiss chemical and pharmaceutical sectors – rejected a draft local law to secure the rights of laboratory primates (see [go.nature.com/3q5yfiw](https://go.nature.com/3q5yfiw)).

This back-peddalling comes at a time when more funding is being directed towards replacing laboratory animals altogether (last year, the Swiss National Science Foundation alone announced 20 million Swiss francs (US\$21.2 million) in funding for research in this field until 2027; see also last year's European Parliament resolution at [go.nature.com/3cb1erd](https://go.nature.com/3cb1erd)).

Despite the Swiss referendum results, scientists are likely to see further initiatives regarding research on animals, such as proposals to ban experiments on primates or ones that involve severe distress, such as the transplantation of aggressive tumours.

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## Stress-test the resilience of critical infrastructure

The United Nations Office for Disaster Risk Reduction is developing strategies for stress-testing the resilience of important infrastructure that could be affected by multiple stressors, including climate change. This will help to inform decisions on investment before and after disasters, thus limiting damage to populations, industry or the environment.

The possible effects of severely disruptive events – wildfires, floods and earthquakes, for example – and the requirements for recovery depend on a system's capacity to recover and transform following such events. Stress-testing with this in mind demands new ways of thinking and new tools, with applications such as levee integrity against floodwaters, transport infrastructure amid a refugee crisis, or hospital bed capacity after a mass casualty event. The financial sector uses such testing to understand the conditions under which institutional finance might buckle.

Stress-testing the resilience of infrastructure gives policymakers a better understanding of system structures and dynamics. It supports the prioritization of sectors and needs in the face of tight budgets. It also provides the option to use network analysis, enabling high-fidelity modelling of systems under real-world conditions.

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\*On behalf of 6 correspondents.

See [go.nature.com/3tjjbtw](https://go.nature.com/3tjjbtw)