



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Centre for Inflammatory Disease, Department of Immunology and Inflammation (MP, CC, LL, SPM, MW) and Department of Infectious Diseases (JB, ADP, X-NX, WB, PK), Imperial College London, London W12 0NN, UK; Imperial College Renal and Transplant Centre, Imperial College Healthcare NHS Trust, Hammersmith Hospital, London, UK (MP, CC, SG, LL, SPM, MW); Department of Infection and Immunity North West London Pathology NHS Trust, London, UK (AC, MG, PR, PK); Department of HIV and Genitourinary Medicine, Chelsea and Westminster Hospital, London, UK (ADP, PK)

- Polack FP, Thomas SJ, Kitchin N, et al. Safety and efficacy of the BNT162b2 mRNA Covid-19 vaccine. *New Eng J Med* 2020; **383**: 2603–15.
- Walsh EE, Frenck RW Jr, Falsey AR, et al. Safety and immunogenicity of two RNA-based Covid-19 vaccine candidates. *New Eng J Med* 2020; **383**: 2439–50.
- Ewer KJ, Barrett JR, Belij-Rammerstorfer S, et al. T cell and antibody responses induced by a single dose of ChAdOx1 nCoV-19 (AZD1222) vaccine in a phase 1/2 clinical trial. *Nature Med* 2020; **27**: 270–78.
- Baden LR, El Sahly HM, Essink B, et al. Efficacy and safety of the mRNA-1273 SARS-CoV-2 vaccine. *New Eng J Med* 2021; **384**: 403–16.
- Voysey M, Clemens SAC, Madhi SA, et al. Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK. *Lancet* 2021; **397**: 99–111.
- Sahin U, Muik A, Vogler I, et al. BNT162b2 induces SARS-CoV-2-neutralising antibodies and T cells in humans. *medRxiv* 2020; published online Dec 11. <https://doi.org/10.1101/2020.12.09.20245175> (preprint).
- Mahase E. Covid-19: medical community split over vaccine interval policy as WHO recommends six weeks. *BMJ* 2021; **372**: n226.
- McKay PF, Hu K, Blakney AK, et al. Self-amplifying RNA SARS-CoV-2 lipid nanoparticle vaccine candidate induces high neutralizing antibody titers in mice. *Nature Comm* 2020; **11**: 3523.
- Deng W, Bao L, Liu J, et al. Primary exposure to SARS-CoV-2 protects against reinfection in rhesus macaques. *Science* 2020; **369**: 818–23.
- Seow J, Graham C, Merrick B, et al. Longitudinal observation and decline of neutralizing antibody responses in the three months following SARS-CoV-2 infection in humans. *Nature Microbiol* 2020; **5**: 1598–607.
- Wajnberg A, Amanat F, Firpo A, et al. Robust neutralizing antibodies to SARS-CoV-2 infection persist for months. *Science* 2020; **370**: 1227–30.
- Wyllie D, Mulchandani R, Jones HE, et al. SARS-CoV-2 responsive T cell numbers are associated with protection from COVID-19: a prospective cohort study in keyworkers. *medRxiv* 2020; published online Nov 4. <https://doi.org/10.1101/2020.11.02.20222778> (preprint).
- Chandrashekar A, Liu J, Martinot AJ, et al. SARS-CoV-2 infection protects against rechallenge in rhesus macaques. *Science* 2020; **369**: 812–17.
- Zimmermann P, Curtis N. Factors that influence the immune response to vaccination. *Clin Microbiol Rev* 2019; **32**: e00084-18.

## COVID-19, cults, and the anti-vax movement

Rochelle Burgess and colleagues<sup>1</sup> eloquently described participatory community engagement as essential for successful COVID-19 vaccination, which involves appreciating the heterogeneous public and working with communities and their leaders to enable bottom-up approaches. They suggested that COVID-19 has drawn attention to the structural violence that is embedded within society, with the pandemic furthering the marginalisation of historically oppressed and excluded groups. Burgess and colleagues<sup>1</sup> drew attention to how people who might have suffered disproportionate economic and health consequences from COVID-19 are now being asked “to trust the same structures”<sup>1</sup> that failed to provide adequate resources and social protection during the pandemic. Failure to address these contextual dimensions can worsen mistrust, damaging vaccine uptake. However, Burgess and colleagues make a distinction between “people wholly opposed to vaccinations (anti-vaxxers) and...vaccine hesitancy”<sup>1</sup> and imply participatory community engagement as a means to engage only people with vaccine hesitancy.

Lessons from studying cults (which are less pejoratively called new religious movements, describing movements that emerged in the late 20th century) can inform approaches to the anti-vax movement. A cult has come to mean a non-conforming ideology, or a religion that is disliked, with beliefs that are unacceptable to mainstream society. Just as cults are grouped together as sinister, bad, or wrong, the discourse surrounding anti-vaxxers in both academic and popular circles can be dismissive and derogatory. The pejorative label and negative attitudes towards cults promote an us-and-them viewpoint, creating martyrs<sup>2,3</sup> and extending the length of time that members hold the new beliefs, thus encouraging further involvement in the movement and radicalisation.<sup>4</sup>

Learning from these consequences, a more constructive perspective could view the anti-vax movement as a religious phenomenon, involving a whole spectrum of ideas, and focus on the essential need to understand the beliefs that are involved to avoid further marginalisation. Hence, implying that anti-vaxxers are beyond the reach of community engagement activities could result in increased anti-vax activities. We suggest a more inclusive approach, where the same inquisitive dialogue and contextual understanding that was suggested for vaccine hesitancy should be extended to members of the anti-vax movement.

SM declares funding by the Economic and Social Research Council and the Parkes Foundation towards the cost of her doctoral study. CH declares no competing interests.

\*Sophie Mylan, Charlotte Hardman  
sophie.mylan@lshtm.ac.uk

Department of Global Health and Development, London School of Hygiene & Tropical Medicine, London WC1H 9SH, UK (SM); National Health Service, London, UK (SM); Department of Theology and Religion, Durham University, Durham, UK (CH)

- Burgess RA, Osborne RH, Yongabi KA, et al. The COVID-19 vaccine rush: participatory community engagement matters more than ever. *Lancet* 2021; **397**: 8–10.
- van Twist A, van Eck D, Newcombe S. “Trust me, you can’t trust them”: stigmatised knowledge in cults and conspiracies. In: Dyrendal A, Robertson DG, Asprey E, eds. *Handbook of conspiracy theory and contemporary religion*. Leiden: Brill Academic Publishers, 2018: 152–79.
- Singler B. Big, bad pharma: the indigo child concept and biomedical conspiracy theories. *Nova Relig* 2015; **19**: 17–29.
- Barker E. *New religious movements: a practical introduction*. London: Her Majesty’s Stationery Office, 1989.

## Health systems in the ACT-A

The attention to health systems in the headline of Ann Usher’s World Report<sup>1</sup> about the Access to COVID-19 Tools Accelerator (ACT-A) is most welcome. However, we were disappointed that the World Report focused on medical oxygen and personal protective equipment (PPE), interventions that, although important, are better described as components of clinical



Indrani Mukherjee/Getty Images

For the **UN Resolution 2286** see  
<https://digitallibrary.un.org/record/827916?ln=en>



Published Online  
 March 12, 2021  
[https://doi.org/10.1016/S0140-6736\(21\)00621-8](https://doi.org/10.1016/S0140-6736(21)00621-8)

care. Unlimited medical oxygen and PPE will not benefit populations that are affected by COVID-19 if health facilities do not have enough staff or funding for other equipment, drugs, utilities, and transport, or if they have lost most supplies to pilfering. Additionally, populations will not benefit if health managers cannot effectively prepare budgets, use most of their recurrent budget on salaries, or do not reliably collect or use local data for outbreak identification, priority setting, and resource allocation.

COVID-19 and the ACT-A provide an enormous opportunity for strengthening health systems. There has arguably never been such an obvious, globally applicable rationale (ie, financial and physical) to basic health services, essential public health functions, and advanced health care that is affordable for people who are very sick. The observed collapse in essential basic services,<sup>2</sup> delayed management of illnesses other than COVID-19,<sup>3</sup> and the inability of many countries' health systems to mount an effective response to the pandemic have exposed the fragility of the global health sector. Had this pandemic involved a more lethal virus than SARS-CoV-2, then the consequences would have been even more dire.

The diagnostics, treatments, and vaccines that are being developed with ACT-A funding all depend on strong health systems for their efficient and effective introduction. A WHO–UNICEF operational framework<sup>4</sup> described a health-systems approach to universal coverage of quality primary care and essential public health functions and provided related guidance for governments, donors, and partners. Funding this approach, in addition to medical oxygen and PPE, should be prioritised by the ACT-A.

We declare no competing interests.

\*David B Hipgrave, Aboubacar Kampo, Luwei Pearson  
[dhipgrave@gmail.com](mailto:dhipgrave@gmail.com)

UNICEF, Baghdad 10001, Iraq (DBH); UNICEF, New York, NY, USA (AK, LP)

- 1 Usher AD. Health systems neglected by COVID-19 donors. *Lancet* 2021; **397**: 83.
- 2 Akseer N, Kandru G, Keats EC, Bhutta ZA. COVID-19 pandemic and mitigation strategies: implications for maternal and child health and nutrition. *Ame J Clin Nutr* 2020; **112**: 251–56.
- 3 Richards M, Anderson M, Carter P, Ebert BL, Mossialos E. The impact of the COVID-19 pandemic on cancer care. *Nat Cancer* 2020; **1**: 565–67.
- 4 WHO, UNICEF. Operational framework for primary health care. Geneva: World Health Organization, 2020.

## The crisis of health care in Myanmar

We are writing in solidarity with the health workers of Myanmar during the worsening crisis following a military coup on Feb 1, 2021. Many UK health research and care institutions have worked with clinical colleagues in Myanmar over many years, building both partnership and friendship. Together we have seen significant improvements in the country's health system, providing life-saving care to mothers, newborns, infants, and children.<sup>1</sup> Those improvements are now at risk.

Large numbers of Myanmar civilians, including health workers, are committed to the Civil Disobedience Movement, believing that peaceful protest is the best way to avoid a politically and economically disastrous slide back into military dictatorship, and to arrive at a way forward for Burmese democracy. Demonstrations have spread to all parts of the country. Through personal communication with colleagues in Myanmar and news reports,<sup>2,3</sup> it is clear that many protesters are in hiding, sleeping in a different place each night in fear of their lives. Petrol is now scarce, banks are closed, and internet, electricity, and water supplies are all disrupted. Meanwhile, although government hospitals, schools, and universities are shut, groups of doctors are treating patients quietly and without charge in a variety of settings.

UN Resolution 2286 prohibits harm against health workers in situations of conflict. They must be protected now, not least by the vigilance of the global community. Myanmar's doctors and nurses are a vital constituency in the country's social development. We urge all parties to respect their humanitarian role and to ensure their safety. We hope that by bearing witness alongside our Myanmar friends and colleagues, we may help to galvanise international support for Myanmar's recent democratic process, a resolution to the current crisis, and a resumption of the country's path to prosperity.

We declare no competing interests.

\*Jean J Bowyer, Susan C Broster, Jay Halbert, San San Oo, Susan PA Rubin  
[bowyerbrown@yahoo.co.uk](mailto:bowyerbrown@yahoo.co.uk)

Royal College of Paediatrics and Child Health, London WC1X 8SH, UK (JJB, SPAR); Maidstone and Tunbridge Wells NHS Trust, Royal Tunbridge Wells, UK (JH); Addenbrooke's Hospital, Cambridge, UK (SCB); Hywel Dda University Health Board, Haverfordwest, UK (SSO); University of Medicine 1, Yangon, Myanmar (SSO)

- 1 Latt NN, Cho SM, Htun NMM, et al. Healthcare in Myanmar. *Nagoya J Med Sci* 2016; **78**: 123–34.
- 2 BBC. Myanmar coup: protesters face up to 20 years in prison under new law. Feb 15, 2021. <https://www.bbc.co.uk/news/world-asia-56067423> (accessed March 11, 2021).
- 3 Stublely P. Myanmar coup: troops seen on streets and internet cut as protests continue. Feb 14, 2021. <https://www.independent.co.uk/news/world/asia/myanmar-coup-protest-troops-internet-aung-san-suu-kyi-b1802235.html> (accessed March 11, 2021).

## Department of Error

Gordon KB, Foley P, Krueger JG, et al. Bimekizumab efficacy and safety in moderate to severe plaque psoriasis (BE READY): a multicentre, double-blind, placebo-controlled, randomised withdrawal phase 3 trial. *Lancet* 2021; **397**: 475–86—In this Article, the last sentence of the penultimate paragraph of the Results section should read: "There were no cases of inflammatory bowel disease or adjudicated suicidal-ideation and behaviour throughout the study." This correction has been made to the online version as of March 25, 2021.

Figtree GA, Vernon ST, Hadziosmanovic N, et al. Mortality in STEMI patients without standard modifiable risk factors: a sex-disaggregated analysis of SWEDEHEART registry data. *Lancet* 2021; **397**: 1085–94—The appendix of this Article has been corrected as of March 25, 2021.