



Will anti-vaccine activism in the USA reverse global goals?

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In the time of the COVID-19 pandemic, anti-vaccine activism in the USA accelerated, amplified and formed an alliance with political groups and even extremists. An organized, well-funded and empowered anti-science movement now threatens to spill over and threaten all childhood immunizations in the USA and globally.

Many countries now face declining immunization rates as a result of anti-vaccine activism¹. In the case of the USA, an anti-vaccine movement that began with false assertions linking vaccines to autism accelerated roughly a decade ago in Texas (where I live and work) around a libertarian framework known as health freedom². At present, many conservative elected leaders in the US House of Representatives actively promote this health freedom anti-vaccine agenda, as do several US senators, sitting governors and federal judges³. Far-right extremist groups such as the Proud Boys march at anti-vaccine rallies.

Health freedom in the USA

The central tenets of the health freedom movement are: (1) prioritizing vaccine choice (especially for COVID-19 vaccines) over government vaccine mandates; (2) promoting pseudoscientific claims on the benefits of 'natural immunity' or cures such as hydroxychloroquine or ivermectin; (3) exaggerating vaccine side effects and downplaying their effectiveness; and (4) asserting that the pharmaceutical industry and the US government engage in backroom discussions or even possibly financial transactions. Conservative news outlets such as Fox News amplify some of these beliefs, as do contrarian intellectuals, and the organized groups identified by the Center for Countering Digital Hate (CCDH) as the 'disinformation dozen'. Anti-vaccine activism even extends to some health-care providers connected to the far right.

US anti-vaccine activism under the banner of health freedom (also referred to as medical freedom) has produced tragic and even deadly consequences. The loss of life has been massive. Since 1 May 2021, when President Biden's administration announced that COVID-19 vaccines would become widely and freely available, at least 200,000 unvaccinated Americans have lost their lives potentially needlessly because they refused to have a COVID immunization. Analyses from Charles Gaba and organizations such as the Kaiser Family Foundation and the *New York Times* have shown that those COVID-19 deaths or low vaccination rates

occurred overwhelmingly along a partisan divide and in Republican-majority states, with the highest death rates among US counties that voted heavily for the 2020 re-election of President Trump. A new phrase known as 'red COVID' has been invoked to report on this strong partisan divide in vaccine acceptance.

A global anti-vaccine empire

This anti-vaccine activism that is now linked to health freedom politics has helped to amplify anti-vaccine sentiment in other countries. This explains in part the 'freedom convoy' anti-vaccine protests in Canada, and anti-mask and anti-vaccine rallies held in the UK and western European capitals during the pandemic. Moreover, there are reports on how vaccine refusal extends beyond COVID-19 vaccines to include parents refusing routine childhood or school-entry vaccinations for their children⁴.

A central concern is whether anti-vaccine activism from the USA will detrimentally effect the world's low- and middle-income countries (LMICs). For two decades, under the auspices of the 'Global Goals' (initially the 'Millennium Development Goals' followed by 'Sustainable Development Goals'), tremendous strides have been made in reducing deaths and morbidity from measles, polio, pertussis and other dangerous illnesses that can be prevented by vaccination⁵. The fear is that globalizing anti-vaccine activism might reverse these trends. A successful vaccine ecosystem led by Gavi, the Vaccine Alliance, and its United Nations partners, the World Health Organization (WHO) and UNICEF, is under threat.

Even before the emergence of COVID-19, the WHO listed vaccine hesitancy as one of the top ten global health threats, including in LMICs⁶. Now, in this time of the pandemic, the WHO notes further significant 'backsliding' of routine childhood immunizations. In terms of COVID-19 vaccinations, African nations exhibit the lowest rates globally. Only 8% of the population of Nigeria, 18% of Kenya and 24% of Uganda are fully vaccinated against COVID-19. Although access accounts

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for most of the vaccine inequality, vaccine refusal has become a considerable problem, according to some reports⁷.

Connecting the dots

Evidence that links US anti-vaccine activism to vaccine refusal in LMICs remains fragmented and often elusive. It requires expanded data collection and analysis. However, an international media platform, openDemocracy, reports how US conservative groups now target audiences in Uganda to discredit COVID-19 vaccinations. In a 2021 interview with the Center for Strategic and International Studies, one African journalist reports: “Right-wing and QAnon talking points about the vaccines have become a staple within African communities, with people questioning the pandemic and the real purpose of the vaccines. A lot of people believe the vaccines are a way for governments to track citizens or worse”. Anti-vaccine videos from a Fox News anchor and other materials, including Antony Fauci memes, circulate widely in South Africa. Additional surveys find that large numbers of South Africans distrust the safety or effectiveness of COVID-19 vaccines⁸. The African Centres for Disease Control and Prevention (CDC) reports disproportionately high vaccine hesitancy among those who receive their information through social media. Confirming the adverse impact of American COVID-19 anti-vaccine activism is challenged by the paucity of culturally relevant on-the-ground reporting and the fact that data are often unsearchable in the biomedical science literature. Another complication is the reality that US government and European Union warnings about the two major adenovirus-vectored vaccines also dampened enthusiasm for these vaccines on the African continent.

Alarming, American anti-vaccine activism looks set to continue beyond COVID-19. One US-based organization identified among the disinformation dozen by the CCDH has just released a film claiming a tetanus immunization program is a WHO ‘population-control experiment’ that sterilized African women. Anti-vaccine activists also target leading global health institutions such as the Gates Foundation and the WHO. This includes outlandish claims around injuries as a result of polio and other vaccine campaigns in India and elsewhere. Because I publicly defend vaccines and write about how my daughter’s autism is unrelated to vaccinations, I am also a frequent and regular target.

Conclusion

As the SARS-CoV-2 Delta variant spread across the southern states of the US in the summer of 2021, we learned too late about the damage inflicted by anti-vaccine activism and missed an opportunity to prevent a catastrophic loss of life. If we wish to halt a global decrease in vaccinations, we cannot allow vaccine refusal to continue to accelerate. Among the potential recommendations is an expanded application of social science to the study of anti-vaccine activities in LMICs and the establishment of an observatory for collecting and analysing disinformation jointly with the WHO, the African CDC and other global health organizations^{9,10}.

Because so much US anti-vaccine aggression is currently linked to political extremism and even influences elected officials in the US government, we must also recognize the limits of the health sector to combat these new realities. Seeking outside advice from experts in homeland security, justice, commerce and even the US State Department is essential, in addition to seeking help from the various United Nations agencies. Anti-vaccine activism now costs human lives on scales that exceed global terrorism or other established threats. We must recognize the depth and breadth of anti-vaccine activism and its detriment to global security.

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Competing interests

P.J.H. is a co-inventor of a COVID-19 recombinant protein vaccine technology owned by Baylor College of Medicine (BCM) that was recently licensed by BCM non-exclusively and with no patent restrictions to several companies committed to advance vaccines for LMICs. The co-inventors have no involvement in license negotiations conducted by BCM. Similar to other research universities, a long-standing BCM policy provides its faculty and staff, who make discoveries that result in a commercial license, a share of any royalty income. So far, BCM has not distributed any royalty income to the co-inventors of the COVID-19 recombinant protein vaccine technology. P.J.H. is also the author of several books published by Johns Hopkins University Press and ASM-Wiley Press and receives royalties from those books.

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- Less than 1% COVID-19 vaccines supplied to African countries expired: <https://www.devex.com/news/less-than-1-covid-19-vaccines-supplied-to-african-countries-expired-102493>
- Red COVID: <https://www.nytimes.com/2021/09/27/briefing/covid-red-states-vaccinations.html>
- The Vaccine Demand Observatory: <https://www.thevdo.org>
- US conservatives spreading antivax misinformation to unvaccinated Uganda: <https://www.opendemocracy.net/en/5050/us-conservatives-spread-anti-vaccine-covid-misinformation-uganda/>
- Vaccine hesitancy runs high in some African countries, in some cases leaving unused doses to expire: <https://www.nytimes.com/2021/04/16/world/vaccine-hesitancy-africa.html>
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- What is driving COVID-19 vaccine hesitancy in sub-Saharan Africa?: <https://blogs.worldbank.org/african/what-driving-covid-19-vaccine-hesitancy-sub-saharan-africa>
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