



## Book

# Why vaccine rumours stick—and getting them unstuck

Infectious diseases have long shaped human history, from the plague of Athens (430–427 BCE) that killed around a third of the Athenian population, the Black Death in the 14th century that killed about 30–60% of all Europeans, and the 1918–19 influenza pandemic that took the lives of at least 50 million people globally. In the 8 months since the emergence of SARS-CoV-2, more than 600 000 people worldwide have died from COVID-19 as of July 21, 2020. No sector of society has been spared and the full economic and societal reckoning will be grim by any account. Economists estimate global economic growth could drop by 3–6% and global trade could decline by 13–32% in 2020.

Traditional public health measures have been used to mitigate the spread of the virus and community-wide lockdowns have been enforced in many areas. Sustaining these measures has been challenging. We will be living with the pandemic's social and economic disruption for some time. As only population-wide immunity will end the pandemic, there has been an unprecedented effort to rapidly develop safe and effective vaccines that can be deployed globally. WHO is currently tracking more than 140 vaccine candidates, with 24 of them in clinical development in July, 2020.

While there is more to public health than vaccines, the health of the public continues to be shaped by vaccines and vaccination programmes. This year Gavi, The Vaccine Alliance, an organisation founded on the principle of equitable access to life-saving vaccines by addressing the supply side of vaccination, celebrated its 20th anniversary. Gavi has helped to vaccinate over 760 million children in low-income countries, preventing more than 13 million deaths. Beyond their obvious benefits to health, vaccination programmes have indirect economic and societal

benefits, including on cognitive development, educational attainment, labour productivity, income, savings, investment, and fertility.

Because the full impact of vaccines requires widespread public acceptance to achieve population-level immunity, from their earliest days, vaccination policies have been subject to political and ideological debate, pitting

**“...there is a need to address the complex challenges related to vaccine hesitancy that Larson’s book illuminates.”**

individual rights against public health. The origins of vaccine hesitancy—recognised by WHO in 2019 as one of the top ten threats to global health—reach back to compulsory smallpox vaccination laws and the thread of this long history continues today.

Putting all of this in cultural and scientific context, Heidi Larson’s compelling new book *Stuck: How Vaccine Rumors Start—and Why They Don’t Go Away* looks at the dynamics of the evolving debate through the lens of an anthropologist who has been studying vaccine confidence for decades. Largely written before COVID-19 surfaced, this book is timely as the world has its eyes longingly set on a COVID-19 vaccine.

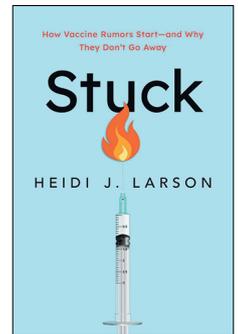
As Larson notes, “the quality of life that most of us enjoy today is dependent on vaccines. In many ways it is one of the biggest worldwide social experiments in collectivism and cooperation in modern times. The challenge is that it depends on a social contract whose fabric is eroding in a broader context of anti-globalization, nationalism, and populism. Vaccines can, as they have in the past, serve as a form of soft diplomacy to keep at least a fundamental level of global cooperation alive and well.”

The foundation that underpins vaccination acceptance is trust. Trust

in the processes, practices, and policies of vaccine development, licensure, and manufacturing; in the policy makers who set vaccine recommendations; and in the health-care system—the doctors, nurses, and community immunisers who administer vaccines as part of routine care and during mass vaccination campaigns. Without understanding and addressing trust, efforts to improve vaccine confidence will be a steep climb. That will certainly be the case when COVID-19 vaccines arrive, especially given the many new vaccine technologies that are being tested and the speed at which they are being developed.

Larson’s book draws from a vast array of findings from her Vaccine Confidence Project that has established an information surveillance system for early detection of public concerns around vaccines. From this large body of work, Larson explores several important themes in *Stuck*: rumour, dignity, distrust, risk, emotional contagion, choice, the power of beliefs over facts, and the power of stories over data. Her analysis of these issues covers a broad range of events, settings, and countries, including Ebola virus vaccine trials in west Africa, routine MMR vaccination in the Somali community in Minnesota, USA, human papillomavirus vaccination in Japan and Columbia, dengue vaccine introduction in the Philippines, and the ramifications of a CIA-inspired sham hepatitis vaccination campaign in Pakistan as part of the hunt for Osama bin Laden.

The calculus of vaccination decision making is the balance of benefit and risk coupled with uncertainty and Larson argues that it is these same elements that breed rumours. Because no vaccine—and no medical product—is risk free there will always be fertile ground for rumours. The challenge, Larson stresses, is “managing the rumours and mitigating purposeful



**Stuck: How Vaccine Rumors Start—and Why They Don’t Go Away**

Heidi J Larson  
Oxford University Press, 2020  
pp 200, US\$24.95, £18.99  
ISBN 9780190077242

For Gavi, The Vaccine Alliance  
see <https://www.gavi.org/>

For the Vaccine Confidence Project  
see <https://www.vaccineconfidence.org/>

**Further reading**

Congressional Research Service. Global economic effects of COVID-19. Updated July 2, 2020. <https://fas.org/sgp/crs/row/R46270.pdf> (accessed July 15, 2020)

WHO. Draft landscape of COVID-19 candidate vaccines. July 21, 2020. <https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines> (accessed July 22, 2020)

Bloom DE, Brenzel L, Cadarette D, Sullivan J. Moving beyond traditional valuation of vaccination: needs and opportunities. *Vaccine* 2017; 35 (suppl 1): A29–35

UN. UN tackles “infodemic” of misinformation and cybercrime in COVID-19 crisis. March 31, 2020. <https://www.un.org/en/coronavirus-communications-team/un-tackling-%E2%80%98infodemic%E2%80%99-misinformation-and-cybercrime-covid-19> (accessed July 15, 2020)

FirstDraft. Misinformation is damaging communities around the world. 2020. <https://firstdraftnews.org/> (accessed July 15, 2020)

Associated Press–NORC Center for Public Affairs Research. Expectations for a COVID-19 vaccine. 2020. <https://apnorc.org/projects/expectations-for-a-covid-19-vaccine/> (accessed July 15, 2020)

Hern A. Nearly one in six Britons would refuse Covid-19 vaccine—survey. *The Guardian*, July 7, 2020

Welcome. Wellcome Global Monitor 2018. 2019. <https://wellcome.ac.uk/reports/wellcome-global-monitor/2018> (accessed July 15, 2020)

Sabin-Aspen Vaccine Science and Policy Group. Meeting the challenge of vaccination hesitancy: a report of the Sabin-Aspen Vaccine Science and Policy Group. 2020. [https://www.sabin.org/sites/sabin.org/files/sabin-aspen-report-2020\\_meeting\\_the\\_challenge\\_of\\_vaccine\\_hesitancy.pdf](https://www.sabin.org/sites/sabin.org/files/sabin-aspen-report-2020_meeting_the_challenge_of_vaccine_hesitancy.pdf) (accessed July 15, 2020)

Biss E. On immunity: an inoculation. New York: Graywolf Press, 2015

Centola D. How behavior spreads: the science of complex contagions. Princeton, NJ: Princeton University Press, 2018

scare tactics while listening for important clues that need further investigation”. These are not moles to be whacked, but signals that call for a deeper understanding not only about why they came about but why they stick. Only by doing this are we likely to get unstuck.

Despite tremendous gains that have resulted from making vaccines more accessible and affordable and the delivery programmes that make them available, as Larson highlights in this book there has been stagnation of vaccine uptake. Although vaccination remains the social norm in all countries, this plateau in uptake together with outbreaks of vaccine-preventable diseases has led to a sharper focus on the quality of vaccination services and on the last inch of the last mile: the decision to accept or decline a vaccine that is available and being offered.

In the pre-COVID-19 era, measles was a litmus test. Reported cases of measles rose globally by 300% in the first 3 months of 2019 compared with the same period in 2018, with outbreaks in all regions. In the future, the COVID-19 vaccines now in development will be our case study. Although many other measures—eg, surveillance, testing, contact tracing, isolation, quarantine, physical distancing, handwashing, provision of PPE, investments in resilient health and social care systems and research, and socioeconomic support, among others—are key elements in the COVID-19 response, a longer-term goal is the possibility of population-level immunity from a vaccine. Thus, it is little surprise that the race to develop COVID-19 vaccines is running at full steam.

Yet, even before any of the many vaccine candidates have worked their way through the rigorous clinical testing gauntlet to show safety and efficacy, expectations for a COVID-19 vaccine are unrealistically high. Portrayed as the saviour from our current plight, COVID-19 vaccines are spoken about in some quarters as if they will be 100% effective and 100% safe—bars that have

yet to be cleared by a vaccine or medical product. If we don’t adequately reset such high expectations, they might further fuel the narrative that questions the value of vaccines more broadly.

As if that uphill climb wasn’t steep enough there is already a global chatter—the rumours, distrust, and wildfires—surrounding the virus and vaccines. These elements are contributing to what WHO Director-General Tedros Adhanom Ghebreyesus, has characterised as an “infodemic”—the fake news that “spreads faster and more easily than this virus”, which intermingles misinformation and disinformation about COVID-19 and vaccines. The fact-checkers have taken on a Sisyphean challenge as they strive to ensure the integrity of the world’s information ecosystem.

But Larson asks that we do more because it isn’t only about getting the facts right. As she frames the core problem: “we don’t have a misinformation problem, we have a relationship problem”. The misinformation can be deleted, but the underlying distrust that has caused it and allowed it to stick remains. Rather than countering and dismissing rumours, Larson encourages the health community and other stakeholders to listen to these rumours and recognise what people are saying. These analyses can reveal deeper issues such as the feeling of being disenfranchised and not being heard. It is from these insights, she argues, “lie the cues to building new and more trusting relationships”.

Intent may not be a predictor of behaviour, but we shouldn’t assume that when COVID-19 vaccines are developed they will be welcomed by all. A US poll in May, 2020, found that only half of the people surveyed said they will take a COVID-19 vaccine and many are unsure. In a survey this spring from Larson’s Vaccine Confidence Project, a fifth of Swiss respondents and 18% of those in France would refuse a COVID-19 vaccine. A more recent YouGov poll in the UK found that nearly one in six British adults said they would either probably or

definitely turn down a COVID-19 vaccine and another 15% were not sure. We will not only need to monitor this sentiment over time but will need a deeper understanding of the implications of the social media chatter, social networks, and social norms and their impact on vaccination decision making.

There is also reason for hope. Last year the Wellcome Global Monitor survey of more than 140 000 people from over 140 countries found that 72% trust scientists, and 79% and 84%, respectively, agree that vaccines are safe and effective. But hope is not a strategy and there is a need to address the complex challenges related to vaccine hesitancy that Larson’s book illuminates. She captures in a single sentence the crux of the issue: “Today we are in the paradoxical situation of having better vaccine science and more vaccine safety regulations and processes than ever before, but a doubting public.” To avoid getting stuck before COVID-19 vaccines become available, concerted efforts by health and other sectors, governments, and civil society will be needed to explain what we know and don’t know about the vaccines that have been approved for widespread use, their benefits and risks, and the value to individuals and communities that make the case for vaccination. It will be crucial that such efforts listen to, involve, and engage all communities at the local level. As the COVID-19 pandemic sweeps the world, leaving disease, death, stigma, suspicion, and fear in its wake, COVID-19 vaccine development is running a marathon at a sprinter’s pace. At this inflection point, we should take note of Larson’s warning and hope: “We are yet to see how we will emerge from this crisis. Perhaps we have been shaken enough to get unstuck from our old ways and be open to a new future.”

**Bruce Gellin**

Sabin Vaccine Institute, Washington, DC 20037, USA  
[bruce.gellin@sabin.org](mailto:bruce.gellin@sabin.org)  
 I am President, Global Immunization at the Sabin Vaccine Institute.