

Volatility of vaccine confidence

Last week, the European Medicines Agency declared the AstraZeneca COVID-19 vaccine safe and effective, after several European Union member states had suspended its use because of blood clot concerns. Will the public trust this message? This week's news could help—a U.S. phase 3 clinical trial of the vaccine shows promising efficacy in preventing symptomatic COVID-19. But sentiments toward vaccines are volatile and reflect external events—such as recent concern about AstraZeneca's efficacy data—as well as internal emotions.

Various polls on vaccine willingness made early predictions of low vaccine uptake owing to vaccine hesitancy. But with the ups and downs of virus surges, and more information—and misinformation—around the vaccines, confidence levels also had ups and downs. Vaccine willingness started to climb with news of an effective Pfizer vaccine, a second wave of infection, the emergence of new variants, and more lockdowns. Now, a reported safety risk and consequent anxieties have sent sentiments plummeting in some countries.

Author and physician Danielle Ofri called this undulation of sentiment “emotional epidemiology” as she reflected on the seeming eagerness, then hesitation or refusal, to receive the H1N1 influenza virus vaccine during the 2009 pandemic. COVID-19 is affecting the world at a much larger scale than H1N1; thus, vaccine hesitancy could pose a major threat to controlling the pandemic.

Scientists, politicians, and public health officials may not always recognize that vaccine hesitancy is not the same as being “anti-vaccine.” The vaccine hesitant are often mischaracterized as “anti-science” or simply “anti-vaxx.” But being hesitant or undecided in the face of a possible safety risk is not being anti-vaccine. A failure to understand the distinction can feed both fires.

What distinguishes the vaccine hesitant from anti-vaxxers? *The Anti-Vaxx Playbook*, recently published by the Center for Countering Digital Hate, underlined three key messages used by organized anti-vaccine groups: COVID-19 is not dangerous, the vaccine is dangerous, and vaccine advocates cannot be trusted. This builds upon a long history of “anti-vaccine tropes” identified by medical anthropologist Anna Kata, including questioning the safety and efficacy of vaccines, promoting alternative cures, claiming that vaccination infringes on individuals'

civil liberties, promoting conspiracy theories, and asserting that vaccines are immoral. Anti-vaccination advocates typically represent well-organized entities with explicit agendas, ranging from financial interests (such as selling alternative cures) to ideological or political commitments (such as opposing specific legislation). These organizations also frequently shift their goalposts, claiming that vaccines cause any number of maladies while supporting opposing political platforms. Unfortunately, these themes are widespread on social media—nearly 150 anti-vaxx organizations have over 10 million followers online.

The vaccine hesitant are a highly diverse group. Modalities of hesitancy range from delays over receiving a vaccine because of anxiety around safety concerns, to fears due to historic individual or community experiences, to questions about COVID-19 vaccines. Those who refuse vaccines are not necessarily “anti-vaxx,” although vaccine-hesitant individuals may consume content from anti-vaxx organizations as they search for evidence to confirm or dispel their concerns. The vaccine hesitant are therefore vulnerable to manipulation by anti-vaccine activists. They also risk being judged or labeled “anti-vaxx” by the very people—health care professionals—who are best positioned to encourage healthy behaviors.

How can vaccine hesitancy be addressed? Communication about

vaccines must be delivered in an empathic manner to avoid stigmatizing those who question inoculation. This requires leveraging established relationships to address concerns of the vaccine hesitant. Examples include the Engaging in Medical Education with Sensitivity initiative during the 2019 measles outbreaks, in which Orthodox Jewish nurses empowered parents in that community to reach their own conclusions about vaccines while listening to their concerns and helping them contextualize information. Also, the University of Maryland's Health Advocates In-Reach and Research network of Black barbershops and salons trains personnel as health educators to encourage customers to pursue healthy behaviors.

In addition to the official regulatory endorsements of the safety of COVID-19 vaccines, it is locally trusted voices who will help build confidence in them. The world needs all the safe and effective vaccines that exist to end the pandemic. But it needs people who believe in them too.

—Heidi J. Larson and David A. Broniatowski

“But sentiments toward vaccines... reflect external events...as well as internal emotions.”

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