Speaking to hearts before minds? Public health messages aligned with people's political intuitions may not increase vaccination uptake





What influences people's attitudes towards vaccination? Laura Kudrna and Kelly Ann Schmidtke report on an experiment seeking to determine whether messages aligned with people's politics influenced their intentions to take up the influenza vaccine. They find that the messages had no substantial effect.

In 2019, the Health Secretary, Matt Hancock said that he is 'open' to making vaccines compulsory, and Labour MP Paul Sweeney argued that failure to vaccinate children should be a 'criminal offence'. But mandates are difficult to enforce, and punishments diminish public trust. In addition, people still opt out of mandatory policies, and effectiveness increases when people freely comply. Instead of mandates, we advocate behavioural approaches that preserve individual freedom, and agree with Professor Heidi Larson that additional emphasis should be placed on public perspectives when planning vaccine policies and programs.

Public health messaging about vaccines is particularly important in light of COVID-19. In April 2020, the United Kingdom's Vaccine Taskforce convened; in May, the United States' 'Operation Warp Speed' took off. This speed elicited optimism among some but handed a megaphone to the anti-vaccination movement. Del Bigtree, founder of the Information Consent Action Network, cautioned that 'You shouldn't rush to create a product you can inject into perfectly healthy people without doing proper safety studies'. Here, identical factual information – a vaccine is being developed quickly – elicited reasoned responses that were both optimistic and pessimistic. However, intuitions come first and strategic reasoning comes second. Where public health messages do not align with people's automatic intuitions, factual and reasoned information may go unheeded.

On 21 September, we conducted an online experiment to determine if public health messages aligned with people's political intuitions influenced their intentions to take up the influenza vaccine. Influenza vaccinations have long been important, but are particularly important now in the context of COVID-19 because co-infection increases mortality rates. We recruited 192 participants living in England, aged 50+, and who had not already vaccinated this season. Half identified as being affiliated with the Labour Party and half with the Conservative Party. Participants viewed a message either aligned or unaligned with their automatic political intuitions (see Figures 1 and 2). Then they stated how much they agreed with a statement about their intentions to take up the influenza vaccine this season on a 7-point scale, where higher numbers indicated more positive intentions.

Figure 1: Left-wing message



Did you know that being vaccinated against seasonal influenza can help less fortunate people? Indeed, vaccinations not only save the lives of people vaccinated, but also the lives of people who cannot be vaccinated (e.g. young children and people with suppressed immune systems). To keep everyone safe, vaccinations are available to take up at your local GP and pharmacy. People 50 years old and older are encouraged to get their vaccination. Getting vaccinated against influenza is one of the easiest and best things you can do, and yet not all people do it. You can make a difference... And do the right thing for the world!

Figure 2: Right-wing message



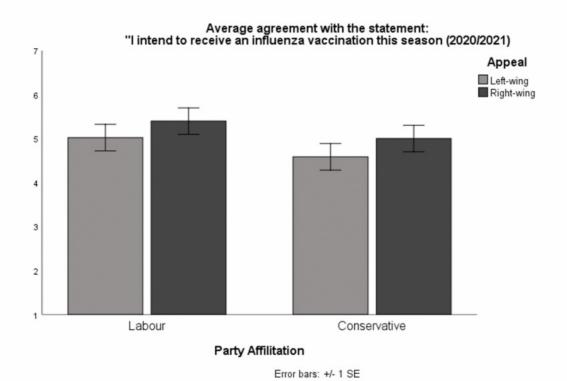
Did you know that 7,621,505 people living in England over 65 were vaccinated against influenza at GPs during the 2019-2020 influenza season? And why shouldn't they be? Our duty as citizens of England is to fight to make it a safe place by doing our part to be healthy and reduce pressure on our NHS. To assist this fight, the Department of Health and Social Care is rolling out its most comprehensive flu programme this winter, with vaccinations available at local GPs and pharmacies. They are encouraging people 50 years old and older to be vaccinated. Don't be the last one to join the fight to make England a safe place to live!

Professor Johnathan Haidt describes the automatic intuitions we set out to influence as moral foundations. Typically, people who identify as being more left-wing are most strongly influenced by their care and fairness intuitions (a desire to prevent harm to others and to ensure equality). In contrast, people who identify as being more right-wing are more strongly influenced by the remaining foundations: purity (a desire to avoid contaminants), authority (to preserve traditions), loyalty (to strengthen group bonds), and liberty (to preserve individual freedom).

Research conducted in the <u>United States</u> and <u>Australia</u> has already identified some of the foundations associated with parental vaccine hesitancy, and suggests that public health messages can be framed to increase parents' intentions. For example, a message designed to promote purity might say: 'Boost your child's natural defenses against diseases! – Vaccinate!'. These proposals are a good start, but without evidence that they are likely to be effective, public health practitioners have little reason to prefer them to the messages developed in-house. The messages used in the present study were informed by messages used in a previous one that significantly altered people's intentions to recycle.

Our main prediction was that our left-wing message would increase labour participants' intentions, and our right-wing message would increase conservative participants' intentions. We did not find this. As shown in Figure 3, the messages had no substantial effect. One explanation is that the moral foundations used in our advertisements were not relevant in a UK context, which we plan to address in future work. We aim to conduct a general UK survey describing moral foundations in the population and use the survey results to inform a collaborative online workshop with public contributors and health specialists, which is in keeping with Professor Heidi Larson's calls to involve public perspectives. This pilot study lays the groundwork for such future research.

Figure 3: Results of the study testing the effects of messages on vaccination intentions



We asked people some follow up questions too. In a free-text box, participants were asked to explain their intentions to vaccinate. Their explanations largely fell within five categories, which in addition to their foundations may have been influenced by the messages they read: Protect Self; Protect Others; Protect the NHS; Being Eligible/Invited; and Habits. We also asked questions about people's intentions of taking up a COVID-19 vaccination and wearing a face mask. Similar to recent research, people were more likely to express intentions to take up a future COVID-19 vaccination (72%) than the current influenza vaccination (65%). We suspect that these expressed intentions may be a bit optimistic. Indeed, most participants (89%) also expressed that they would wear a face mask in a store that did not require them to do so, which is higher than our casual observations at the grocery store around the time of the experiment (before additional penalties were introduced). Acquiescence bias may have led our participants to be agreeable in this survey, particularly as they just saw messages promoting health-related behaviour. But this need not preclude identifying meaningful differences between randomized conditions. Our research team looks forward to better understanding the intuitive influences on vaccination behaviour.

About the Authors



Kelly Ann Schmidtke is Assistant Professor at the Warwick Medical School, University of Warwick.



Laura Kudrna is Research Fellow at the University of Birmingham.