MedicalXpress

How behaviors can inform COVID-19 health campaigns

July 29 2021, by Kristie Auman-Bauer

Credit: Pennsylvania State University

As the pandemic continues, implementing effective public health campaigns to improve vaccination rates and encourage personal behaviors to control the spread of the virus may be necessary.

Penn State researchers are exploring behaviors for slowing and stopping the spread of COVID-19, such as vaccinating, masking, and social distancing, and related beliefs, emotions, and experiences via survey data of Pennsylvania adults in the Centre County COVID-19 Data 4 Action Project (D4A).

Predicting vaccination intentions

Rob Lennon, associate professor of family and community medicine at

Penn State's College of Medicine, was part of the team that explored public confidence in a COVID-19 vaccine. In the study, 950 Centre County adult residents without children under age 18 were asked about their vaccine intentions between August and October 2020.

The team found that 55% of respondents reported being "very likely" to take a coronavirus vaccine, whereas 20% were "somewhat likely," with the remaining 25% "unlikely." In contrast, 70% of the respondents had received the flu vaccine since September 2019. "We found the strongest predictors of vaccine acceptance were trust in the system evaluating vaccines and local perceptions of COVID-19," said Lennon. "The strongest predictors of negative vaccine intentions were worries about unknown side-effects and positive attitudes toward natural infection."

Surprisingly, the researchers found that sociodemographic factors, political views, and religion did not predict vaccine intentions. "Our results suggest that distrust in both the development and approval process for COVID-19 vaccines led people to make their decisions," said Lennon.

The study findings also suggest that public health campaigns based on creating fear of the disease are not effective, nor are campaigns focused on specific sociodemographic groups. "We found that concerns over COVID-19 vaccines are widespread, suggesting the need for drastic measures to ensure public confidence in how COVID-19 vaccines are developed," Lennon said. "We need to show the public that vaccines are effective while acknowledging that for some, there are side-effects. We also need to communicate evidence coming from other studies showing that, overall, the benefits of vaccines far outweigh the risks."

In the future, Lennon suggests public health campaigns be based on education as well as addressing misinformation. "Disease mitigation depends upon behaviors, education, and trust. In other research, we've

found health information campaigns based on education, not fear, are the most effective in changing behaviors."

Exploring behaviors to inform public health campaigns

The same interdisciplinary team of researchers also considered the personal behaviors involved in slowing and stopping the spread of COVID-19 before vaccines were available.

According to Rachel Smith, professor of communication arts and sciences, COVID-19 asked a lot of us. "Mitigation involves a lot of behaviors, including hygiene, masking, social distancing, and more. We needed to do these behaviors frequently and consistently, and we needed to start new behaviors, which were uncomfortable, such as masking."

Researchers wanted to know what people ultimately decided to do. "Some people did everything, some did nothing, and others were selective—such as picking up masking, but not social distancing," said Smith.

Identifying profiles of mitigation behaviors can provide important insights for public health campaigns. "If we can identify mitigation profiles, and predictors of those profiles, then we have a better chance of crafting effective campaigns," Smith said.

In the D4A's survey of Centre County adults, researchers asked questions about both mitigation behaviors and potential predictors of those behaviors, including whether their household included essential workers or individuals with chronic disease.

The research team identified five distinct groups of people, or profiles:

one marked by complete adherence with health recommendations (34% of the sample), one by complete refusal (9% of the sample), and three by a mixture of adherence and refusal. One of the mixed groups practiced symptom management only, such as staying home if they felt sick, covering their mouth and nose if they coughed or sneezed, and seeking medical attention if they became symptomatic. The two other mixed groups added masks to symptom management and practiced either good hygiene habits or social distancing.

"The groups who practiced mask wearing plus either social distancing or good hygiene habits provided interesting insights into adoption," said Smith. "Both of these groups adhered to covering faces when coughing or sneezing, staying home when sick and seeking medical attention, but they made a choice about whether to take on public (social distancing) or private (hygiene) behaviors."

The most powerful predictor of complete adherence was experiencing more social approval. "We found that experiencing relatively more encouragement to engage in the new COVID-19 behaviors– masking, social distancing, and/or physical distancing—from important others in their lives appeared to have a strong influence. Participants who experienced such social support engaged in every COVID-19 mitigation behavior we asked about." Smith said. "However, the participants who engaged in a few or none of the mitigation behaviors experienced more disapproval about engaging in those behaviors."

Challenging problems for health campaigns are determining those who need to be reached and identifying audiences with similar needs who will respond well to a particular persuasive strategy. One direction for future campaigns is to promote opportunities and avenues for social approval—such as a simple thank you for masking.

Smith notes that these findings from the D4A Centre County study

provide just one glimpse into a complex and dynamic situation. "Over time, due to exhaustion, we may see people transition from profiles with more mitigation behaviors to those with fewer behaviors." With more waves of data ahead in D4A, new results may be right around the corner.

Smith's work appears in the *Journal of Health Communication*.

Lennon's work appears in the *American Journal of Health Promotion*.

More information: Rachel Smith et al, Exploring Behavioral Typologies to Inform COVID-19 Health Campaigns: A Person-Centered Approach, *Journal of Health Communication*, DOI: 10.1080/10810730.2021.1946218

Rob Lennon et al, Unique Predictors of Intended Uptake of a COVID-19 Vaccine in Adults Living in a Rural College Town in the United States, *American Journal of Health Promotion*, DOI: 10.1177/08901171211026132

Provided by Pennsylvania State University