

Exposure to misinformation online linked to lower levels of HPV vaccine coverage

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New research has shown that information from Twitter was more useful for explaining differences in HPV vaccine coverage than information about education, insurance coverage, and income. Credit: Macquarie University

New research published in *Vaccine* has demonstrated that vaccine coverage is lower in places where exposure to misinformation and conspiracies are higher.

Dr Adam Dunn from Macquarie University in Australia, with

researchers from Sydney and Boston, has been monitoring Twitter for HPV related tweets since 2013, tracking the kinds of information and websites users share and discuss online.

"In our work we use Twitter like a giant set of rain gauges, but instead of estimating how much rain fell on a city each hour or day, we estimate the city's information diet," said Dr Dunn.

They found that information from Twitter was more useful for explaining differences in HPV vaccine coverage than information about education, insurance coverage, and income.

Topics that were common in states with lower rates of coverage included anecdotal stories about adverse events, negative reactions to policy changes, and pharmaceutical industry conspiracies.

Human papillomavirus (HPV) vaccines were first introduced to the US in 2006 to prevent the spread of HPV and reduce the risk of several types of cancer that are caused by the virus. Slow uptake of the [vaccine](#) in some states was attributed to the difficulty and cost of accessing healthcare as well as opposition to vaccines from parents and religious groups.

"This type of study cannot prove if the decisions people make about vaccination are influenced by what they read, or if they simply prefer to read what they already believe. But it does tell us that when it comes to our [information](#) diets, we are what we eat," Dr Dunn went on to explain.

The researchers have recently expanded their social media monitoring to help [public health organisations](#) counteract misinformation online. The methods they use are the same kinds of methods that advertisers and political groups have been using to identify and influence their target markets to sell their products or garner more votes.

"We live in a time where we build echo chambers like cocoons around ourselves. They dictate our opinions, influence elections, and lead people to reject scientific evidence for alternative truths. As public health researchers, we need to do much more than just produce research if we want to help people avoid misinformation and embrace scientific evidence," Dr Dunn concluded.

More information: Adam G. Dunn et al. Mapping information exposure on social media to explain differences in HPV vaccine coverage in the United States, *Vaccine* (2017). [DOI: 10.1016/j.vaccine.2017.04.060](https://doi.org/10.1016/j.vaccine.2017.04.060)

Provided by Macquarie University

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