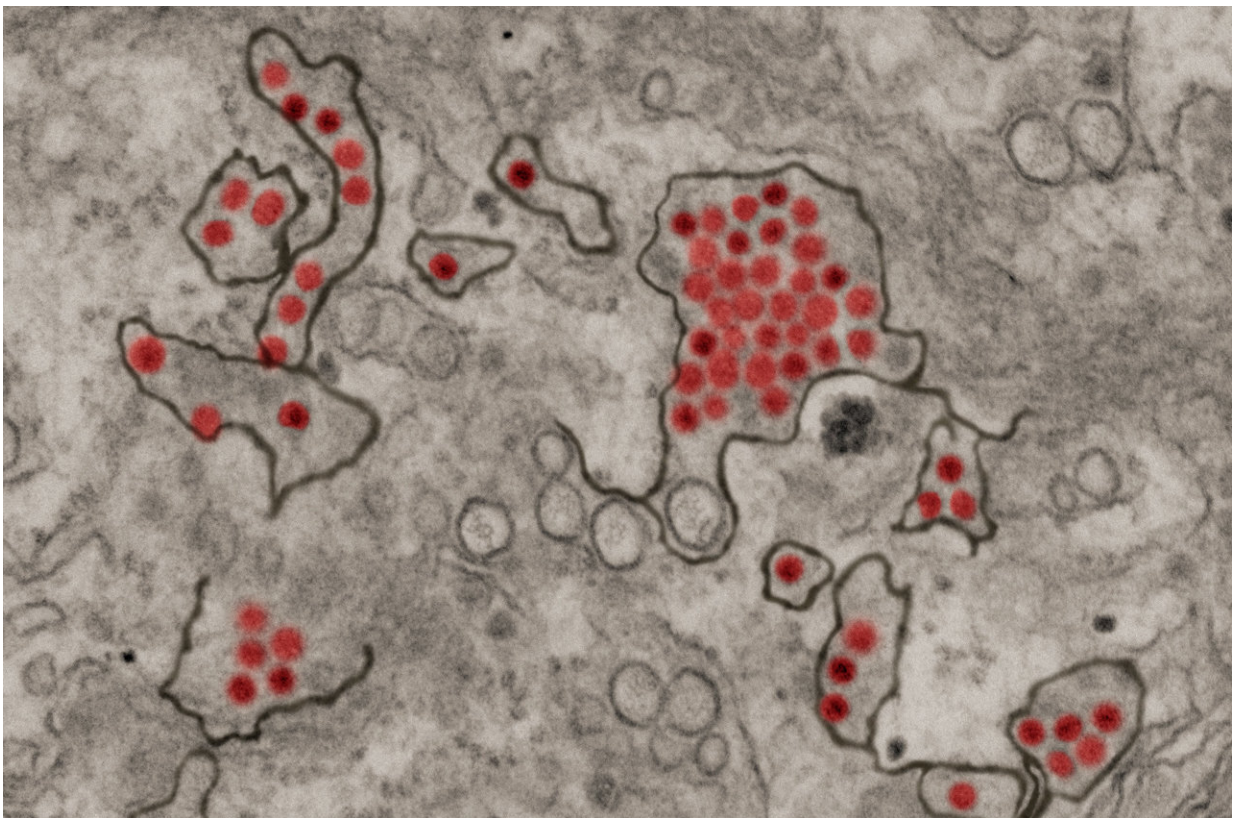


Lessons learned from addressing myths about Zika and yellow fever outbreaks in Brazil

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Zika virus particles (red) shown in African green monkey kidney cells. Credit: NIAID

When disease epidemics and outbreaks occur, conspiracy theories often

emerge that compete with the information provided by public health officials. A Dartmouth-led study in *Science Advances* finds that information used to counter myths about Zika in Brazil not only failed to reduce misperceptions but also reduced the accuracy of people's other beliefs about the disease.

The results provide important context as countries launch public information campaigns about the new coronavirus (COVID-19), including how to protect oneself and prevent the spread of the disease.

"It is essential to evaluate public health messaging and information campaigns," said co-author [Brendan Nyhan](#), a professor of government at Dartmouth. "Our results indicate that efforts to correct misperceptions about emerging diseases like Zika may not be as effective as we might hope."

The study was based on a nationally [representative survey](#) conducted in Brazil in 2017 and online survey experiments conducted there in 2017 (not long after the 2015-2016 Zika epidemic) and in 2018 (just after an unusually severe yellow fever outbreak). Using [survey data](#), the team first demonstrated the prevalence of misperceptions among Brazilians about whether Zika can be transmitted through [sexual contact](#) (true) or casual contact (false).

The researchers then conducted three preregistered experiments testing the effectiveness of information provided by [public health officials](#) to dispel myths about Zika and yellow fever. These studies, which were conducted online among Brazilian adults, showed that corrective information about Zika not only failed to reduce misperceptions but also frequently reduced the accuracy of other beliefs people held about the disease (a finding that was replicated in both the 2017 and 2018 data).

The researchers found that corrective information about yellow fever

was more effective than the material about Zika. However, exposure to this information did not increase support for public policies aimed at preventing the spread of either disease nor did it change people's intentions to engage in preventive behaviors.

More information: John M. Carey et al, The effects of corrective information about disease epidemics and outbreaks: Evidence from Zika and yellow fever in Brazil, *Science Advances* (2020). [DOI: 10.1126/sciadv.aaw7449](https://doi.org/10.1126/sciadv.aaw7449)

Provided by Dartmouth College

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