

# Losing the battle over best-science guidance early in a crisis

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A new study reveals how Facebook communities were already intertwined with groups opposing best-science guidance long before COVID-19 vaccines

A new George Washington University study shows who talks to who, and who listens to who, as a [global crisis](#) emerges. Mapping out the online global conversation on Facebook starting in December 2019, the study shows how large numbers of mainstream Facebook users became entangled with [online communities](#) opposed to best-science guidance early on in the COVID-19 pandemic, undercutting [public confidence](#) in expert guidance on everything from masks to vaccines. Moreover, the researchers behind the study are finding almost identical online behavior in the case of monkeypox.

"This is a real problem that extends far beyond the COVID-19 pandemic," Neil Johnson, a GW physics professor and leader of the study, said. "If left unaddressed, we risk losing the battle over hearts and minds when it comes to other crises such as monkeypox, abortion misinformation, [climate change](#)—and even trust in upcoming elections."

The study reveals that while public health authorities were still trying to decipher the novel coronavirus and [social media platforms](#) like Facebook were starting to promote official health-related information banners, many Facebook users were already looking elsewhere for information about how to cope.

In particular, as early as January 2020, Facebook parenting communities became intertwined with a number of smaller communities whose members were passionate about providing [health information](#) but who resisted or opposed expert health and scientific guidance. By mid-February, these parenting communities began sharing their own COVID-19 guidance with similar communities. In addition, the researchers found that while official health, medical and science communities were engaging online throughout this time, they were mostly talking and listening to one another.

The online conversations that Johnson and his team were able to map

show parenting communities on Facebook clearly co-mingling with groups promoting everything from distrust of vaccines and alternative health to more conspiracy-type content around climate change, 5G, fluoride, chemtrails and genetically modified foods. The team's map also reveals how expert messaging and conversations sharing best-science guidance took place far from these communities, leaving them to rely on groups with more [extreme views](#) for information. Facebook's targeted health messages also missed the mainstream communities, the research shows.

"This was a huge missed opportunity for effective public health messaging and intervention early in the crisis," Johnson said. "Maps like the ones we've created could help public health experts and social media platforms tailor their best-science COVID-19 guidance around, for example, popular topics within the parenting communities and then introduce that guidance across the Internet globally and at scale."

He suggests social media platforms and experts avoid targeting their efforts toward more extreme groups and instead focus on mainstream groups, where public health messaging will have more impact.

The study introduces a [mathematical model](#) that allows a quantitative analysis of future risk and what-if scenarios. For example, it shows that simply removing the more extreme groups will not solve the misinformation problem. Instead, it would generate a vacuum into which non-rigorous ideas from alternative health and social movements would flow.

The study, "Losing the battle over best-science guidance early in a crisis: COVID-19 and beyond," was published in *Science Advances* on Sept. 28, 2022.

**More information:** Lucia Illari et al, Losing the battle over best-

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