



How to turn the tide on vaccine hesitancy: Apply an algorithm that actually works

BY DAMON CENTOLA, OPINION CONTRIBUTOR — 08/01/21 08:00 AM EDT
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“The world situation is very fragile.” Maria Van Kerkhove of the World Health Organization (WHO) recently sounded the alarm on the Delta variant. COVID-19 is being transmitted among unvaccinated people “even in countries with high percentages of immunization.” Delta, she added, is “extremely contagious in any country it reaches.”

With rates of vaccination continuing to decline in the United States, the unvaccinated — which includes anyone under the age of 12 — may be in a perilous place. The Delta variant has even caused the Centers for Disease Control and Prevention (CDC) to recommend that fully vaccinated people wear masks indoors again in places with high transmission rates of the virus.

What now?

It isn't that the CDC and the WHO aren't trying to persuade people to get vaccinated. They are, and they're spending lots of money in the process. But they are going about it in the wrong way, using an intuition that we demonstrated to be false in a new study. Conventional wisdom dictates that social influencers — celebrities and others with enormous followings on social media — are the people most able to convince others to try just about anything. Though Kim Kardashian may be great at pushing coconut

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water, her influence deflates when she wants to convince her followers of something substantive.

We measured the most influential actors in over 74 public health networks to find which people are effective at spreading information that causes an actual shift in thinking or the adoption of a new behavior. (A public health network can be defined as a social network of people who are likely to be sharing information regarding news on public health.) Consistently, the people with huge numbers of followers — social influencers — had little ability to persuade.

An influencer is great at spreading information that already resonates with her followers. But when she shares information that contradicts their worldview, it's perceived as a breach of trust. When it comes to challenging people's preconceptions of substantive things — such as how crucial it is to be vaccinated — social influencers often do more harm than good.

So, if not to celebrities, where should public health officials turn in this race-against-time fight to change the minds of vaccine-refusers?

Our study revealed that we should look to the margins, or the mathematical periphery: "regular" people who may not have nearly as many connections as others in the same network. Why? Because what we consider the "center of influence" in a network will shift depending on the type of information being transmitted. Information with substance — unlike gossip or product placement — is most likely to be accepted by people when it takes hold in a network's outer edges. And the less certain people are about something, the more that influence shifts to the periphery. Clearly and consistently, our research team was able to pinpoint actual "network hot spots" or "social clusters" that have the power — or influence — to catalyze change.

Why is this so? Partly because humans make decisions with the assistance of people they see as like them in circumstance. If a family is considering moving to a new neighborhood, they don't ask Gwyneth Paltrow or Kim Kardashian to weigh in; they ask families with similarly aged children, in similar financial circumstances — those with needs and bottom lines that resemble their own.

An idea becomes a norm only when it pulses across a network from a few different sources and is gradually witnessed by those sources' contacts as something safe or good or effective or true. In other words, it takes time to digest an idea with substance to it; it takes repeatedly seeing an idea successfully adopted by others for it to be accepted, take hold and become a norm, and that kind of messaging is most effective when an idea works its way from the outside in.

It isn't easy to conceptualize an anonymous cluster of points in a social network as a source of power capable of creating a large-scale shift in people's attitudes. But that's precisely who — or where — we see those shifts beginning. A recent palpable example comes from the protests that swelled last summer in response to chronic police brutality toward African Americans. The murders of Breonna Taylor and George Floyd specifically set off a movement among "regular" non-famous or commercially influential people that gathered steam as it pulsed across the nation's social networks. The knowledge that police violence is disproportionately meted out against people of color was hardly news, but galvanized by two shocking slayings in quick succession, social action gained steam and momentum; diverse communities absorbed familiar facts in a new and

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vital way, triggering action after action as fresh urgency flooded our
information highways.

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Our algorithm can predict with startling specificity just where in the social graph that special cluster of influence will be. Targeted effectively — using familiar strategies such as direct neighborhood outreach and email-delivered incentive programs — marginal members of a social network can themselves become powerful social influencers, and we can all agree that social influence is never more important than when it can be called upon to save lives and end a wrenching pandemic.

We don't have time to get this wrong. The existence of network hot spots has enormous ramifications for everything from marketing to activism to vaccination rates. We should see these "hidden" social clusters not as static spots on a map, but as powerful engines of change. The CDC, the WHO and all the other entities battling the scourge of COVID-19 should apply something basic to their strategies for spreading accurate, life-saving information: math. As Tom Cruise once said in a movie, "It's not sexy but it has teeth."

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