De-Bunking COVID-19 Misinformation

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In the midst of a worldwide pandemic, COVID-19 has drastically impacted lives around the world. In the early days of the pandemic, information was changing on an hourly basis; news outlets, and social media were filled with contradicting advice, opinions and coverage of the virus's progression.

Termed an "Infodemic" by the World Health Organization, this "overabundance of information" (1) has infiltrated the lives of billions around the world and has found to be incredibly harmful to physical and mental health. Indeed, a glimpse into the dangers of this was given to the world when former President Donald Trump hailed chloroquine as the "game changer" treatment for COVID-19. A man and his wife decided to take this information into their own hands and proceeded to ingest chloroquine found in aquarium cleaners. Unfortunately, the man died, and his wife was left in critical condition (2).

Astonishingly, a survey done in May of 2020 from the School of Journalism and Communication at Carleton University showed that nearly half of Canadians believed in one of the major COVID-19 conspiracy theories. Interestingly, individuals who believed these conspiracies spent more time on social media and were thought to potentially share this content on their social feeds (3).

What is Misinformation?

During the COVID-19 pandemic, misinformation has flooded our timelines and scientists have struggled to keep up with the combat against each permutation of new "information". Misinformation is "false information that is spread, regardless of intent to mislead" (4). Importantly, misinformation does not have malicious intent behind it, and most often is spread without meaning to cause harm. In contrast, disinformation is spreading "deliberately misleading or biased information" (4).

A large contributing factor fueling misinformation is inconsistent messaging and inaccurate sources of information. These factors are amplified on social media platforms, where algorithms can create echo chambers. This occurs when users are only exposed to information that they already agree with. This can be dangerous as it reinforces the users belief by continuing to expose them to conspiracy theories and misinformation (5). Studies have shown that most COVID-19 information on social media is obtained on Facebook; with Reddit, Twitter, TikTok and YouTube as the next most popular (6). As a vital source of information to the public, social media platforms often struggle to balance the right of freedom of speech and opinion with information that could cause harm.

Now more than ever, we are understanding the true consequences of these actions, since the impact of this information could save lives.

Three COVID-19 Myths:

1. COVID-19 is no worse than the flu

In the early days of the Pandemic, even before COVID-19 had reached North America, arguments arose about how COVID-19 compared to the flu (caused by the Influenza virus). What really sets the two apart, is the death toll. The trouble is that the measurement of deaths caused by the flu is purely estimation. As such, the CDC estimates that the between 25,000 and 60,000 people die every year in the United States from the flu (7,8). These stats were highly publicized by President Trump when he relayed these facts to the media is astonishment and attempt to downplay the severity of COVID-19 (9).

To reach this estimation, the CDC takes the amount of confirmed deaths per year (an average of 3,448 to 15,620 per year over the last five years), and multiplies it by various coefficients that help project the total amount of unreported flu deaths. This makes it incredibly difficult to compare the severity of the two infections. The best way to compare would be the strictly compare confirmed deaths (9). In this case, COVID-19 deaths in United States over the last year have surpassed 550,000 (10). It becomes obvious that this is significantly worse.

In addition, given how common the flu is, people typically have some form of immunity against it. Since COVID-19 is new, this is not the case, meaning individuals are more likely to become infected and become ill.

2. You don't need to wear a mask.

In the early days of the pandemic, health officials reported that healthy individuals did not need to wear a mask. However, mere months later, health officials recommended mandates to enforce mask-wearing as a means to combat the spread of the virus. It is now, over a year later, that mask-wearing is universally accepted amongst health officials. This contradictory information led to vast confusion amongst the public. Public figures, such as President Trump, rejecting these guidelines only fed the anti-mask movement (11).

At the end of the day, all research suggests that wearing a mask is the best way to protect yourself and others from COVID-19. Additionally, individuals who are asymptomatic or pre-symptomatic can also spread COVID-19 (12). This is mainly because of the mode of transmission of COVID-19, which typically spreads through aerosol droplets. This is released into the air when someone talks, coughs or sneezes (13).

3. Any COVID-19 vaccine is unsafe.

Conspiracy theories have driven many misconceptions about the COVID-19 vaccines. Before they were even released, stories of Bill Gates using the vaccines as a way to microchip the population spread like wildfire. In general, misinformation around the vaccine has suggested malicious intent from wealthy individuals attempting to harm or brainwash populations with the vaccine.

These extreme allegations have always been without evidence, but they have a large impact on perception of the vaccine. A recent poll showed that only about half of Canadians would get the COVID-19 vaccine (14).

The COVID-19 vaccines are safe and effective. We now have a variety of options on the market, which can get a bit overwhelming, but the best vaccine for you is the one that is available for you to get. The benefits of the vaccine strongly outweigh the risk of COVID-19 (15). The vaccines have been under heavy regulations over the last year, and are approved by the corresponding regulatory boards. Most recently, cases of rare blood clots after the Oxford Astra-Zeneca vaccine have caused turmoil in vaccination efforts (16). It is important to remember that the scale of vaccination (reaching 1 billion people) is incredibly large (17). This means that incredibly rare events are bound to happen, but they are still extremely rare.

How can you combat misinformation?

#ScienceUpFirst is a new social media initiative to combat the spread of COVID-19 information. Backed by dozens of scientists and communicators, the goal is to amply voices of trusted and respected scientific information. Ultimately, the way to combat misinformation is by empowering the public to think before they click, share or engage with information online (18). You can follow them of social media for the most up to date data to fight COVID-19 misinformation.

We each have a role to play, and despite our best efforts this is not an issue that will be going away anytime soon. Take the time to talk to family and friends. Most COVID-19 misinformation comes from a place of fear, so listen empathetically and meet them where they are.

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