



**APRU GLOBAL HEALTH PROGRAM**

**2021 CASE COMPETITION CHALLENGE**

***“Technology-Driven Solutions to  
the COVID-19 Infodemic”***

## Introduction

Thank you for participating in the sixth annual APRU Global Health Case Competition. We hope that you will have a challenging and rewarding educational experience. Please remember that this case represents a complex scenario and that there is no single “right” approach. Your challenge is to develop and justify an approach. We encourage teams to consider a balance of innovative yet realistic, evidence-based solutions. This case was created exclusively for use in the 2021 APRU Global Health Case Competition. Any reuse, reproduction, or distribution of this case material must be approved by APRU. For questions, please contact Mellissa Withers at [mwithers@usc.edu](mailto:mwithers@usc.edu)

**GOOD LUCK TO ALL TEAMS!**

## Overview of the Challenge

This challenge focuses on addressing the massive amount of misinformation that has quickly spread throughout the world during the COVID-19 pandemic, with dramatic negative personal and societal consequences. Discerning what is accurate scientific content versus what is fabricated or simply a rumor can be challenging. By employing a multidisciplinary approach, teams will build an intervention to reduce the spread of misinformation and increase health literacy in one Asia-Pacific country. The focus of the intervention is the development or adaptation of a technology-driven tool.

## Background

Over the past year, populations around the world have been bombarded with information about COVID-19.<sup>1</sup> With the proliferation of information that must be digested quickly, it is difficult to decipher what is true and what is pseudoscience, rumors, or outright deliberate lies. The World Health Organization (WHO) has described the problem as a “massive infodemic.” An infodemic is defined as an “overabundance of information—some accurate and some not—that occurs during an epidemic.”<sup>2</sup> The Director-General of the WHO, Dr Tedros Adhanom Ghebreyesus has also called attention to the problem, saying that “fake news spreads faster and more easily than this virus, and is just as dangerous.”<sup>3</sup>

Some of the misinformation comes from sources seeking to discredit scientists while some comes from those motivated by the opportunity to make a profit selling phony cures or ads using “click bait.” Studies have shown that sensationalist headlines tend to generate more user engagement than accurate information, and often attract even the savviest internet user.<sup>5</sup> In fact, research has shown that COVID-19 misinformation is disseminated significantly more widely than information about the virus from authoritative sources like the WHO.<sup>4</sup> One study from multiple countries around the world conducted in March 2020 found that about one in three people said that they had already seen false or misleading COVID-19-related information on social media.<sup>5</sup> Another study in the US also published in

March 2020 found that close to half (48%) of the respondents reported seeing made-up news about COVID-19.<sup>6</sup> In some cases, the people responsible for disseminating misinformation are public figures, such as prominent elected officials.<sup>7</sup>

False information on COVID-19 is not only widespread, but it covers a myriad of topics. The UN Educational, Scientific and Cultural Organization found that the information generally relates to one of nine themes, as shown in the figure below.<sup>8</sup>

## Nine key themes of the disinfodemic

This research has identified nine key themes present in content associated with the disinfodemic. These themes frequently feature racism and xenophobia.



### 1. Origins and spread of the coronavirus/COVID-19 disease

While scientists first identified cases of novel coronavirus (the virus that causes the disease COVID-19) connected to an animal market in the Chinese city of Wuhan, there are many conspiracy theories that blame other actors and causes. These extend from [blaming the 5G network](#) through to [chemical weapons manufacturers](#). Using a label like "Chinese virus" instead of neutral terminology inflates location into an adjective, in an historical echo of early pandemics that gave a [biased meaning to a noun](#).



### 2. False and misleading statistics

Often connected to the [reported incidence of the disease](#) and mortality rates.



### 3. Economic impacts.

This theme includes spreading false information about the economic and health impacts of the pandemic, suggestions that social isolation is not economically justified, and even claims that COVID-19 is overall creating jobs.



### 4. Discrediting of journalists and credible news outlets.

This is a theme often associated with political disinformation, with unsupported accusations that certain news outlets are themselves peddling in disinformation. This behaviour includes abuse levelled at journalists publicly, but it is also used by less visible disinformation campaigns to undermine trust in verified news produced in the public interest. Attacks on journalists in the time of COVID-19 have been [associated with crackdowns](#) on critical coverage of political actors and states.



### 5. Medical science: symptoms, diagnosis and treatment.

This theme includes [dangerous disinformation about immunity, prevention, treatments and cures](#). For example, myriad 'sticky' memes claim that drinking or gargling cow urine, hot water, or salt water could prevent the infection reaching lungs. [They cannot](#).



### 6. Impacts on society and the environment

This theme in the disinfodemic ranges from panic buying triggers and [false information about lockdowns](#), through to the supposed re-emergence of dolphins in [Venetian canals](#).



### 7. Politicisation

One-sided and positively-framed information is presented in an effort to negate the significance of facts that are inconvenient for certain actors in power. Other disinformation designed to mislead for political advantage includes: equating COVID-19 with flu; making baseless claims about the likely length of the pandemic; and assertions about the (un)availability of medical testing and equipment.



### 8. Content driven by fraudulent financial gain

This includes scams [designed to steal people's private data](#).



### 9. Celebrity-focused disinformation

This theme includes false stories about [actors being diagnosed](#) with COVID-19.

Myths and misinformation about COVID-19 undermine our ability to respond effectively to the crisis and can have devastating consequences.<sup>9</sup> By calling into question official sources and data, the spread of misinformation has led people to ingest fatal home cures, ignore public health measures like social distancing, mask mandates, and stay-at-home orders, and to refuse vaccination.<sup>10-11</sup> One example is the spread of misinformation that concentrated alcohol can kill the novel coronavirus, which led to methanol poisoning that contributed to the deaths of more than 800 people and resulted in hospitalization and blindness in hundreds more.<sup>12</sup> The negative consequences also include increases in racism, as well property crimes related to rumors about COVID-19. For example, false claims that radio waves from 5G towers make people more vulnerable to COVID-19 resulted in dozens of acts of arson and vandalism against telecom equipment and facilities, as well as around harassment of telecom technicians.<sup>4</sup> The misinformation that Asians caused the pandemic has led to a dramatic rise in discrimination and incidents of violence and hate crimes in what has been dubbed “coronaracism.”<sup>4</sup>

Some social media platforms have taken dramatic steps to combat the infodemic, such as highlighting and prioritizing content from authoritative sources and directing users to official sources when searching for COVID-19 information.<sup>13</sup> Companies like Google, Facebook and Twitter have offered free advertising to the WHO and national health authorities to help disseminate accurate information about COVID-19. These platforms have also reinforced their efforts to detect and remove false, misleading and potentially harmful content related to COVID-19.<sup>4</sup> In addition, in efforts to deter exploitation and protect consumers from price gouging, some have banned exploitative ads, such as those asking exorbitant prices for toilet paper, hand sanitizers, and medical masks and respirators.<sup>4</sup> However, these companies have faced numerous challenges in implementing these strategies, such as a shortage of staff, limitations in having human moderators flag and remove content, and legal challenges associated with free speech. For example, by late March 2020, the fact-checking organization Snopes was forced to scale back its routine practices, because the sheer volume of COVID-10 misinformation overwhelmed its fact-checkers.<sup>14</sup>

Research suggests that several key factors drive the public’s belief in health-related misinformation. One of the most important is low health literacy.<sup>15</sup> Health literacy is defined as the “cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.”<sup>16</sup> Improving health

literacy at an individual, community and population levels empowers people to make informed decisions, which can reduce the spread of misinformation.<sup>17</sup> The lack of digital literacy—or the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills---has also exacerbated the problem.<sup>18</sup> If consumers are able to accurately identify the source of information, who wrote or paid for it, and why the information is being shown to them, they are less likely to be manipulated by misleading claims and rumors.

How can communities and individuals be empowered with the knowledge, skills and self-efficacy to recognize myths and fake information about health? The WHO recommends that individuals, communities, societies, health systems, and governments work together to combat misinformation and propagate accurate health information. Governments, public health agencies, the media, civil society, and tech companies must join forces to improve people’s media, digital and health literacy skills. Leveraging the latest digital technology tools is one of the best ways to address the problem.<sup>2</sup>

The spread of misinformation is not exclusive to internet or social media sites. Almost half of the world’s population has no access to the internet. Moreover, fewer than one in five people in the least developed countries are connected to the internet, and less women have access as compared to men.<sup>19</sup> Therefore, while high tech solutions are vital, it is also important to recognize that this will not solve the problem for everyone. At a time when news can travel at the speed of light, we should also consider how we can provide mechanisms to enable technology-deficient communities to keep “connected” through creative communication solutions that may be cheaper and more viable in these settings. While these populations may only have access to yesterday’s technology, they can still access today’s information through digital tools, such as programs utilizing SMS, digital information repositories, and satellite systems.

## The Proposal

For this challenge, your team has been approached by the UNDP to identify a technology-based intervention that could be implemented in one country in the Asia-Pacific over the next year. The intervention must utilize a technology-driven tool for two primary objectives: 1. to combat misinformation; and 2. to increase health literacy of the public about COVID-19. While the intervention can have multiple components, the focus should be the development (or adaption) and implementation of a technology-based solution. The total hypothetical budget is US\$50,000. The intervention plan should incorporate innovative, cost-effective, and culturally-appropriate strategies that are evidence-based. Teams should consider real-world opportunities and challenges and outline an approach that is realistic and could be implemented in practice. The intervention should be able to be adapted to other health topics in the future.

### **The plan should include:**

- a short analysis of the problem and context (with references)
- a justification for this approach including theoretical model, if appropriate
- a detailed description of the technology-based solution
- sustainability, scalability and potential partnerships
- a plan on how to measure impact
- a short description of limitations and expected challenges
- consideration of how this will impact the most tech-deficient communities, if at all
- timeline of activities with short- and long-term objectives

## Instructions

- Teams should be comprised of 4-6 members from the same university. At the beginning or end of the video, please provide a slide with full name, discipline of study, affiliated department and institution, and academic status as of April 2021 (e.g. undergraduate, graduate, etc.) for each team member. Substitutions are allowed prior to the deadline but please send us an email alerting us of any changes.
- This should be a student-driven activity with minimal input from faculty mentors, but teams can turn to faculty members for *basic* guidance.
- Teams will present their plan in a video lasting *no more than* 10 minutes. Videos over 10 minutes will be automatically disqualified. Teams are encouraged to develop engaging and creative visual materials. The challenge rules require all team members to be physically shown in the videos at least once. However, just as in a live presentation, you can include video clips, slides, animations, and other media/props. Teams should begin with an introduction as in any presentation to an audience. Following the introduction, the format is open. The team can choose to 'zoom in', showing videos, photos, maps, diagrams, interviews, etc.
- We highly recommend that teams use microphones when filming and subtitles if appropriate
- Outside video clips or b-rolls (developed by other people or agencies) are allowed but they should not last for more than 100 seconds total (all clips combined).
- Previous year's videos can be seen on the APRU Global Health Program website at [www.apruglobalhealth.org](http://www.apruglobalhealth.org)
- Provide a link to the video on YouTube, Vimeo or similar site to Mellissa Withers via email to [mwithers@usc.edu](mailto:mwithers@usc.edu) by 11:59pm Pacific Time on June 11, 2021. Please make sure that all of the judges that will be assigned to review the videos can access them (i.e. no password). Please note that all teams that submit videos give consent to allow APRU to screen their videos at the conference and to post them on our website for future viewing and analysis. Please do not remove them after the competition.

**Please review our website for more details on eligibility criteria and judging-**  
**<http://apruglobalhealth.org/education-opportunities/casecompetition/>**

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