






# Pandemics, infodemics and health promotion

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## Abstract

The COVID-19 pandemic and the accompanying infodemic are significant public health issues. The COVID-19 infodemic has been prolific from early in the pandemic response, and has continued to escalate during vaccine rollout. COVID-19 is the first pandemic in the social media era, expediting the need for effective measures to manage the high volume of information and misinformation. To address the infodemic, the World Health Organization (WHO) and others have commenced a comprehensive program of work, building capacity, raising awareness and developing new tools and methods. As part of the WHO capacity building effort, they have developed a comprehensive infodemic manager training program. The authors of this paper are Australian alumni from the first two training courses, all authors have health promotion backgrounds. Health Promotion Practitioners are uniquely positioned to build on existing skills, knowledge and reach to develop preventative strategies to help mitigate infodemics. This paper offers our combined perspectives on why the infodemic is a significant health promotion concern and the role we believe Health Promotion Practitioners can play in managing and mitigating the infodemic.

## KEYWORDS

COVID-19, equity, health promotion, infodemic, public health

## 1 | INTRODUCTION

The COVID-19 pandemic and the accompanying infodemic are significant public health issues. An infodemic is defined as the spread of misinformation and disinformation, as well as an overwhelming overabundance of information.<sup>1</sup> This overabundance of information makes it difficult for people to identify trusted sources and access consistent, evidence-based information to inform health behaviours. The COVID-19 infodemic has been prolific from early in the pandemic and has continued to escalate during vaccine rollout. The sharing of misleading information without intent to do harm – “misinformation” and content with intent to do harm – “disinformation,” during the pandemic has directly impacted public health responses and outcomes.<sup>2</sup> Addressing the infodemic was

one of the four action areas highlighted to improve health literacy in a recent editorial.<sup>3</sup> In this article, Professor Kickbusch states that the infodemic “has become a major determinant of health.”

Although infodemics are not new, COVID-19 is the first pandemic in the social media era, expediting the need for effective measures to manage the high volume of information and misinformation. To address the infodemic, the World Health Organization (WHO) and others have commenced a comprehensive program of work by building capacity, raising awareness and developing new tools and methods.<sup>4</sup> As part of this, a comprehensive infodemic manager training program has been developed. These one-month long intensive global training programs introduce trainees to the methods and science of infodemic management. The authors of this paper are Australian alumni from the first two global training programs. All

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authors have health promotion backgrounds and this paper offers our combined perspectives on why the infodemic is a significant health promotion concern and the role we believe Health Promotion Practitioners (HPP) can play in managing and mitigating the infodemic.

### 1.1 | Social and commercial determinants and the infodemic

HPPs maintain and improve the health of populations and reduce health inequities through action areas articulated in the Ottawa Charter.<sup>5</sup> Health promotion work is grounded in the social determinants of health.<sup>6</sup> Health and science literacy and digital inclusion are becoming increasingly important determinants of health and are critical components in infodemic management.<sup>7</sup> Recently acknowledged as a “super” determinant of health due to the impact on wider health determinants,<sup>8</sup> improving digital literacy may impact positively on health and wellbeing, capacity building, health decision making and help to counter the effects of misinformation and disinformation.<sup>9</sup>

COVID-19 has disproportionately impacted people from lower socioeconomic communities where cramped living conditions have made lockdowns harder, where people may be unable to work from home, or where they already experienced discrimination or face barriers to accessing health care and timely and culturally suitable health information.<sup>10,11</sup> Like other health outcomes, we know that social determinants influence the infodemic. In Australia, people with lower education levels, English as a second language, lower digital and health literacy levels, and lower trust in government and authorities are more susceptible to mis/disinformation.<sup>12</sup>

Historical events that have led to mistrust in governments have resulted in official advice being met with scepticism during the pandemic. There have been reports of mis/disinformation targeting Aboriginal Australians leading to increased vaccine hesitancy and refusal.<sup>13</sup> Our neighbour, Papua New Guinea, experiences ingrained mistrust in authorities, providing an environment where the infodemic has enabled the pandemic to thrive.<sup>14</sup> Cultural knowledge and beliefs provide a lens through which health information is filtered.<sup>15</sup> Understanding this and working with bicultural workers, Aboriginal organisations, religious leaders, youth groups and community leaders is vital in developing culturally appropriate strategies.

The commercial determinants of health have been defined as “strategies and approaches used by the private sector to promote products and choices that are detrimental to health.”<sup>16</sup> An example is mobile phone data plans that include Facebook access, thus becoming a primary information source when people cannot afford to pay for internet browsing of other sources. Social media companies responses to managing mis/disinformation on their platforms, and their algorithms for promoting certain content, have had high visibility during the COVID-19 pandemic. Digital inclusion remains low in some priority groups, impacting access to information and how it is received.<sup>17</sup> These factors influence the infodemic and interplay with the social determinants.

### 1.2 | Direct and indirect impacts on individual and population health

The infodemic has impacted poorly on global public health. Following a myth that highly concentrated alcohol could kill the COVID-19 virus, approximately 800 people reportedly died, while 5876 were hospitalised.<sup>2</sup> There have been reports of people becoming unwell after ingesting other substances rumoured to prevent or treat COVID-19, including hospitalisations in Australia due to Ivermectin.<sup>18</sup> Beyond poor impacts on physical health, the infodemic has impacted stigma and race-related discrimination,<sup>2</sup> and a reduced belief in COVID-19, which may lead to poor adherence to preventative measures.<sup>19</sup> The progression of the pandemic has seen a sharp rise in COVID-19 vaccine-related mis/disinformation resulting in vaccine hesitancy, fear and refusal.<sup>20</sup> This escalation reinforces the importance of infodemic management.

The infodemic, and its effect on individuals, reside within a complex system with interactions and influences from a range of behavioural, environmental, economic and social factors. Taking a “systems thinking” and “health in all policies” approach to the infodemic can demonstrate the interplay of multiple factors, including behavioural science and how a person reacts to mis/disinformation. From decades of preventative health work, we know that merely telling people the correct information does not lead to behaviour change. A strategic approach and early interventions are needed to build digital health and media literacy to inoculate against mis/disinformation from a young age,<sup>21</sup> alongside a suite of other measures.

### 1.3 | Impact on broader community cohesion

Mis/disinformation go hand-in-hand with other malicious content such as racism and hate speech. Malicious content impacts poorly on social cohesion and can be divisive.<sup>22</sup> A breakdown in trust in government and authorities can impact acceptance of advice from health authorities. Early on in the pandemic in Australia, newspapers published inflammatory content about Chinese children, and there was reported harassment and violence towards people of Asian descent.<sup>2</sup> Mis/disinformation drives stigma and discrimination and creates a barrier to early testing and seeking health assistance when required. There have been tragic consequences of this, including reports of suicide due to the shame of a COVID-19 diagnosis.<sup>2</sup>

## 2 | ROLE FOR HEALTH PROMOTION PRACTITIONERS

Managing an infodemic cannot be achieved by one group of professionals. WHO advocates that everyone, regardless of profession or background, can be infodemic managers in their daily professional and personal lives. There is opportunity for HPP to utilise existing skills and adopt practical strategies to mitigate the impact of the infodemic. Here we outline some actions focused on the three core concepts of the Ottawa Charter – enable, mediate and advocate.<sup>23</sup>

## 2.1 | Enable

- A dual opportunity exists to improve the quality and accessibility of online and offline health information and to work with the general public to develop health and digital literacy programs, promote fact-checking and pre-bunking, intervene in echo chambers, and boost inoculation to mis/disinformation.
- There is an urgent need for research on digital health literacy, particularly with vulnerable populations.<sup>9</sup> HPP can build on capacity building, monitoring and evaluation training to research and implement efficacious strategies for preventing, managing and mitigating the infodemic.
- Develop social listening systems and skills to identify health information deficits and detect problematic narratives, enabling timely infodemic responses and safer online environments.
- Create pathways for communities to engage in the process and feel empowered to create change, via hotlines for reporting rumours as an example, or buttons flagging mis/disinformation on community forums.

## 2.2 | Mediate

- Build and maintain relationships of trust with community leaders, including multi-faith leaders. Doing so will facilitate a two-way dialogue with the broader community to identify emerging concerns, pre and debunk mis/disinformation and enable amplification of credible and accessible information in a timely and culturally appropriate manner.
- Seek out collaborative, co-design approaches with other professionals and community leaders to produce appropriate, consistent and relevant information that is available in-language for culturally and linguistically diverse audiences to reach groups most marginalised.
- Upskill to pre-empt the tactics and motivations of those who purposely spread disinformation, applying strategies similar to those used for big tobacco and other players, including planning for resistance and advocacy for appropriate policy decisions.
- Those working in health communication can develop work practices to deliver messages quickly, consistently, and clearly via appropriate channels that manage multiple unknowns, minimise uncertainty, reduce mixed messages and information deficits. Apply behaviour change theory to help build trust, influence risk perceptions, and inoculate against mis/disinformation to prompt protective behaviours.

## 2.3 | Advocate

- HPP can apply knowledge of the social and commercial determinants of health and behavioural science to work with other professionals and community leaders in development of culturally appropriate strategies that have the best chance of impact.

- Recognise and advocate for the disproportionate impact of infodemics on vulnerable groups to ensure those most at risk are prioritised for action.
- Advocate for a “systems thinking” perspective rather than focus on the individual, working to make the healthy choice, the easy choice. We must take an intersectoral “health in all policies” approach towards managing this and future infodemics.

## 3 | OPPORTUNITIES FOR RESILIENCE AND CAPACITY BUILDING

There are significant opportunities to adopt an equity approach to build professional and community resilience to mis/disinformation and increase capacity to prevent and manage infodemics. Lessons learnt during the COVID-19 pandemic demonstrate how we can mitigate future risks. Mis/disinformation are spread both offline and online, and the definition of community needs to be expanded to include working with online communities and spaces. The process of monitoring and interpreting social media and other content, known as social listening, needs to gather data from diverse sources and remain agile and iterative as new media and directional changes occur. Developing national social listening capacity with open data sharing arrangements will better enhance the infodemic response.

Research can help direct our efforts in using the latest tools and technology, yet more evidence is urgently needed. We need to understand what works on a primary preventative level (such as digital and health literacy, prebunking, capacity building) and for secondary prevention (social listening for early identification of information voids and rumours, and debunking). The WHO public health research agenda for infodemic management defines a broad range of action areas that require local and global attention.

## 4 | INTEGRATING INFODEMIC CAPACITY

As the impact of the infodemic on public health becomes increasingly evident, there is a need to upskill the workforce and incorporate education on infodemiology into health promotion degrees. Beyond a pandemic, infodemic management skills have wide relevance and can be spearheaded into broader public health challenges, policy debate and advocacy. Mis/disinformation is impacting climate change<sup>24</sup> – a critical public health challenge. Broader than that, colleagues working in alcohol, tobacco, gambling and obesity prevention will be aware of how mis/disinformation can impact public health decision making.

## 5 | CONCLUSION

This commentary outlines the collective view of a small group of experienced and emerging Australian HPP among the first WHO

trained infodemic managers. We see overlap in the skills needed for effective infodemic management and those already integrated into health promotion training programs. Lessons learnt from the COVID-19 infodemic and practical strategies outlined here present vital opportunities for the health promotion field to contribute to the research agenda and the field of practice, and positively impact the health of Australians.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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