

Policy Brief #3: Modeling Intervention Acceptance for Disease Mitigation

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Introduction

Effective public health communication is crucial for mitigating the harm of epidemic and pandemic diseases. In a public health crisis, the public needs accurate, up-to-date, highly-localized, and culturally competent information about how to keep themselves safe and minimize their role in spreading a disease. The COVID-19 pandemic illustrated breakdowns in public health communication that created confusion, distrust, and opportunities for misinformation to proliferate. Drawing on lessons learned from scholarly research and community-based public health practice, the purpose of this workshop was to identify best practices in public health communication in order to maximize acceptance and adherence to disease mitigation interventions. After hearing from experts on health information spreading, health misinformation, health communication for underserved populations, and public health communication, one primary issue became recurrent and pressing in all aspects of this problem: a lack of established incentives for accurate and relevant health communication. To maximize intervention acceptance, conversations about science and health with all publics must be better valued and openness in research and data must be incentivized and/or required by law.

Health Information

Currently, there is a lack of robust and comprehensive health communication data, which hampers our ability to forecast the dissemination of health information effectively. Existing datasets which include data about health communication are often limited, proprietary, or fragmented, preventing researchers from gaining a holistic understanding of health-related information diffusion dynamics. Moreover, social media platforms—which have become primary channels for health information dissemination—exist in an incentive structure that values proprietary data as a primary commodity. Thus, these platforms are becoming increasingly restrictive towards academic research, impeding access to valuable insights that could inform evidence-based interventions and policy decisions. To overcome these challenges, it is imperative to establish data sharing policies that incentivize or require openness, collaboration, and knowledge exchange. Such policies could be implemented by the government (e.g., laws requiring transparency during public health emergencies) and/or by industry consortium (e.g., mutual agreements to share data for the public good). Inspired by initiatives that facilitated the rapid sharing of COVID-19 genetic material at the outset of the pandemic, similar mechanisms should be implemented to enable researchers to access de-identified data on health-related messages from diverse sources, including social media and other online communication platforms.

Misinformation and Scientific Uncertainty

The proliferation of misinformation undermines public trust, jeopardizes informed decision-making, and significantly hinders the acceptance of necessary interventions. Solutions to this problem are likely to be as complex and multifaceted as the problem itself, but some key pressure points may be alleviated through policy measures. First, it is essential to create incentives for social media companies to allocate significantly more resources to misinformation interventions that have been shown to work, such as expertise-checking initiatives and media literacy programs. Secondly, at the onset of any infectious disease crisis, there exists uncertainty and diverging scientific opinions that can contribute to confusion and distrust among the general public. Scientific and medical researchers must be trained to communicate uncertainty by openly acknowledging what is currently unknown, including in preprints and publications. The general public would benefit from scientific literacy training to differentiate between temporary uncertainties and enduring gaps in knowledge. By encouraging scientists and public health officials to utilize phrases like "I don't know" when appropriate—as well as by incentivizing publications that validate prior work and show negative and null results—we can foster transparency and honesty in communication and in science. Simultaneously, providing widespread scientific literacy training can help the public understand that uncertainty is a natural part of scientific inquiry, preventing the misinterpretation of evolving scientific understanding as a failure or a lack of credibility.

Underserved Communities

Efforts to address public health concerns specific to underserved populations have often been limited to creating a token presence within existing conversations. However, a profound paradigm shift is required. To be effectively prepared for the next pandemic, simply creating space at the table is not enough. It is instead imperative to establish a “new table” where the concerns of marginalized communities take center stage. This means reevaluating values and realigning incentives to foster a truly inclusive healthcare landscape that prioritizes equitable representation, amplifies marginalized voices, and drives sustainable change. This can involve providing financial support, research grants, or policy incentives to organizations and institutions that prioritize inclusive healthcare practices, community-centered research, and the development of interventions that directly address the unique needs of marginalized populations amidst broader outbreaks. Furthermore, institutionalizing programs that are focused on actively seeking out and amplifying diverse perspectives, engaging community leaders and grassroots organizations, and creating platforms for meaningful participation and decision-making are critical to long-term success. By embracing diversity, valuing lived experiences, and actively including marginalized voices, we can foster a public health practices that are not only more equitable but also more effective in rapidly addressing the specific concerns and needs of underserved populations amidst the threat of infectious disease outbreaks.

Public Outreach

Lack of incentives for scientists to engage with journalists poses a barrier to effective health and science communication. In an environment driven by academic achievements and career progression, scientists often perceive media engagement as a distraction from their core research objectives. Conversely, journalists face pressures to deliver attention-grabbing stories

that attract readership and generate revenue, often resulting in oversimplification or the emphasis on sensational findings. Consequently, the public may be exposed to inaccurate or misleading scientific information, hindering their ability to make informed decisions in emerging situations such as those witnessed at the onset of the COVID-19 pandemic and with the introduction of NPIs and vaccines. To overcome these challenges, incentives must be established to encourage meaningful collaborations between scientists and journalists. Encouraging scientists to engage with the media can be achieved by recognizing science communication as a valuable contribution to their field, incorporating it into promotion criteria, and providing appropriate support and resources. Similarly, journalists should be incentivized to prioritize accurate reporting through recognition of quality science journalism, awards, and professional development opportunities. Moreover, it is essential to foster increased respect within the scientific community towards public engagement. Scientists often face limited recognition or even skepticism when engaging with the public or the media. By promoting the value of public outreach and science communication within academia, researchers can be encouraged to dedicate time and effort towards effective knowledge translation. Recognizing public engagement as a legitimate and valuable aspect of scientific practice will not only enhance public understanding but also empower scientists to communicate their findings accurately and with clarity—especially in the face of public health crises.