Additional Information: Understanding Health Misinformation on Social Media

The following is intended to provide additional context and information regarding the health misinformation research area for the Foundational Integrity Research: Misinformation and Polarization Request for Proposals (RFP). The topics of interest listed below are not meant to be exhaustive, but rather illustrate a few examples.

Background

Social media is reshaping how people access health information in myriad ways, from enhancing patient-provider communication to the formation of robust patient communities centered around shared health experiences. A robust digital health ecosystem can be extremely advantageous, providing access to tailored information and relevant lived experiences to a broad segment of society. However, along with quality online interactions come false, inaccurate, or incomplete information which have the potential to supplant established interventions with ones that run the spectrum from unproven to unsafe. Examples of health topics known for appreciable prevalence of such misinformation include vaccinations and so-called miracle cures. Collectively termed "health misinformation", such content is often not easy to identify and the motivations driving the people behind their production and propagation are poorly understood. Furthermore, while it is believed that exposure to health misinformation on social media manifests in offline health consequences, the specific contributions and causal mechanisms remain to be established.

In order to inform organizations on how best to respond, we need to better understand how to detect such content on social media, how it spreads, the motivations that drive actors, downstream effects of exposure, and effective interventions. The health area of the Foundational Integrity Research RFP aims to support research proposals in these thematic directions.

Topics of interest include, but are not limited, to the following themes:

Health misinformation surveillance: Discovering, tracking, and understanding the spread of health misinformation. Examples include:

- Scaled strategies to identify health misinformation in social media posts that may contain text, photos, links, and videos. This includes content-based and content-agnostic (e.g. behavioral) detection methods.
- Understanding how health misinformation spreads in the context of social media. This may try to elucidate different types of actors, their interactions, and/or the motivations/strategies in service of their goals.
- Understanding the role influencers play in the proliferation of health misinformation.

- Strategies to predict health misinformation that may go viral.
- Differences between the nature and proliferation of health misinformation across cultural contexts.
- Comparison of the influence, rates, nature, or spread of health misinformation via different communication mediums (different social media platforms, radio, newspapers, etc.).
- Real-time monitoring strategies for discovering problematic hotspots for health misinformation internationally.
- Scaled methods for discovering unknown or emerging health misinformation issues on social media platforms.

Evaluating the impact of health misinformation: Understanding the downstream (potentially incremental) effects of exposure to health misinformation with respect to user- or population-level changes in perceptions, attitudes, behavior, and/or health outcomes. Examples include:

- Strategies for discerning how social media users evaluate and/or internalize health misinformation.
- Methods to inform whether health misinformation exposure causally lead to measurable offline effects (e.g. changes in attitudes towards or uptake of proven treatments, etc).
- Understanding the interaction between timing/context and exposure to downstream outcomes. For example, does seeing health misinformation at specific life stages (e.g. parents, elderly, etc.) lead to measurably worse outcomes than exposure at other life stages?
- Linking social media exposure to misinformation and traditional health data (e.g. EHRs, claims data, etc) to evaluate health outcomes.
- Understanding how exposure changes may lead to radicalization on a health issue.

Developing interventions against health misinformation: Developing and testing of intervention strategies to combat health misinformation, including both the proactive provisioning of quality health information and defensive measures that aim to limit the reach of misinformation. Examples include:

- Understanding when health misinformation on social media requires a response. In cases where it does, should the response be to remove the content, reduce its spread, highlight problematic claims, or proactively correct?
- Assessing the effect of strategies intended to counter misinformation (e.g. information modules at the top of search results or UI treatments labeling content as false) on viewers' behavior or attitudes.
- Understanding the connection between proactive health messaging from trusted entities and offline outcomes.
- How can social media play a role in improving the public’s health literacy to help them better evaluate problematic health claims?

- How can health experts best leverage social media to create and sustain public trust in evidence-based health information? How can partnerships among clinicians, trusted social media influencers, and industry leaders be created to combat health misinformation?

This list of topics is not meant to be exhaustive, and submitters should feel empowered to propose projects beyond what is listed here.