



# COVID-19 research: Infodemiology

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***Presenting on behalf of participants of WHO infodemic management conferences and collaborations***

**Global Research and Innovation Forum**  
24<sup>th</sup>-25<sup>th</sup> February 2022



**World Health  
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**R&D Blueprint**  
Powering research  
to prevent epidemics

# The COVID-19 pandemic is accompanied by an infodemic

The science of infodemiology can equip health systems to better respond and prevent the harms that infodemics can cause

- **Definition:** excess information, including false or misleading information, in digital and physical environments that spread during a health emergency.
- **Why it matters:** Infodemics lead to confusion and risk-taking behaviours that can be harmful to health, as well as erode trust in health authorities and public health responses.
- **What WHO is doing about it:** WHO is developing tools to provide an evidence-based response to the infodemic to strengthen epidemic and pandemic response activities and is fostering the growth of the field of infodemiology.
- **Beyond COVID-19:** In the future, *all* emergencies and pandemics will be accompanied by infodemics that will be better addressed with the tools and insights developed today.



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# Infodemics are seen as threat by health authorities

**90%** of health authorities surveyed in WHO pulse survey (Q4 2021) are investing in infodemic management capacity

**WHO is connecting infodemiology research to public health practice by:**

1. Establishing an infodemiology research agenda
2. Measuring the burden of infodemics
3. Connecting research to practice through a WHO infodemic management training programme and evidence-based infodemiologist's toolbox
4. Promoting infodemiology implementation science, evidence generation, and publication
5. Developing an evidence map and gap analysis for frameworks of interventions and infodemiology
6. Promoting the development of ethical frameworks for infodemiology applied to social listening and infodemic management

2020

## Munich Security Conference



We're not just fighting an epidemic; we're fighting an infodemic.



Our enemy is also an "infodemic" of misinformation.



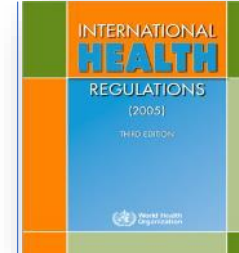
WHA73: counter misinformation and disinformation



132 signatories of "cross-regional statement on infodemic in context of COVID-19" to UN Secretary General



UNGA infodemic side event Uruguay, Indonesia, Thailand



5<sup>th</sup> IHR EC reaffirms Infodemic management temp recommendation

Jan

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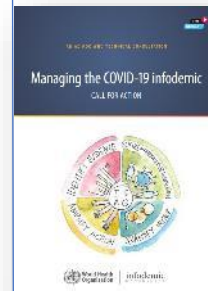
WHO IMST Infodemic Management & RCCE pillar

WHO starts dialogue & collab with tech industry

EPI-WIN launches WHO myth buster series



1<sup>st</sup> weekly Infodemic Digital Intelligence Report



1<sup>st</sup> WHO global Infodemic conference: Framework, strategy, actions. [JMIR paper.]

RCCE Collective Service



Sending SMS messages to public for COVID-19 response



2<sup>nd</sup> WHO global Infodemic conference: Science

UN interagency Infodemic alliance forms

30<sup>th</sup> weekly Infodemic Digital Intelligence Report

UN interagency Infodemic dialogue



276 trainees for WHO Infodemic Manager roster



3<sup>rd</sup> WHO global Infodemic conference: Whole-of-Society



Africa Infodemic Response Alliance

New partnership for AI-assisted speech-to-text translation for digital listening



[Special issue on infodemics and health security](#)



[Special issue on COVID-19 infodemic at scale](#)

[US CDC establishes infodemic insights unit within the COVID-19 vaccine taskforce](#)



[Special issue on infodemiology](#)



WHA74



[UN Interagency Dialogue on Disinformation and Data Transparency, two discussion papers published](#)



[UNGA side event Promoting Transparency to Counter Disinformation and Build Trust](#)



[Special issue on infodemiology](#)

2021

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Infodemiology at the WHO COVID-19 R&D blueprint review



[4th WHO Infodemic conference: social listening](#)



2nd WHO infodemic manager training



[WHO global conference on communicating science during health emergencies](#)



[WHO competency framework: Building a response workforce to manage infodemics](#)

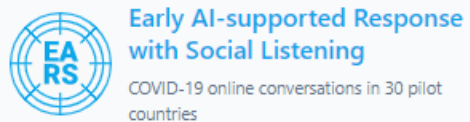


[5th WHO Infodemic Management conference: Measuring the burden of infodemics](#)



Total 750+ infodemic managers trained across 132 countries

90th weekly Infodemic Digital Intelligence Report



# The WHO public health research agenda in infodemiology is shaped by country priorities

## Five research streams:

1. Measuring and monitoring the impact of infodemics during health emergencies
2. Detecting and understanding the spread and impact of infodemics
3. Responding and deploying interventions that protect against the infodemic and mitigate its harmful effects
4. Evaluating infodemic interventions and strengthening resilience of individuals and communities to infodemics
5. Promoting the development, adaptation and application of tools for managing infodemics.



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# The evidence base for infodemiology is growing...

Cyberpsychology, Behavior, and Social Networking, Vol. 24, No. 8 | Rapid Communication

Free Access

## The Instagram Infodemic: Cobranding of Conspiracy Theories, Coronavirus Disease 2019 and Authority-Questioning Beliefs

Emma K. Quinn , Sajjad S. Fazel, and Cheryl E. Peters

Published Online: 4 Aug 2021 | <https://doi.org/10.1089/cyber.2020.0663>

[Am J Trop Med Hyg.](#) 2020 Oct; 103(4): 1621–1629.

PMCID: PMC7543839

Published online 2020 Aug 10. doi: [10.4269/ajtmh.20-0812](https://doi.org/10.4269/ajtmh.20-0812)

PMID: [32783794](https://pubmed.ncbi.nlm.nih.gov/32783794/)

## COVID-19–Related Infodemic and Its Impact on Public Health: A Global Social Media Analysis

[Md Saiful Islam](#)<sup>1,2,\*</sup>, [Tonmoy Sarkar](#)<sup>1</sup>, [Sazzad Hossain Khan](#)<sup>1</sup>, [Abu-Hena Mostofa Kamal](#)<sup>3</sup>, [S. M. Murshid Hasan](#)<sup>4</sup>, [Alamgir Kabir](#)<sup>2,5</sup>, [Dalia Yeasmin](#)<sup>1</sup>, [Mohammad Ariful Islam](#)<sup>1</sup>, [Kamal Ibne Amin Chowdhury](#)<sup>1</sup>, [Kazi Selim Anwar](#)<sup>6</sup>, [Abrar Ahmad Chughtai](#)<sup>2</sup> and [Holly Seale](#)<sup>2</sup>

> [Am J Public Health.](#) 2020 Oct;110(S3):S319–S325. doi: [10.2105/AJPH.2020.305902](https://doi.org/10.2105/AJPH.2020.305902).

## Limited Role of Bots in Spreading Vaccine–Critical Information Among Active Twitter Users in the United States: 2017–2019

[Adam G Dunn](#)<sup>1</sup>, [Didi Surian](#)<sup>1</sup>, [Jason Dalmazzo](#)<sup>1</sup>, [Dana Rezazadegan](#)<sup>1</sup>, [Maryke Steffens](#)<sup>1</sup>, [Amalie Dyda](#)<sup>1</sup>, [Julie Leask](#)<sup>1</sup>, [Enrico Coiera](#)<sup>1</sup>, [Aditi Dey](#)<sup>1</sup>, [Kenneth D Mandl](#)<sup>1</sup>

JMIR INFODEMOLOGY

Purnat et al

Original Paper

## Infodemic Signal Detection During the COVID-19 Pandemic: Development of a Methodology for Identifying Potential Information Voids in Online Conversations

[Tina D Purnat](#)<sup>1\*</sup>, [Paolo Vacca](#)<sup>2\*</sup>, [BSt](#); [Christine Czerniak](#)<sup>3\*</sup>, [PhD](#); [Sarah Ball](#)<sup>2\*</sup>, [BA](#); [Stefano Burzo](#)<sup>4\*</sup>, [MA](#); [Tim Zecchin](#)<sup>2\*</sup>, [BA](#); [Amy Wright](#)<sup>2\*</sup>, [BA](#); [Supriya Bezbaruah](#)<sup>5\*</sup>, [PhD](#); [Faizza Tanggol](#)<sup>6</sup>, [BA](#); [Ève Dubé](#)<sup>7\*</sup>, [PhD](#); [Fabienne Labbé](#)<sup>7\*</sup>, [PhD](#); [Maude Dionne](#)<sup>7\*</sup>, [MSc](#); [Jaya Lamichhane](#)<sup>3\*</sup>, [MA](#), [MBA](#); [Avichal Mahajan](#)<sup>3\*</sup>, [PhD](#); [Sylvie Briand](#)<sup>3\*</sup>, [MPH](#), [MD](#), [PhD](#); [Tim Nguyen](#)<sup>3\*</sup>, [MSc](#)

PERSPECTIVE

THE COVID-19 INFODEMIC

## The Covid-19 Infodemic — Applying the Epidemiologic Model to Counter Misinformation

[David Scales](#), [M.D.](#), [Ph.D.](#), [Jack Gorman](#), [M.D.](#), and [Kathleen H. Jamieson](#), [Ph.D.](#)

Review Article | [Published: 01 May 2021](#)

## Understanding misinformation infodemic during public health emergencies due to large-scale disease outbreaks: a rapid review

[Nashit Chowdhury](#), [Ayisha Khalid](#) & [Tanvir C. Turin](#) 

[Journal of Public Health](#) (2021) | [Cite this article](#)

# Calls for papers and research funding opportunities have mushroomed in the last year

## Call for Papers

Special  
Theme Issue:  
**Social Media, Ethics, and  
COVID-19 Misinformation**

The Journal of Medical Internet Research (JMIR)  
in collaboration with the Stanford INFODEMIC Conference



**JMIR Publications**  
Advancing Digital Health & Open Science

## The Mercury Project: Call For Proposals

The Mercury Project > The Mercury Project: Call For Proposals

### OVERVIEW

Evidence-based strategies to combat health mis- and disinformation and to increase the uptake of reliable health information are critical to an effective and equitable pandemic response.

The Mercury Project invites letters of inquiry for research projects that address one or more of the following goals:

- 1) estimating the causal impacts of mis- and disinformation on online and offline outcomes in the context of the Covid-19 pandemic, including health, economic, and/or social outcomes, differential impacts across sociodemographic groups, and quantifying the global costs of those impacts;
- 2) estimating the causal impacts of online or offline interventions in the United States, Africa, Asia, and Latin America and the Caribbean to increase uptake of Covid-19 vaccines and other recommended public health measures by countering mis- and disinformation, including interventions that target the producers or the consumers of mis- and disinformation, or that increase confidence in reliable information.

### GRANT SNAPSHOT

The Mercury Project is a \$10M+ research consortium investigating the impacts of health misinformation and evaluating interventions to prevent its spread in the United States, Africa, Asia, and Latin America and the Caribbean.

**Letter of Inquiry Deadline:**  
rolling basis

**Contact:**  
mercury@ssrc.org

**APPLY**

### RESOURCES

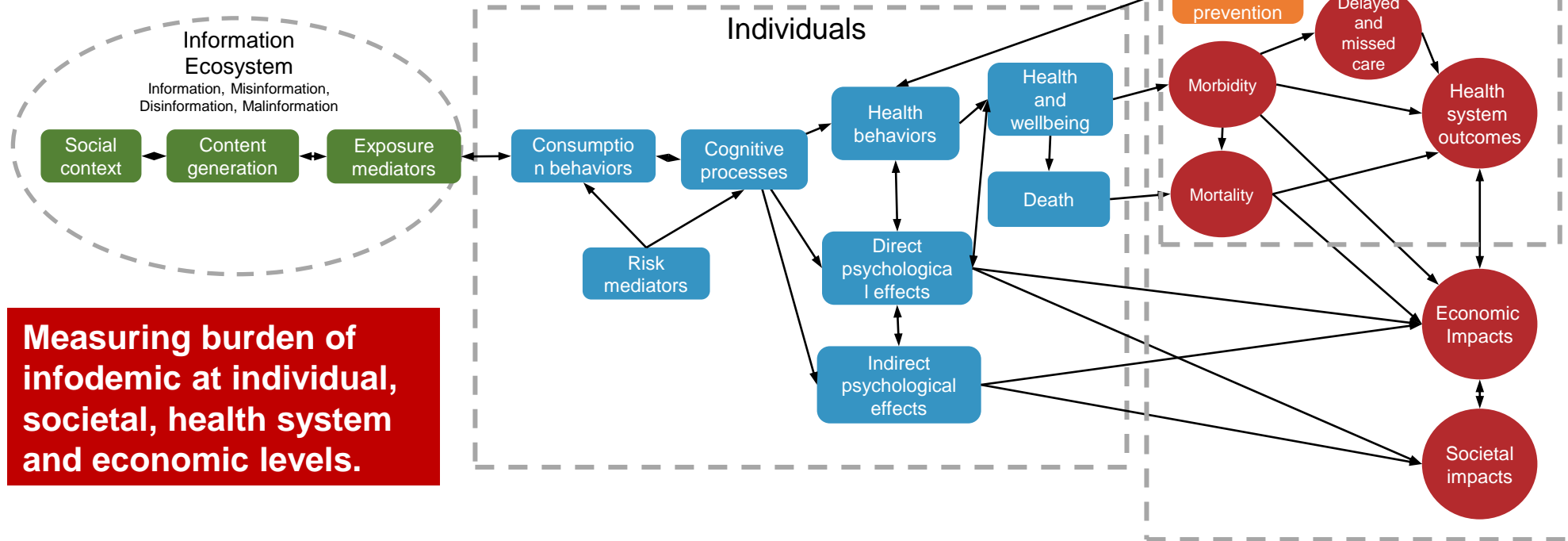
Frequently Asked Questions

# 5<sup>th</sup> WHO infodemic management conference, November 2021

## Developing metrics and indicators to quantify the burden of infodemic on health and well-being

Co-sponsored  
by US CDC

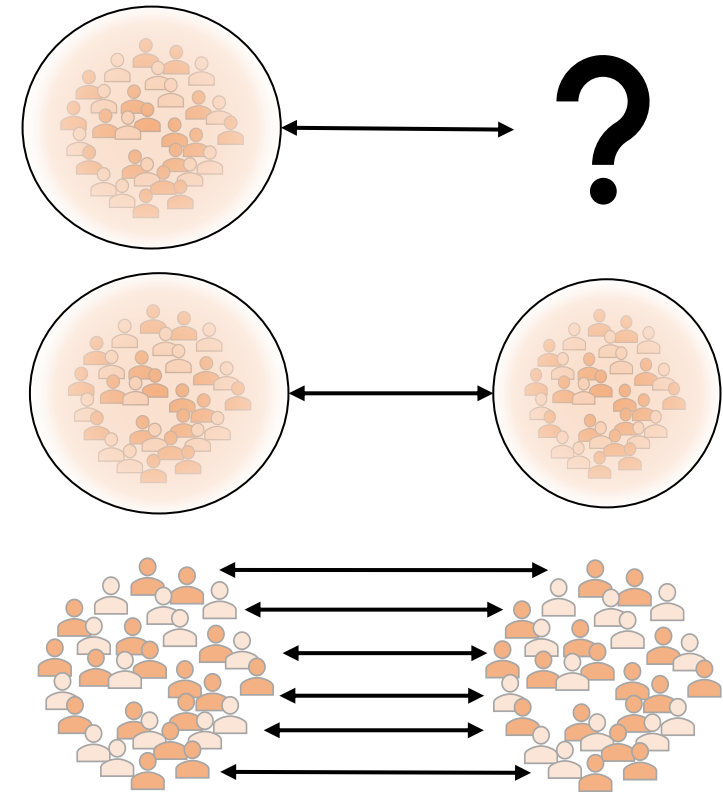
*Draft concept map in discussion at the conference*



# Highlights from recent infodemiology collaborations

## Connection information surveillance methods with health outcomes

- Studies are inconsistent in design, focused only on single platforms, almost never connect individual exposures to health outcomes
- Build open tools that safely collect data about individual information exposures and survey
- Train/support regional networks of researchers who can follow a consistent protocol and prospectively contribute data to global efforts



# Next steps

## Project, publications, and research collaborations

- Developing and translating robust infodemiology tools are critical for learning how to reduce infodemic harm, support PHSM, and promote uptake of treatments, diagnostics and vaccines.
- Establishment of working groups following the 5<sup>th</sup> WHO Infodemic Management Conference on measuring burden of infodemics
  - **Evidence mapping and gap analysis** reviewing implementation of the public health research agenda, infodemic management frameworks and interventions
  - Development of tools for **automated social listening** of conversations in social media and other sources
  - Development of evidence-based **scalable social inoculation interventions**
  - Tools and protocol for **measuring information diet** and linking it to health outcomes
  - **Field infodemiology guide** for field responders
  - Development of an ethical framework for social listening and infodemic management

# Acknowledgements

Brought to you by the WHO Information Network for Epidemics (EPI-WIN)





# Thank you

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