COVID-19 research: Infodemiology

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

UN interagency Infodemic alliance forms

UNGA infodemic side event Uruguay, Indonesia, Thailand

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

2nd WHO global Infodemic conference: Science

3rd WHO global Infodemic conference: Whole-of-Society

276 trainees for WHO Infodemic Manager roster

Sending SMS messages to public for COVID-19 response

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

WHO starts dialogue & collab with tech industry

EPI-WIN launches WHO myth buster series

UN interagency Infodemic dialogue

1st weekly Infodemic Digital Intelligence Report

RCCE Collective Service

30th weekly Infodemic Digital Intelligence Report

5th IHR EC reaffirms Infodemic management temp recommendation

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Africa Infodemic Response Alliance

Munich Security Conference

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UNGA side event: Promoting Transparency to Counter Disinformation and Build Trust

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

WHA74

2021

Jan
Feb
March
April
May
June
July
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Sep
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Nov
Dec

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

4th WHO infodemic conference: social listening

2nd WHO infodemic manager training

WHO competency framework: Building a response workforce to manage infodemics

WHO global conference on communicating science during health emergencies

5th WHO Infodemic Management conference: Measuring the burden of infodemics

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UN Interagency Dialogue on Disinformation and Data Transparency, two discussion papers published

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Total 750+ infodemic managers trained across 132 countries

90th weekly Infodemic Digital Intelligence Report

Special issue on infodemiology and health security

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WHO global conference on communicating science during health emergencies

Early AI-supported Response with Social Listening

COVID-19 online conversations in 30 pilot countries

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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.
The evidence base for infodemiology is growing...

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

Understanding misinformation infodemic during public health emergencies due to large-scale disease outbreaks: a rapid review
Calls for papers and research funding opportunities have mushroomed in the last year.
Developing metrics and indicators to quantify the burden of infodemic on health and well-being

Co-sponsored by US CDC

5th WHO infodemic management conference, November 2021

Draft concept map in discussion at the conference

Measuring burden of infodemic at individual, societal, health system and economic levels.
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 5th 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
Thank you