WHO competency framework

Building a response workforce to manage infodemics

World Health Organization

infodemic
MANAGEMENT

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Contents

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An "infodemic", being the overabundance of information – some accurate and some not – that occurs during an epidemic, represents a major problem. It makes it hard for people to find trustworthy sources and guidance on what to think and on how to behave during a health emergency. During the COVID-19 pandemic, this is exacerbated by the global scale of the emergency and by the globally interconnected ways in which information is spread through online and offline communication channels.

We have witnessed several negative consequences of an infodemic: confusion and fear (especially among populations that are vulnerable and at risk), loss of trust in institutions, misconceptions, misunderstanding and stigma. All this can result in individuals not engaging in appropriate decision-making that, in the context of a pandemic, might lead to disease and death.

WHO has promoted a major effort on how to manage the infodemic, calling upon the knowledge and expertise of practitioners and scientists working in the field. Infodemiology has emerged as a valuable discipline now and for the future. Considerable work has been carried out to understand the multidisciplinary nature of infodemic management, as well as to identify key examples and tools to highlight, measure and better managed instances of infodemics. A choral effort was essential to build a public health research agenda to direct focus and investment on infodemic management globally.

The development of a competency framework to manage infodemic is a main step towards the measurement of Infodemic management through a detailed definition of the different fields involved in infodemic management, and the requisite knowledge, skills and abilities needed for the workforce to prepare for and respond to infodemics. It is a matter of listening better to communities, of targeting persuasive instances of communication and evaluating their effects through approaches. It is also a matter of training and educating of strengthening health literacy and critical thinking, of collaborating and networking. Moreover, standard operating procedures need to be implemented in health institutions so that they are prepared to act and react in a timely and coordinated way.

Infodemic cannot be suppressed, it can only be managed. Hence, the importance of health authority is to embrace actively the new field of epidemic and pandemic preparedness and response. It strengthens the relevance of institutional communication and promotes the coordination and consistency of health information.

Reliable and trustworthy information is among the key determinants of our knowledge, beliefs, attitudes and ultimately behaviour. Especially when phenomena are unknown, different opinions spread around. It is difficult to standardize a normativity of what is right or wrong, or of quality versus manipulation. Yet, managing infodemics and health misinformation means that health institutions must be able to "talk" to, exchange with and respond to their communities but the trust is crucial for response. This dialogue is crucial to avoid the burdens of uncertainties resulting in unfruitful relativism. This is why a competency framework for infodemic management is an asset for health institutions today, and a guiding compass to orient a large part of their goals and missions.

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Acknowledgements

List of acronyms and abbreviations

COVID-19	coronavirus disease 2019
EPI-WIN	WHO Information Network for Epidemics
IM	Infodemic management
US CDC	US Centers for Disease Control and Prevention
WHO	World Health Organization

Note to the reader

This report presents the competency framework for infodemic management by explaining its conceptual and methodological development. The process of designing the framework included participatory work with stakeholders that provided important insight on how to populate it. This participatory work had an explorative goal, and does not imply consensus.

Executive summary

In April 2020, the WHO Information Network for Epidemics (EPI-WIN) held an online global consultation that produced a WHO framework for managing the COVID-19 infodemic and pointed to the need to create a competency framework for a new workforce of infodemic managers.[1] Specific knowledge and skills are needed to design and apply infodemic management (IM) interventions and practice to promote resilience to infodemics among individuals and communities, including mis/disinformation, and to promote self-efficacy for self-protective health behaviours. In light of this, WHO, in partnership with the US Centers for Disease Control and Prevention (US CDC), conducted research and a consultation to produce this competency framework.

The objective is to orient and support the design, development and evaluation of the needs of an institution's workforce. This framework can assist institutions to strengthen IM capacity by hiring, staff development and human resource planning. It is structured to benefit all workers active in IM in health institutions and organizations, including leaders and people who have active roles that influence decision- and policy-making.

The framework is conceptualized around the five workstreams for infodemic preparedness and response along the epidemic curve, analogous to an epidemic response. It is structured around four domains that contain competencies for infodemic managers in the form of tasks, and the knowledge and skills that are needed to perform them. From a methodological perspective, the competency framework was developed in three stages, through a synthesis of lessons learned from IM at WHO conferences and events during 2020, and participatory research with stakeholders, i.e. a qualitative interview-based study and two expert panels.

The presentation of the framework includes some recommendations for its implementation.

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[1] An ad hoc WHO technical consultation managing the COVID-19 infodemic: call for action, 7-8 April 2020. Geneva: World Health Organization; 2020. (https://www.who.int/publications/i/item/9789240010314, accessed 21 February 2021).

Introduction

Background

The main purpose of this document is to strengthen efforts at the country level to manage infodemics by outlining a set of competencies to guide the empowerment, education and training of employees of health institutions.

An infodemic is an overabundance of information – including mis/ disinformation – that occurs during an epidemic. The term was first used in 2003, combining the words "information" and "epidemic",[1] following previous information epidemic discussions.[2] An infodemic spreads between humans in a similar manner to an epidemic, via digital and physical information systems. It makes it hard for people to find trustworthy sources and reliable guidance when they need it. It is propagated by the fundamentally interconnected ways in which information is disseminated and consumed, through social media platforms, online, and through other channels. In the context of the COVID-19 pandemic, it is exacerbated by the global scale of the emergency.

During epidemics, more so than in normal times, people need accurate information so that they can adapt their behaviour and protect themselves, their families and their communities against infection. Infodemics affect citizens in every country and addressing them is a new and centrally important challenge in responding to disease outbreaks.

In response to the pressing demand for timely, trustworthy information about COVID-19 and subsequent epidemics and pandemics, the World Health Organization (WHO) established the Information Network for Epidemics (EPI-WIN) to serve as a network uniting technical and social media teams within WHO. EPI-WIN disseminates and amplifies evidence-based information about COVID-19, and tracks and responds to misinformation, myths and rumours.

Within this context, the management of infodemics is a priority for WHO and it requires the strengthening of "infodemiology" as the science that provides standards to manage infodemics.[3] Moreover, it requires global strategic planning and actions to translate scientific evidence into the empowerment of health institutions and communities at large.

On 7 and 8 April 2020, EPI-WIN held an online global consultation on managing the COVID-19 infodemic, with the aim of gathering information, evidence, ideas and comments from a wide range of technical experts and other stakeholders. The objective of this event was to gather input for a draft infodemic response framework, with the secondary aim of catalysing a new community of practice on IM and beginning to define its work. This meeting produced a WHO framework of 50 action points to manage the COVID-19 infodemic.[4] One of those action points was to hold the first WHO

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[1]   Rothkopf DK. When the buzz bites back. The Washington Post. 11 May 2003 (www.washingtonpost.com/archive/opinions/2003/05/11/when-the-buzz-bites-back/bc8cd84f-cab6-4648-bf58-0277261af6cd/, accessed 21 February 2021).

[2]   Coiera E. Information epidemics, economics and immunity on the internet. We still know so little about the effect of information on public health. BMJ. 1998;317(7171):1469-70.

[3]   For a discussion of infodemiology and the public health research agenda for infodemic management, see WHO public health research agenda for managing infodemics. Geneva: World Health Organization; 2021. (https://www.who.int/publications/i/item/9789240019508, accessed 21 February 2021).

[4]   An ad hoc WHO technical consultation managing the COVID-19 infodemic: call for action, 7-8 April 2020. Geneva: World Health Organization; 2020. (https://www.who.int/teams/risk-communication/infodemic-management/who-ad-hoc-online-consultation-on-managing-the-COVID-19-infodemic, accessed 21 February 2021).

Infodemiology Conference in June and July 2020,[1] with a research question prioritization exercise that ran throughout October 2020.

A clear outcome of these initiatives pointed to the need for health institutions to have expertise in IM and to actively engage in IM to benefit their communities. Specific knowledge and skills are needed to apply IM interventions and practice to promote resilience to the infodemic in individuals and communities, including mis/disinformation, and to promote self-efficacy for self-protective health behaviours. In light of this, WHO, in partnership with the US Centers for Disease Control and Prevention (US CDC), conducted extensive research to produce this competency framework for a new workforce: infodemic managers.

Objective and structure

The objective of the competency framework for IM is to orient and support the design, development and the evaluation of the needs of an institution's workforce. This framework can assist institutions to strengthen IM capacity by hiring, staff development and human resource planning. More specifically, it is a reference tool for activities including:

- ❖ developing/reviewing terms of reference and job descriptions,
- ❖ redesigning work processes,
- ❖ reorganizing responsibilities,
- ❖ linking work functions to required competencies,
- ❖ conducting training needs assessments and developing training plans,
- ❖ linking staff performance to outcomes,
- ❖ developing indicators to evaluate institutional (and staff) performance in IM,
- ❖ determining criteria for career development.

This framework is structured to benefit all personnel working in health institutions and organizations addressing the infodemic, including leaders and those who have active roles that influence decision- and policy-making.

The overall conceptual and structural organization of the competency framework implements the main guiding principles presented in WHO public health research agenda for managing infodemics,[2] namely that actions in IM must be driven by:

- ❖ the respect of ethical conduct,
- ❖ the overall task of empowering communities through the framing of access to reliable health information as a right,
- ❖ a community-centred and context-appropriate approach,
- ❖ a focus on interventions that can be implemented rapidly in response to acute health events,
- ❖ the ongoing effort to strengthen health systems and build trust.

The agenda mentioned above also highlights a set of actions as clusters for IM, namely:

1. *Strengthening the scanning, review and verification of evidence and information*. This covers actions including evidence generation and synthesis, knowledge translation, publication and dissemination of scientific evidence.
2. *Strengthening the interpretation and explanation of what is known, fact-checking statements, and addressing mis/disinformation*. This covers actions including the development of trusted sources, fact-checking and rapid response to mis/disinformation, effective use of social media, web and other communication channels.

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[1]   Details of the conference can be found online: 1st WHO Infodemiology Conference. Geneva: World Health Organization; 2021. (https://www.who.int/teams/risk-communication/infodemic-management/1st-who-infodemiology-conference, accessed 21 February 2021).

[2]   WHO public health research agenda for managing infodemics. Geneva: World Health Organization; 2021. (https://www.who.int/publications/i/item/9789240019508, accessed 21 February 2021).

3. *Strengthening the amplification of messages and actions from trusted actors to individuals and communities that need the information*. This covers actions including the coordination of information to reduce the proliferation of sources, the localization of messages and community engagement, the implementation of programmes to boost critical thinking skills, health and science literacy.
4. *Strengthening the analysis of infodemics, including the analysis of information flows, monitoring the acceptance of public health interventions, and an analysis of factors affecting infodemics and behaviours at individual and population levels*. This covers actions including the monitoring and evaluation of IM interventions and the development of infodemic research priorities.
5. *Strengthening systems for IM in health emergencies.* This covers activities including capacity-building, collaboration and networking with stakeholders, as well as policy-making.

In the initial development of the competency framework, all these actions were mapped onto the five workstreams in the epi curve of an infodemic response, analogous to an epidemic response. Each workstream of the response involves the applications of tools, methods and interventions to support behaviour change to flatten the curve, as illustrated in the figure below.
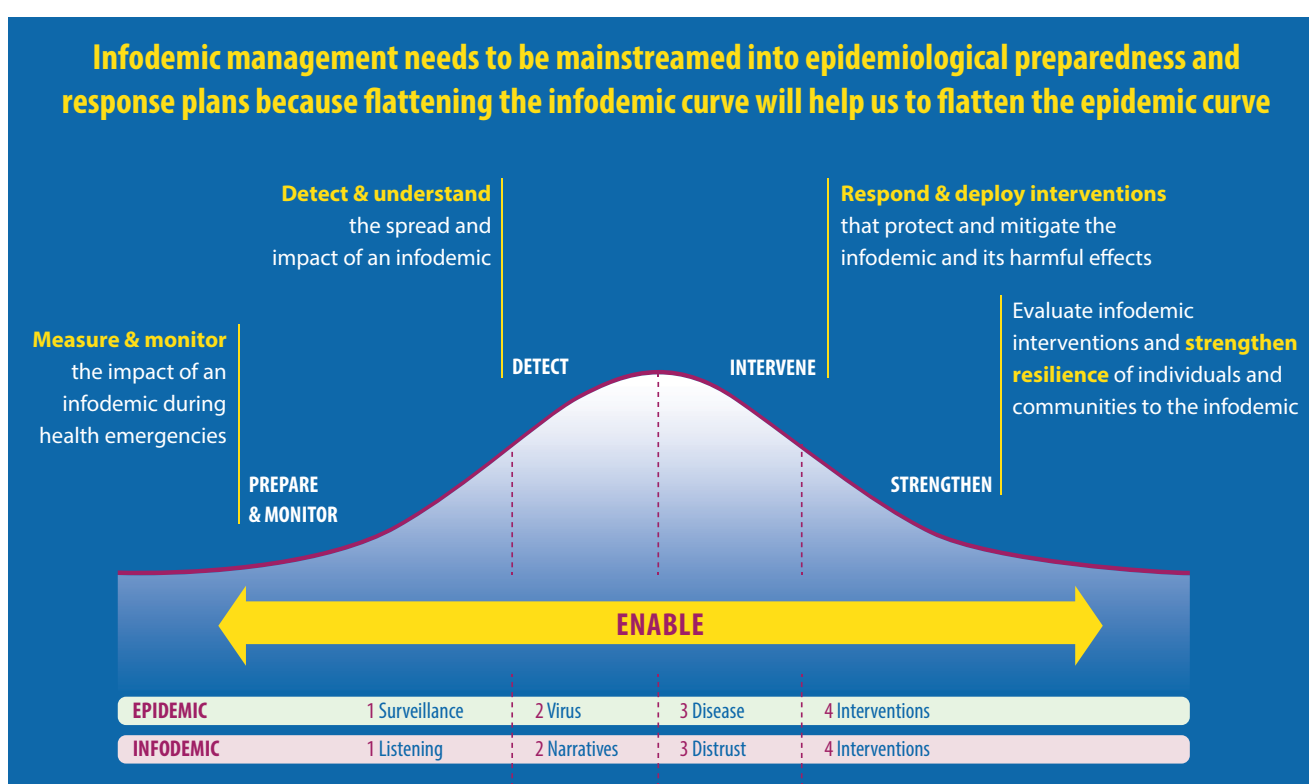
Figure 1. The five workstreams in the epi curve of an infodemic response, analogous to the epidemic response.

Specifically, these workstreams are the following:

1. Workstream 1*. Measure and monitor the impact of infodemics during health emergencies*. The application of standardized metrics and tools are needed to track the evolution of infodemics among individuals, communities, societies and health systems, in both the digital and the physical information environments.
2. Workstream 2. *Detect and understand the spread and impact of infodemics*. A common approach is needed to understand how information and mis/disinformation is spread and how it affects online and offline behaviour in different populations.
3. Workstream 3. *Respond and deploy interventions that mitigate and protect against the infodemic and its harmful effects*. An evidence base is needed to identify interventions that are effective in different contexts and for different types of acute health event.

4. Workstream 4. *Evaluate infodemic interventions and strengthen the resilience of individuals and communities to infodemics*. Common evaluation frames are needed to improve the development of interventions and programmatic responses to infodemics.
5. *Workstream 5*. *Enable*, that is, *promote the development, adaptation and application of tools for the management of infodemics*. There is a need to enhance the transferability of lessons and evidence-based interventions between contexts, countries and infodemics.

The above workstreams form the basis of the core domains of the competency framework.

Methods

The competency framework for IM was developed in three main steps that link the conceptual work and participatory research with the relevant stakeholders.

Step 1: Preparatory work

The overall structure of the framework was built by following the guidelines in the Guide to writing competency framework for WHO Academy courses.[1] On the basis of this guide, it was decided to organize competencies according to the following areas:

- ❖ *Domains*: the headings that highlight the identifying characteristics of a group of competencies which enable readers to grasp, at a glance, what the competency framework will cover.
- ❖ *Activities*: core functions of the work, which encompasses groups of related tasks.
- ❖ *Tasks*: observable component units of the work within an activity.
- ❖ *Knowledge*: the information needed to perform a certain task.
- ❖ *Skills*: A specific ability that is learned through practice.

The domains and activities to be included in the framework were identified on the basis of the five workstreams in the epi curve of an infodemic response highlighted above. This process is fully conceptualized in Health misinformation and infodemics: A framework approach to infodemic management[2] and in Health misinformation and infodemics: Key principles and tools of a framework for infodemic management.[3] The main activities are presented in the following figure, which shows the transdisciplinarity of the approach to IM:
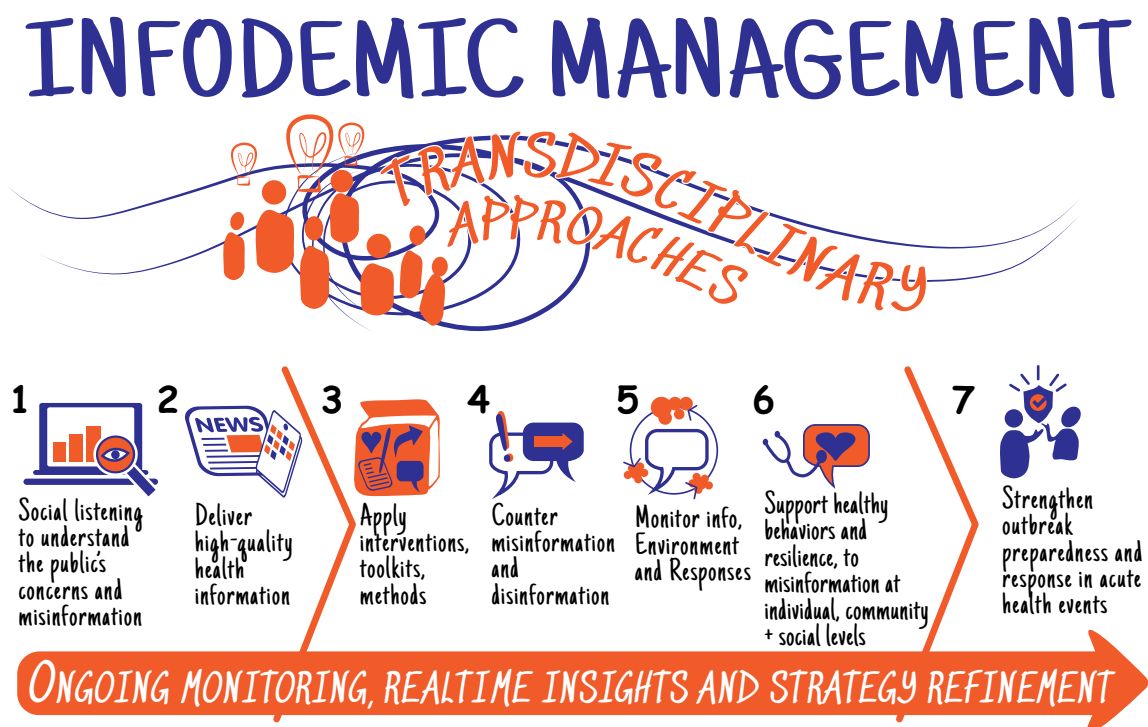
Figure 2. The main activities required for IM

[1]   Guide to writing competency framework for WHO Academy courses, working draft 0.3 [Unpublished].

[2]   First WHO Infodemic Manager Training, working draft 0.1. See: https://www.who.int/teams/risk-communication/infodemic-management/1st-who-training-in-infodemic-management, accessed 21 February 2021.

[3]   Lecture given by T. Purnat and E. Wilhelm on 26 November 2020, in the context of the first training in infodemic management. See summary: Purnat TD. Building systems for respond to infodemics and build resilience to misinformation. 2 December 2020. (https://www.linkedin.com/pulse/building-systems-respond-infodemics-build-resilience-tina-d-purnat/, accessed 21 February 2021).

Step 2: The qualitative study

To populate the framework of domains and activities with specific tasks, competencies and skills, a qualitative study with relevant stakeholders was performed.

The qualitative study used the method of semi-structured interviews with participants (n = 26), identified on the basis of their academic background in fields relevant to IM (n = 10) or of their professional experience in IM activities for an institution (n = 16). The full list of study participants is available in Annex 1.

The interview grids focused on the following topics:

❖ current IM processes within institutions (strengths and limitations, gaps and needs);
❖ specific theories, models, strategies and tools for IM used within institutions;
❖ key disciplines for competence development in IM.

The full interview grids are available in Annex 2.

The interviews were conducted via Zoom between December 2020 and January 2021. They were video-recorded and transcribed verbatim. Participants gave oral consent to be video-recorded. The transcripts were analysed using a thematic analysis.[1]

Overall, the interviews confirmed the value of an approach to IM that is analogous to epidemic management, promoting infodemiology as a key source of evidence and knowledge. All participants acknowledged the value and importance of having a competency framework to inform and strengthen institutions' processes and services in IM.

Participants confirmed and further reinforced which aspects should be factored into IM that had been highlighted during the first infodemic conference, namely:

❖ The *computational dimension*: IM involves the ability to tap into huge amounts of data.
❖ The *cognitive, emotional and overall behavioural dimension*: the focus on behaviour and behaviour change is key for the success of the interventions.
❖ The *sociocultural dimension*: analyses and interventions require knowledge of social networks with anthropological perspectives.
❖ The *communication dimension*: communication is key and crucial, and requires expertise and evidence of impact.

The different tasks, fields, theories, models, strategies, practices and processes highlighted by participants were clustered under standardized labels and then inserted into the draft framework under the specific domains and activities. For the sake of further clarification, each domain was enriched with a "competency statement" that highlights the overall focus of the domain. Similarly, each activity was explained through the presentation of its main objective.

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[1]   Rubin H, Rubin IS. Qualitative interviewing: The art of hearing data, third edition. Thousand Oaks, CA: Sage; 2021.

Step 3: Stakeholder panels

The complete framework, with all domains, activities, tasks, knowledge and skills was presented for discussion and revision to two stakeholder panels, respectively held on 26 January 2021 and 2 February 2021 via Zoom.

The panels took place with a majority of participants in the qualitative study (n = 14), both academics (n = 5) and practitioners (n = 11), some additional academics (n = 2) and of the core team in IM (n = 6). Of them, 21 people took part in the first panel, and 17 in the second panel.

The objectives of the panels were:

1. to help ensure that the framework adequately covers all the main competencies of IM, and related aspects;
2. to identify aspects of the draft framework that were unclear, were missing or required different wording;
3. to identify the main steps for the framework's implementation.

The first consultation focused on objectives 1 and 2. The framework was then revised according to the feedback and presented again to the second panel. The second panel was devoted to discussions on objective 3.

Participants gave oral consent to be video-recorded.

Competency framework

The competency framework comprises four domains that group specific competencies, namely:

1. first domain: *Infodemic management*, competencies in infodemiology;
2. second domain: *Prepare and monitor*, competencies in the use of effective tools to listen to target audiences and how to design and share appropriate information;
3. third domain: *Detect and intervene*, competencies to design, implement and evaluate interventions to promote resilience to mis/disinformation and to empower individuals and communities to exercise their right to access quality health information;
4. fourth domain: *Strengthen*, competencies to empower health systems to ensure healthier populations through better IM in health emergencies and in regular contexts.

For each activity, the related tasks, knowledge and skills needed to best perform the activities themselves are presented.

DOMAIN (1)	1. INFODEMIC MANAGEMENT
COMPETENCY STATEMENT	Infodemic managers apply IM and the science of infodemiology to public health policies, programmes and practice
ACTIVITIES	**1.1 COORDINATE, FACILITATE AND STRENGTHEN**
Objective	Promote and facilitate implementation of IM within institutions
TASKS	♦ Develop or adopt a taxonomy of classifications for mis/disinformation as a reference framework for IM ♦ Promote and ensure coordination among the different domains and tasks of IM ♦ Promote multi- and interdisciplinary approaches to the different tasks of IM ♦ Promote the development, adaptation and application of tools for IM ♦ Share knowledge and experience on IM within professional networks and with key partners ♦ Take part in global initiatives on IM ♦ Develop partnerships with organizations that are active in IM ♦ Promote ethical conduct in IM to avoid the spread and propagation of harmful health information, as well as unintended harm from all actions
KNOWLEDGE OF:	♦ infodemiology (understanding and approaches) ♦ IM (theories, methods, tools, strategies and processes) ♦ public health (history of public health and best practice) ♦ communication science (from interpersonal to mass communication) ♦ behavioural and cognitive science ♦ implementation science ♦ knowledge translation ♦ organizational management ♦ quantitative and qualitative research methods ♦ regulatory and ethical principles for IM ♦ project management
SKILLS **Ability to:**	♦ strengthen and develop all main IM processes within institutions ♦ identify and apply standards for ethical conduct in IM ♦ build a network of partners for coordinated IM ♦ update an institution's work with the latest evidence-based ♦ recommendations on IM

DOMAIN (2)	2. PREPARE AND MONITOR
COMPETENCY STATEMENT	Infodemic managers demonstrate that they can use effective tools to listen to target audiences and have the skills to design and share appropriate information
ACTIVITY	**2.1. LISTEN**
Objective	Listen, identify and understand population gaps, needs, behaviours and their determinants to develop more responsive health programmes
TASKS	◆ Analyse and evaluate individuals' behaviours, focusing on personal, social and environmental determinants ◆ Identify people's topics of interest ◆ Recognize emotional language ◆ Detect information deficits and open questions in the offline and online populations ◆ Identify, analyse and evaluate the evidence-basis of the main narratives and claims over health issues circulating in the population ◆ Analyse and evaluate signals from the infodemic monitoring activity for relevance and appraise risks to behaviours ◆ Provide evidence-informed recommendations for priority follow-up actions on detected high-risk signals ◆
KNOWLEDGE OF:	◆ quantitative and qualitative research methods ◆ theories and models of behaviour and behaviour change from an ecological perspective ◆ risk communication ◆ national health information systems, national statistics and databases, public health data and related sources ◆ research methods and data collection tools to identify people's needs, concerns, beliefs, knowledge and attitudes ◆ social listening and social media monitoring tools ◆ argumentation theory and persuasion research ◆ narratology and the rhetoric of narratives ◆ data triangulation from multiple sources ◆ metrics to measure and quantify infodemics ◆ classifications and analytical approaches to assess the risk levels of an infodemic and to identify priorities for action
SKILLS **Ability to:**	◆ identify mis/disinformation ◆ utilize research methods, social listening and social media monitoring tools and methods to collect data (online and offline) on an infodemic ◆ apply analytical and evaluative frameworks to assess the quality and the risk of mis/disinformation to behaviours ◆ identify targets for IM interventions within an ecological behavioural perspective
ACTIVITY	**2.2. INFORM**
Objective	Proactively share accurate, credible and appropriate information with target audiences to increase awareness, to build and strengthen health literacy, and to promote healthy behaviours on health issues

TASKS	♦ Develop and tailor messages for different populations, utilizing appropriate communication strategies, communication media and channels ♦ Pretest messages among target populations ♦ Measure the effectiveness of messages ♦ Partner with medical associations and nongovernmental organizations that are influential online and offline to target different stakeholders in the health system ♦ Partner with traditional and social media and tech companies to push messages to target populations ♦ Work together with spokespersons ♦ Interact with the media ♦ Promote credibility and trust in health authorities and service delivery
KNOWLEDGE OF:	♦ public health (history of public health and best practice) ♦ science literacy ♦ theories, models and strategies of personal, interpersonal, group and mass communication ♦ theories and approaches to communication for behaviour change ♦ theories and approaches for marketing (including the choice of appropriate communication channels and the use of specific single or combined communication approaches) ♦ narratology and the techniques of building narratives ♦ theories, models and strategies of risk communication, persuasion and advertising ♦ techniques of knowledge dissemination and scientific journalism ♦ theories, models and strategies: ♦ to promote health literacy ♦ to build and promote trust in, collaboration with, and respect for institutions and their services ♦ to build community engagement through different levels of engagement activity ♦ content development platforms ♦ content distribution platforms ♦ roles, tasks and strategies for communication by spokespersons ♦ communication strategies to get health information to the media and engage with them, to meet their needs, to promote two-way communication with them and to respond to media regarding errors, myths and misperceptions ♦ content syndication, synchronization and information-sharing between response organizations with or without joint activities ♦ research methods for message testing and impact evaluation
SKILLS **Ability to:**	♦ use theoretical insights and research findings to tailor health communication and dissemination of health information ♦ use theoretical insight and research findings for communication targeting behaviour change ♦ use research methods to pretest messages for relevance, readability, comprehension and potential impact ♦ use communication tools to maintain, promote and build trust in health institutions ♦ communicate with the media and have the right messages presented by the media ♦ empower spokespersons to speak on behalf of institutions ♦ share and benefit from insights from partner or other health institutions with expertise in public health communication and information

DOMAIN (3)	3. DETECT AND INTERVENE
COMPETENCY STATEMENT	Infodemic managers design, implement and evaluate interventions to promote resilience to misinformation and empower individuals and communities to exercise their right to access quality health information
ACTIVITY	**3.1. INTERVENE**
Objective	Empower individuals and communities to mitigate the harm of mis/disinformation
TASKS	♦ Define the knowledge or behaviour objective of the single intervention or of the multiple interventions, and the target populations ♦ Identify barriers to and facilitators of the planned objective in the target population ♦ Define a model of change and clarify processes which will be used to assess the efficacy of the intervention ♦ Define the various levels the intervention covers, from policy and health system to community and individual levels ♦ Identify and establish partnership with stakeholders ♦ Design the interventions (beyond messaging) ♦ Produce the interventions and implement them

KNOWLEDGE OF:	♦ public health (history of public health and best practice)
	♦ quantitative and qualitative research methods
	♦ science literacy
	♦ health literacy (different levels of functional literacy, of literacy in the main public health areas, of critical literacy and health literacy disparities)
	♦ theories, models and best practice in:
	    ○ social marketing
	    ○ health campaigns
	
	♦ frameworks to define the objectives of awareness and behavioural interventions
	♦ strategies to identify and segment the target population
	♦ research methods to analyse target populations' knowledge, beliefs, attitudes and other determinants of behaviour
	♦ strategies to identify populations' preferred communication channels
	♦ the principles of participatory and human-centred design with early involvement of people from the target audience
	♦ the principles of design for public health multilevel interventions, especially theories and methods for:
	    ○ user-rich experience, usability and interface design
	    ○ social inoculation interventions
	    ○ health/digital literacy education
	    ○ crowdsourced fact-checking and participatory mapping of misinformation
	
	♦ systematic literature searches for similar or related interventions in the field
	♦ media literacy
	♦ knowledge translation techniques

SKILLS **Ability to:**	♦ Develop and implement interventions that address individual, community, cultural and societal-level factors affecting trust and resilience to misinformation

ACTIVITY	3.2 COUNTER
Objective	Offer corrections in a timely way that match how the mis/disinformation is spread
TASKS	♦ Track mis/disinformation, check facts and trends over time ♦ Build or strengthen reporting tools and processes to identify mis/disinformation ♦ Build or strengthen tools and processes for rapid analysis of mis/disinformation ♦ Work in partnership with stakeholders to identify and share mis/disinformation rapidly ♦ Actively and proactively react to identified mis/disinformation in a timely way
KNOWLEDGE OF:	♦ taxonomy of classifications of mis/disinformation ♦ approaches and methods for fact-checking, including crowdsourced fact-checking ♦ fact-checking platforms (which ones exist and how they function) ♦ approaches and methods for pre-bunking and debunking ♦ analytical and evaluation frameworks to identify pitfalls in countering misinformation, especially grounded in argumentation theory and persuasion research ♦ theories, models and strategies to produce effective response communication *(see activity 2.2 Inform)*
SKILLS Ability to:	♦ Develop and utilize standard operating procedures to collect, analyse and correct misinformation on various levels, including clear roles and responsibilities ♦ Build and strengthen coordinated work with partner organizations and stakeholders to act on mis/disinformation in a timely way

ACTIVITY	3.3 MONITOR
Objective	Measure the impact of interventions and countering/correction strategies
TASKS	♦ Collect and collate data related to interventions and messages ♦ Estimate the impact of the interventions ♦ Transfer the findings of interventions to improve mis/disinformation correction and management
KNOWLEDGE OF:	♦ public health (history of public health and best practice) ♦ impact and outcome evaluation methods and techniques ♦ methods to develop indicators or proxies to measure the impact and outcomes of interventions ♦ methods and techniques for quantitative and qualitative data collection ♦ methods and tools for community reporting and feedback ♦ research findings from related impact and outcome studies ♦ knowledge translation techniques to build recommendations ♦ evidence-informed policy-making kits and tools

SKILLS Ability to:	♦ Design and conduct impact studies ♦ Implement and evaluate interventions in terms of efficacy and overall impact ♦ Reflect on the results of interventions to refine overall institutional strategies against infodemics

ACTIVITY	3.4 SUPPORT
	Support individuals' and communities' resilience against mis/disinformation
TASKS	♦ Design, implement and evaluate interventions to build and strengthen resilience against mis/disinformation, tailored to individual communities and vulnerable populations ♦ Strengthen individual and community involvement and leadership in IM, including participation in finding solutions ♦ Measure community involvement and empowerment ♦ Integrate measures for infodemic resilience into health system standard reporting processes
KNOWLEDGE OF:	♦ the theories, methods and tools for community engagement and participatory design ♦ the determinants of health behaviour ♦ the determinants of vulnerability risks ♦ health literacy (different levels of functional literacy, of literacy in the main public health areas, of critical literacy and health literacy disparities) ♦ social marketing ♦ methods to develop and support community risk, exposure and resilience indices ♦ human-centred approaches to the design of infodemic interventions ♦ methods to strengthen, build and measure trust between individuals, communities and health institutions
SKILLS Ability to:	♦ Identify targets for interventions to build and strengthen resilience against mis/disinformation ♦ Use frameworks and research methods to build and evaluate interventions to strengthen individuals' and communities' resilience against mis/disinformation ♦ Use theories, frameworks and strategies of communication to build or reinforce trust in institutions

DOMAIN (4)	4. STRENGTHEN
COMPETENCY STATEMENT	Infodemic managers strengthen health systems to ensure healthier populations through a better IM in health emergencies and in regular contexts
ACTIVITY	**4.1. PREPARE**
Objective	Ensure that data-based insights and lessons learned from interventions are applied to prepare health systems with planning, processes and policies for IM
TASKS	♦ Promote building, revision and adoption of policies for IM ♦ Embed IM modules and indicators in all relevant aspects of the public health response ♦ Support and promote interdisciplinarity in institutions' IM ♦ Develop and strengthen partnerships and alliances with academia, research community and practitioners including the technological sector, medical associations and community leaders
KNOWLEDGE OF:	♦ theories, methods and tools for advocacy in IM ♦ models and formats of policy briefs for the synthesis of evidence ♦ knowledge translation ♦ models and approaches for multidisciplinary and interdisciplinary collaboration and communication ♦ scientific paper writing and research dissemination to lay audiences ♦ political sciences
SKILLS **Ability to:**	♦ synthesize and present existing evidence and guidance from IM findings for specific country contexts ♦ apply principles and tools of knowledge translation from IM findings to empower and reinforce health systems in IM ♦ promote interorganizational work and collaboration

ACTIVITIES	**4.2 ONGOING MONITORING AND STRATEGY REFINEMENT**
Objective	Implement regular and nimble feedback and a refinement process to adapt to the changing needs of the target populations
TASKS	♦ Build or strengthen data collection mechanisms to monitor changes in population needs longitudinally ♦ Identify and address gaps in IM programme design and service delivery ♦ Use implementation research evidence in programme improvement and policy development ♦ Document IM processes, analyses and outputs for future use ♦ Promote shared interventions and approaches between countries, including the assessment of factors affecting the transferability of interventions
KNOWLEDGE OF:	♦ quantitative and qualitative research methods ♦ implementation science ♦ knowledge translation ♦ research design and methods for longitudinal data collection ♦ strategic institutional development ♦ organizational management ♦ project management ♦ documentation and reporting tools and methods

SKILLS Ability to:	♦ design and evaluate longitudinal studies on individual and community needs and behaviours ♦ identify strengths and limitations in institutions' IM programmes and procedures ♦ translate the findings from IM interventions and best practices to strengthen institutions' strategies ♦ collect, synthesize and transfer the findings from partners or other relevant institutions

ACTIVITY	4.3 BUILDING CAPACITY
Objective	Build IM capacity within institutions
TASKS	♦ Seize on the role of being an educator and support capacity development of colleagues on IM ♦ Assess IM training needs within the institution ♦ Set organizational training objectives and create training action plans ♦ Define and plan for internally provided or outsourced training ♦ Implement training initiatives ♦ Evaluate and revise training ♦ Integrate infodemic training within the main processes and services for employees of the institution ♦ Partner with organizations and institutions that are active in educational and training programmes on IM ♦ Empower relevant external spokespersons or professional staff, including health professionals, through training in techniques and approaches to manage mis/disinformation and answer the public's questions ♦ Establish relationships with the media
KNOWLEDGE OF:	♦ infodemiology and IM ♦ methods and tools for institutional competence assessment ♦ identification of SMART learning objectives ♦ the principles and techniques for adult learning and professional training ♦ methods and techniques for training evaluation ♦ models and best practice for interacting and building collaboration with stakeholders ♦ capacity-building ♦ human resource management
SKILLS Ability to:	♦ identify relevant topics, needs and gaps within institutions for IM training ♦ build institutional relationships with relevant stakeholders (from professional categories to the mass media) ♦ use the theories, methods and principles of professional learning to design, implement and evaluate training in infodemiology and IM within the institution

Implementation and next steps

The expert group also discussed the use and implementation of this framework. The expert reflection resulted in the following considerations for implementation.

First, it is important to highlight that this framework is not intended to be a regulatory document nor a training curriculum. Rather, it can be used as a reference tool when planning IM capacities, training or teams and should be applied locally according to the local context and needs.

When applying the framework to the local context, some competencies outlined in this document may not be relevant for some work environments, depending on factors such as capacity and resources. For users in such settings, the framework can provide a basis for scaling up IM competencies whenever additional needs are identified and resources made available. Also, depending on local needs, additional competencies, such as proficiency in certain languages, may also be required.

It is also worth noting that the competency statements are broad by definition and they are not sufficiently detailed to provide a direct basis for specific training curricula. Users that aim to develop job descriptions for hiring and staff development, human resource planning, training needs assessments and education and training programmes should first break down the competency statements into finer levels of detail to uncover the required objectives within their specific organization and processes.

Second, this framework proposes a rational structure to separate domains and activities, but other models are possible. Users are invited to decide how to assemble the competencies to tailor the use of the framework according to their needs.

In light of this, this framework does not prioritize between competencies, nor does it highlight links between the activities, as this is also strongly dependent on the local organization and availably of resources that each institution has at its disposal. However, the competencies presented in the framework differ significantly in terms of the knowledge and skills required, suggesting a need to build an interdisciplinary team capacity.

Third, within the scope of general implementation, the framework in its first iteration should undergo a period of implementation by Member States, partners and other stakeholders.

WHO will use this framework to develop training curricula and programmes through the WHO Academy, which will deliver internationally certified micro-skill certificates to health workers globally. The framework will be evaluated on a rolling basis to review the implementation and reflect on lessons learned from it and the practice of IM. The competence framework revision should also incorporate ongoing lessons learned from the practice of IM, infodemiology and pandemic response.

Overall, the full implementation of this framework will need an approach beyond the health system and public health practice; for example, in the media and journalism, in civil society and others. The framework could be adapted for use in other sectors and parts of society, as a complement to the public health perspective in this document. In addition, the framework can be adapted and applied to the education sector to enhance the active educational and school-based response towards a "culture of resilience" to infodemics.

Annex 1: Participants

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Annex 2: Interview instruments

A) Interview guide for participants from the Academy:

A. WARMING UP

1. Do you think that the provision of institutional health information to individuals and communities about COVID-19 was and is problematic? Why?

2. What do you see as the strengths and limitations of institutional engagement with the public about COVID-19?

3. Do you have specific examples in mind of optimal/suboptimal types of institutional engagement in the context of specific countries?

B. INFODEMIC

1. Have you heard the term "infodemic" (used by WHO). If so, in what context?

2. Infodemic refers to an abundance of health information and health mis/disinformation. Do you think that the infodemic is a problem? Why?

3. Do you have any evidence of potential harm that the infodemic may have contributed to in your country or other specific countries?

4. What are, in your view, the specific populations that are particularly vulnerable?

5. Moving to infodemic management activities:

   ❖ Do you have any specific strategies for monitoring the infodemic? Do you have any strategies for health message design and implementation? Do you have specific strategies for evaluating the impact of your institution's health messages?

C. INSTITUTIONAL ENGAGEMENT TOWARDS HEALTH BEHAVIOUR CHANGE

1. What do you see as the main strategies for addressing and influencing health behaviour? Do you have specific strategies to address and influence the health behaviour of individuals and communities?

D. INSTITUTIONAL MANAGEMENT OF INFODEMICS

1. If you were to advise institutions to invest in resources to manage communication/infodemics:

   ❖ what disciplines could provide the main guidance on empowering the infodemic response and increasing resilience to an overabundance of health information and health disinformation?
   ❖ what competencies do you think would be most valuable?
   ❖ what type of job positions would you envisage and what job profiles would need to be skilled up?
   ❖ what training in which fields/specific topics would you recommend for optimal public health responses?

E. FINAL

1. Is there any other topic/issue that you would like to address about infodemic management to strengthen institutions?

B) Interview guide for participants from health institutions

A. WARMING UP

1. COVID-19 is linked to an overload of information, including misinformation and disinformation (for example, fake news and conspiracy theories). Did you or are you experiencing problems with this?

2. Can you think of any example where your institution had to deal with, or has been impacted by, disinformation? If yes, can you recall the case and what did you do to manage it? If not, do you have examples in mind outside your institution and in your country?

3. What do you think are the past and current major challenges in engaging with the public about COVID?

4. In terms of communication/engagement with the public, what have you learned from the past 10 months that you find valuable today?

B. FOCUS ON THE INFODEMIC

For WHO, "infodemic" refers to the abundance of health information and health mis- and disinformation. In order to manage infodemics, in your institution:

1. Do you know/use measures to listen to and understand the population's information needs?

2. How do you design the messages for the public?

3. Do you use/know theories or models for behaviour change? How do you engage with your community?

4. When you see instances of mis/disinformation that can impact your community, do you have strategies and tools to correct it in a timely way?

5. Do you have a system in place to monitor the impact of your communication and community engagement?

6. How do you build, maintain or restore trust with your audience? How can health institutions do this?

7. How do you strengthen community empowerment and how do you support individual and community resilience to mis/disinformation?

C. PREPAREDNESS OF HEALTH INSTITUTIONS

1. Before COVID-19, did your organization have any infodemic management capacity to address health issues?

2. During COVID-19 did your institution build or reinforce a structure to deal with health communication, especially considering the risks linked to the infodemic? Did your institution increase resources to manage the infodemic? Were new people employed?

3. How many people work on communication and information management and community engagement? Is this number enough to deal with these tasks? If not, which additional resources would you consider important, with what backgrounds and job profiles?

4. Did existing employees receive specific training in this field? If there was any training, was this provided by people working internally or it was outsourced to external trainers?

5. In managing the infodemic does your institution work in partnership with other institutions and organizations, or with other stakeholders (e.g. social media platforms)? If yes, is this collaboration beneficial and why?

6. How do you deal in your institution with the fact that scientific evidence changes rather fast, that scientists/health practitioners often disagree? Does this disagreement also have an impact on your employees and colleagues?

E. FINAL

1. Is there any other topic/issue that you would like to address about institutional engagement and management of the infodemic in order to strengthen institutional efforts?

Annex 3: Summary of the review of declarations of interest by participants

Final number of participating experts: 17 (non-WHO) experts

Final number of experts with disclosed interests: None

The Global Infectious Hazard Preparedness department, within the WHO Health Emergencies Programme, organized a virtual meeting of the Working Group to discuss the draft Infodemic Management Competency Framework, on 26 January and 1 February 2021.

In accordance with WHO policy, all the participants who are not UN staff or not working for government were asked to complete the WHO form for Declaration of Interests for WHO Experts before attending the meeting. These declarations were then evaluated by the WHO Secretariat prior to the meeting. All the participants who submitted the form declared no personal or financial interests.

At the start of the meeting, the summary of the declarations of interest by the expert members were disclosed to all participants.

World Health Organization | *infodemic* MANAGEMENT