



WHO global conference on communicating science during health emergencies, Geneva, Switzerland, 7–25 June 2021 (virtual meeting)

Meeting report



World Health
Organization

WHO global conference on
communicating science
during health emergencies,
Geneva, Switzerland,
7–25 June 2021 (virtual meeting)

Meeting report

WHO global conference on communicating science during health emergencies, Geneva, Switzerland, 7–25 June 2021 (virtual meeting): meeting report

ISBN 978-92-4-004476-0 (electronic version)
ISBN 978-92-4-004477-7 (print version)

© World Health Organization 2022

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: “This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition”.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

Suggested citation. WHO global conference on communicating science during health emergencies, Geneva, Switzerland, 7–25 June 2021 (virtual meeting): meeting report. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Illustrations by Sam Bradd

Contents

Acknowledgements	v
Executive summary	vi
Conference background and objectives	1
Opening plenary	3
Opening speeches	3
Keynote speeches	3
Themes and challenges emerging from the keynote talks	4
Thematic sessions	5
Track 1: Engaging in science communication during health emergencies as a researcher	5
Challenges and solutions discussed during the themed sessions	5
Track 2: Connecting science and media during health emergencies	6
Challenges and some solutions discussed during the themed sessions	7
Track 3: Science communication during health emergencies for and by decision-makers	8
Challenges discussed during the themed sessions	8
Track 4: Perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education	10
Challenges and solutions discussed during the themed sessions	10
Proposed actions for WHO and partners that the themed discussions yielded	11
Develop trusted relationships and communication environments	11
Strengthen the public understanding of science	11
Use innovative and inclusive communication strategies	11
Closing plenary	13
Opening speech	13
Keynote speeches	13
Innovative science communication concepts	13
Thematic discussions reporting	14
Closing speech	14
Next steps to promote science communication during health emergencies	14
Declaration of interests	14
Funder	14
Annexes	15
Annex 1: Participants	16
Annex 2: Meeting programme	21

Acknowledgements

This report is the outcome of the World Health Organization (WHO) global conference on communicating science during health emergencies, which took place from 7 to 25 June 2021. This document was produced by the Secretariat of the WHO Information Network for Epidemics (WHO EPI-WIN) in Geneva, Switzerland.

The conference was organized by Ramona Ludolph and Judith van Holten of the WHO EPI-WIN Secretariat under the leadership of Tim Nguyen, Unit Head, High Impact Events Preparedness Unit. Their work was directed by Sylvie Briand, Director of the Department of Epidemic and Pandemic Preparedness and Prevention.

WHO gratefully acknowledges the contributions of the themed discussion participants who shared their experiences and perspectives on science translation during health emergencies. A full list of conference participants can be found in Annex 1.

Special thanks is due to the external speakers who presented at the conference: Kamran Abbasi, Prince Agwu, Marco Bardus, Fergus Bell, Vitalba Crivello, Charles Ebikeme, Mohamed Elsonbaty, Alexandra Freeman, Fatuma Guleid, Francesca Hartley, Alice Hazelton, Atila Iamarino, Mirjam Jenny, Malia Jones, Tamar Kabakian, Kai Kupferschmidt, Jihad Makhoul, Adeline Marcos, Naomi Lee, Lindsey Leininger, Shamila Nair-Bedouelle, Ann Ngengere, Alex Njeru, Vera Novais, Elizabeth (Lizz) Ntonjira, Radhika Patnala, Julien Schekter, Aurelie Skrobik, Tom Trewinnard, Mikhail (Doctor Mike) Varshavski, Carmen Valle, Kasisomayajula Viswanath, Siouxsie Wiles and Ann Wilhoite.

The EPI-WIN Secretariat is grateful for the support of WHO colleagues in regional and country offices who contributed to the discussions and provided technical input to the conference programme: Shereen Ayub, Supriya Bezbaruah, Philippe Henri Borremans, Domingas Da Silva, Tamer El Maghraby, Veneza Ferreira, Rana Hajjeh, Inas Hamam, Elisabeth Hasan, Yvan Hutin, Faiha Ibrahim, Olha Izhyk, Aishath Thimna Latheef, Hendra Manafe, Ahmed Mandil, Zaina Nazim, Kimberley Rambaudo, Rayyan Sabet-Parry, Cristiana Salvi, Aminata Seydi, Sarah Tyler, Sara-Jayne Terp, Simon van Woerden and Sonoor Verma.

The EPI-WIN Secretariat wishes to acknowledge the contributions of WHO colleagues at headquarters who facilitated discussions during the conference and provided technical support: Zerthun Alemu Belay, André Buell, Christine Czerniak, Melinda Frost, Petros Gikonyo, Jamie Guth, Sarah Hess, Vicky Houssiere, Jaya Lamichhane, Jianfang Liu, Shi Han Liu, Alexandra Leigh Mcphedran, Avichal Mahajan, Lynette Phuong, Samira Rahmatullah, Shiva Raju, Romana Rauf, Katherine Sheridan, Sally L. Smith, Heather Saul, Aicha Taybi and Tamar Zalk.

This report was drafted by Mark Nunn, Judith van Holten and Ramona Ludolph.

Executive summary

In June 2021, WHO EPI-WIN organized a conference to discuss the challenges and good practices in health science communication during the COVID-19 pandemic. It was intended for everyone involved in science communication, such as scientists, decision-makers, journalists, and professionals working in social media, culture and education.

The conference set out:

- to present innovative science communication concepts for researchers; science and the media; and translating science into action;
- to convene representatives of the multidisciplinary science communication community to map and address the science translation-related challenges of the COVID-19 pandemic and exchange experiences;
- to identify good practice examples of innovative science communication during the pandemic to inform the development of a set of principles for effective science communication during public health emergencies; and
- to create a multidisciplinary network of “science communicators” that can be called upon for future science communication activities.

Participants came from a wide spectrum of organizations, with representatives of research, policy, civil society and international organizations participating alongside freelancers, independent science communicators and influencers.

In addition to the opening and closing plenaries of the conference, themed discussion sessions with a limited number of experts were organized along four tracks:

- Track 1: engaging in science communication during health emergencies as a researcher
- Track 2: connecting science and the media during health emergencies
- Track 3: science communication during health emergencies for and by decision-makers
- Track 4: perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education

After three weeks of structured conversations, the conference had created a strong case for the huge potential impact of science communication on people’s responses to the COVID-19 pandemic and future health emergencies. The challenges encountered and lessons learnt highlighted in the discussions can be summarized into three themes, which are detailed in this report.

First, there is a widespread need to improve scientific literacy among all audiences. This entails improving the communication of how science works, what it can and cannot do. The generation of scientific knowledge takes time, is built on debate, evolves over time and has an inextricable relationship with uncertainty. It is important to explain scientific processes to policy-makers, journalists and the public to manage their expectations and build and maintain trust in science when evolving evidence causes public health recommendations to change.

Second, communicators should listen more to the concerns, beliefs, and needs of their audiences. Regular involvement of communities in the production and communication of health science ensures that the information they receive is relevant, understandable, and credible. This dialogue helps to build trust in science and encourages people to ask questions and voice concerns.

Third, communicating science effectively requires creativity and innovation. People consume information on different channels, at different times and in different formats. Different target audiences need scientific information presented in ways that resonate with them and add to their lives in a meaningful way. Good science communication will guide them to engage in preventive measures and critically reflect on health information instead of adding to the overwhelming amount of information disseminated during a health emergency.

Conference background & objectives



Since the beginning of the COVID-19 pandemic, evidence about the virus has been evolving continuously. As scientific and public understanding of the pandemic has changed, recommendations and response measures have changed with it.

The pandemic has highlighted how much science and evidence-based public health measures can affect people's lives on a daily basis. Journalists, health-care workers, religious leaders, teachers, and many others had to become science communicators to effectively fulfil their professional roles. At the same time, researchers were requested, on an unprecedented scale, to transparently communicate their results and explain the underlying scientific process. Recognizing the challenge and importance of making science accessible and understandable to all, WHO EPI-WIN organized a global conference on communicating science during health emergencies from 7 to 25 June 2021. The insights from the conference will feed into the development of guidance for effective science communication during health emergencies.

The conference also set out:

- to present innovative science communication concepts in the areas of (a) science communication for researchers; (b) science and the media; and (c) translating science into action for decision-makers and professionals in health, education and culture;
- to convene representatives of the multidisciplinary science communication community to map and address the challenges of the COVID-19 pandemic;
- to exchange experiences;
- to identify and collate good practice examples of innovative science communication during the pandemic to inform the development of a set of principles for effective science communication during public health emergencies; and
- to create a multidisciplinary network of "science communicators" that can be called upon for future science communication activities.

Participants included science communicators from a range of disciplines such as research, health, education, journalism, social media, and culture. They came from a wide spectrum of organizations, with representatives from research, policy, civil society, and international organizations participating alongside freelancers, independent science communicators, and influencers.

Format of the conference

The conference took place over three weeks, with public opening and closing plenaries open to anyone who registered online. These sessions were recorded and simultaneously translated into French and Spanish, and are available online via the [conference website](https://www.who.int/news-room/events/detail/2021/06/07/default-calendar/who-global-conference-on-communicating-science-during-health-emergencies)¹.

The opening panel highlighted the importance of science communication during public health emergencies and provided an overview of the main challenges of communicating science faced during the COVID-19 pandemic.

The central part of the conference consisted of a series of discussions open to a number of invited experts, covering predetermined themes set by the WHO Secretariat. The weekly thematic discussions were 90-minute facilitated sessions led by a WHO moderator. The list of participants is provided in the annex.

¹ Conference website: <https://www.who.int/news-room/events/detail/2021/06/07/default-calendar/who-global-conference-on-communicating-science-during-health-emergencies>

The discussions were organized along four tracks:

- Track 1: engaging in science communication during health emergencies as a researcher
- Track 2: connecting science and the media during health emergencies
- Track 3: science communication during health emergencies for and by decision-makers
- Track 4: perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education.

The public closing plenary served to share the key lessons and early conclusions of these thematic discussions. It also showcased a number of innovative science communication concepts submitted following a public call for good practice examples launched by WHO and included two keynote talks on science communication during health emergencies.

Target audience of the report

The report is intended for everyone involved in science communication, including scientists, decision-makers, journalists, and professionals working in social media, culture, and education.



Opening plenary

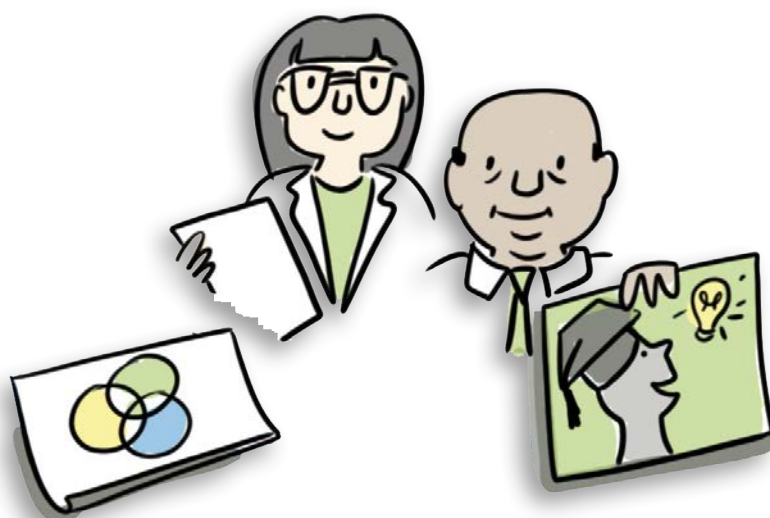
All presentations from the conference plenary can be accessed online via the conference website².

Opening speeches

Dr Tedros Adhanom Ghebreyesus, Director-General, WHO and Dr Sylvie Briand, Director of the WHO Department of Epidemic and Pandemic Preparedness and Prevention, gave speeches that highlighted some of the challenges of communicating science to the public and policy-makers during the COVID-19 pandemic. They recognized that many people around the world have become science communicators during this pandemic, and that they have been using new channels and methods to translate science to their respective target audiences. Teachers, businesspeople, health-care workers, religious leaders and others have all come up with innovative ways to bring science into their everyday lives. Examples are online campaigns or the creation of comic books, songs, games and videos. They also emphasized the need for a better understanding on how to support researchers, policy-makers, media, and other professionals to communicate science effectively in this pandemic and in future health emergencies.

Keynote speeches

In this session, five keynote speakers presented different aspects of science communication. Shamila Nair-Bedouelle, Assistant Director-General for Natural Sciences at the United Nations Educational, Scientific and Cultural Organization (UNESCO), opened with the case for why science journalism is needed now more than ever. K. Viswanath, Professor of Health Communication at the Harvard School of Public Health, compared the communication of science and risk during a pandemic and an infodemic to drinking from a firehose. Siouxsie Wiles of the University of Auckland explained her own role in demystifying the science behind the COVID-19 pandemic and stressed the importance of multidisciplinary collaboration to convey science most effectively to different audiences. Alexandra Freeman, of the Winton Centre for Risk and Evidence Communication at the University of Cambridge, presented a series of lessons on how to carry out trustworthy and useful evidence communication to decision-makers. Science communicator Atila Iamarino gave a presentation about his experiences in Brazil and the struggles of communicating in an environment with a lot of mis- and disinformation, large number of COVID-19 cases, and little official messaging. Throughout the presentations and the discussions that followed, several challenges for science communication began to emerge, along with a range of possible responses and solutions.



² <https://www.who.int/news-room/events/detail/2021/06/07/default-calendar/who-global-conference-on-communicating-science-during-health-emergencies>

Themes and challenges emerging from the keynote talks

Rapid and continuous evolution of scientific information and the infodemic. Science is continuously advancing. However, when new evidence emerges and scientific consensus shifts, advice for the public changes with it. The resulting confusion and uncertainty among the public poses challenges to communicators. An overabundance of (scientific) information, also referred to as an infodemic, competes for the audiences' attention and makes the task of science communication even harder.

Health and science literacy. Low health and science literacy can hinder the uptake and comprehension of high-quality health messages, which in turn may result in low compliance with public health measures. Continuous effort should be made to improve health and science literacy to increase the public's trust in and understanding of science.

Health communication inequalities. Several speakers raised the challenge of inequalities in health communication, which can manifest at multiple levels. At the macro level, health communication inequalities can cause differences in the capacity to generate, process and distribute health information between different groups and institutions. At the individual level, it can cause differences in the ability to access, process, evaluate and translate health information into behaviour. Science communicators should understand the cultural and contextual dimensions of their target audiences and apply these insights to their interventions.

Trusted sources and relationships among stakeholders are key. Across all speakers, a consensus emerged about the importance of longstanding, trusted relationships between communicators and communities. Trust is achieved only through constant dialogue and involvement of key stakeholders and communities. Relationship- and partnership-building outside crises is an important part of preparing the ground for communication in a crisis. This is a long-term commitment requiring the regular investment of financial and human resources.

Monitoring and evaluating science communication. The impact of science communication efforts remains unclear without formal monitoring and evaluation – impeding the drawing of lessons learnt and improvement of future communications. Evaluations should be conducted jointly with community members and representatives of the target audience. Speakers discussed establishing communication surveillance networks – in parallel with disease surveillance networks to promote real-time monitoring of the effects of communication interventions.

Open science and open access. Timely and free access to scientific data, publications and information during an emergency is important. Yet, 72% of scientific publications are currently accessible only through paid subscriptions. Platforms that share data freely, as well as the release of accompanying communication materials such as infographics under Creative Commons licences, would decrease barriers to access and facilitate timely translations and adaptations of materials to different situations and settings.

Quality assurance of scientific information during health emergencies. During the pandemic, many scientific articles were available to the media, decision-makers and sometimes public ahead of publication and without undergoing a peer-review process. Research producers need to be clear about this limited quality assurance when communicating their results, research users need to understand the implications and types of scientific quality assurance processes to interpret the validity of results correctly, and research publishers such as journals need to identify innovative solutions combining rapid publication and dissemination with the highest quality assurance possible.

Capacity-building in science translation. Journalists form an important part of the response to health emergencies, and COVID-19 has underlined their role in translating science to journalistic content for the public. More could be done to reinforce the role of science journalists in preparing for future emergencies. Policy responses to improve science journalism could include designing practical training programmes; promoting greater interaction between scientists and other communicators; and providing more financial support for science journalism. Better communication is not just the task of journalists, though. Scientific institutions and academia could place more value on communicating their work. Scientists could be incentivized within their jobs and career development pathways to dedicate time to science translation. Speakers agreed that WHO can help with wider efforts to build national capacity and capability, using its convening power to bring together actors, including the private sector, civil society, communities, and philanthropists around broad-spectrum efforts to build capacity for science communication.

Thematic sessions



Track 1: Engaging in science communication during health emergencies as a researcher

In this track, academic researchers and editors of scientific journals gathered across three sessions to discuss the challenges around communicating science and research during the COVID-19 pandemic.

In the first two sessions, participants discussed the purpose, definition, and stakeholders in charge of science communication along with the challenges in publishing and communicating research during the COVID-19 pandemic. The last session reflected on the challenges affecting science communication during protracted health, social, political, economic and financial crises.

The group defined science communication as:

- presenting scientific facts and findings in a way that the general public can understand;
- ensuring that people have access to the right information when needed;
- preventing the spread of and susceptibility to mis- and disinformation;
- listening to audiences and engaging in two-way communication.

The group noted that the purpose of science communication is to increase the understanding of scientific data and processes, so that people are better able to protect their own health and that of others. With regard to the stakeholder group responsible for science communication, participants agreed that historically, scientists and researchers were expected to translate research findings. However, there was consensus that, increasingly, especially during a health emergency, responsibility for science communication is shared. It lies with researchers, scientists, governments, the media and trusted figures, such as influencers and religious and community leaders.

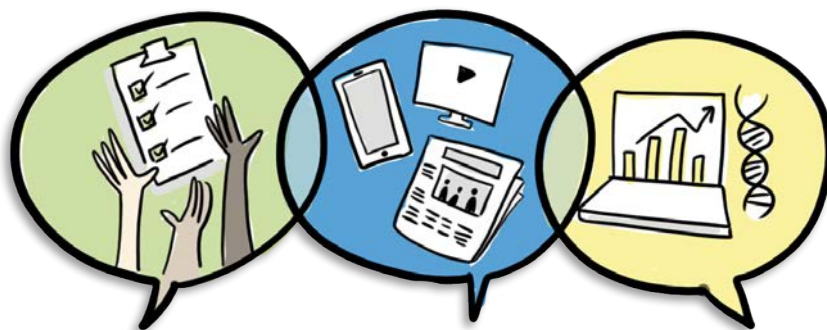
Challenges and solutions discussed during the themed sessions

Ensuring timely publication of research findings while safeguarding high quality. Part of the discussion centred on the role of scientific journals. During the pandemic, journals experienced huge volumes of article submissions. The use of pre-print servers, where authors can publish their work without it first being peer-reviewed and ultra-fast-track review timelines helped to meet the demand for rapid access to emerging results. However, the group acknowledged that these publishing timelines adapted to the emergency situation and the uncertain quality of non-peer-reviewed studies created other challenges for research users. The group proposed that researchers and scientists may need to pass on their methods of critical appraisal to journalists and decision-makers to enable them to judge if the scientific data are of good enough quality to be shared with the public. It remained, however, unclear how journalists should cope with this additional responsibility in view of their own tight timelines and potential lack of scientific expertise to evaluate studies' quality. There was also agreement that increasing the transparency of the scientific and publishing process is important in helping people understand the value of science in decision-making.

Conveying effective messages to broad and varied audiences. The COVID-19 pandemic has highlighted the impact of evidence-based public health measures on people's lives and the importance of ensuring that science is accessible and understandable to all. The group noted that, to achieve effective messaging, most scientific content may need a separate short translation into simple language for lay audiences. Journals can, for example, provide article summaries that explain the added value of the article, limitations, and key findings in plain language. Other ideas included translating science into infographics or other more visual communication materials that require lower scientific literacy levels.

Coordination and accountability of different stakeholders across the research world. The group acknowledged a lack of global coordination and accountability of different stakeholders across the research world. Countless research and publishing activities are taking place around the world, but a lack of coordination means that there are overlaps between the work of different scientists and thus inefficient use of resources.

Scientific literacy in different contexts. The group acknowledged that the pandemic has accentuated social, political, economic, and health inequalities, worsening pre-existing gaps in health literacy and access to health services. When conflict and financial hardship immediately threaten individuals and communities, scientific information and the perception of risks posed by infectious disease like COVID-19 become secondary concerns. Economic and political conditions impede the adherence to precautions such as wearing masks (which cost money) or physical distancing (where it is impossible for people to work from home or they lack sufficient living space to isolate in case of illness). In situations like these, communicators need a critical understanding of the context and the underlying factors that affect how scientific and health information is perceived and can be implemented.



Track 2: Connecting science and media during health emergencies

This group was composed of media professionals, including freelance writers, editors, directors of media partnership agencies and journals, media health advisors, science journalists and science policy communication experts.

In the first two sessions, participants shared the work and approaches they have used to translate science into journalistic content during the pandemic. They defined science communication in their professional contexts and discussed the challenges of science communication and different ways to address them. The last session reflected on the challenges of countering misinformation.

The group defined science communication as:

- simplifying complex scientific data for public consumption,
- sharing information derived from scientific methods,
- translating health information in plain language,
- helping people engage in protective actions.

Participants agreed that communication must adapt to vastly different contexts around the world and that the media play a crucial role in making science accessible and understandable to the public. Besides, participants agreed on the need to go beyond simply reporting on scientific findings. The journalistic contribution also includes the critical appraisal of scientific findings and the political and economic conditions in which they were produced.

Challenges and some solutions discussed during the themed sessions

Capacity-building activities for science media professionals. The pandemic has increased the demand for the work of science journalists, reporters and publishers. Challenges have included uncertainty about whether and how to report from pre-prints and understanding the nuances of statistics and epidemiology. Participants concluded that training for journalists and other media professionals in a number of these areas is lacking. This relates especially to training for generalist journalists, who may report on scientific issues only during emergencies due to the high demand for coverage and not be trained as science journalists. Participants noted that financial crises heavily affected the media's budget and often led to the laying off of experienced and hence more expensive specialist journalists. It was further concluded that the available training is mostly in English and does not cater for media professionals from non-English backgrounds. Capacity-building should also address areas related to communication itself, including innovation in communication and fact-checking.

Increased interest in science. The pandemic has led to an unprecedented demand for covering scientific issues requiring an increased number of scientific experts for interviews and statements. In addition, many new "experts" on COVID-19 have emerged, sometimes with questionable qualifications. Participants mentioned the difficulty in assessing the level of expertise of these new "scientists" and the challenge to identify trustworthy experts who are willing to be and are trained in talking to the media.

Critical assessment as a key skill for scientific journalism. While discussing the extent of a journalist's duty to assess the quality of the scientific information received, quality control was undoubtedly deemed very important as it directly impacts trust. It was agreed that journalists may not need to be experts on the topic, but they must not be afraid to ask critical questions to research producers. Participants emphasized the need to critically assess any information or statement to provide an adequate interpretation for the public.

Politicization of scientific information. Politicization of scientific information was discussed by participants as an increasingly difficult issue for communicators of all kinds, and particularly for journalists.



Track 3: Science communication during health emergencies for and by decision-makers

This group was composed of decision-makers from a range of different sectors and industries. They included staff of local and national governments and authorities, chief executive officers of media centres, executive directors of linguistic initiatives, media division heads of public institutes, communications and media relations officers, media programme directors, environmental health research officers, and science communicators.

In the first session, participants discussed the purpose and definitions of science communication in their professional context. The following sessions assessed how best to support evidence-informed decision-making during a health emergency, the enabling factors and barriers that influence the uptake of evidence in the decision-making processes and how to build trust with target audiences.

This group defined science communication through its functions, i.e.:

- to convey scientific facts and methodologies of scientific research;
- to foster critical thinking and improve scientific and risk literacy;
- to boost people's decision-making competencies by helping them think critically and independently.

Science communication was also described as a mechanism to increase the trustworthiness of scientific institutions. Significant emphasis was given to the importance of making information available in the local languages and adapting messages to different communities' contexts. Participants also discussed how two-way science communication enables decision-makers to learn about the concerns, information needs and attitudes of the communities they serve – a critical precondition for providing tailored and relevant health information.

As in other tracks, participants in this group concluded that the responsibility for science communication is shared among all relevant stakeholder groups.

Challenges discussed during the themed sessions

Acknowledging uncertainty during emergencies to maintain trust and credibility. A main challenge for many decision-makers has been how to identify accurate information to communicate onward. The scale of the pandemic and the rate at which information emerged or changed made it difficult to develop and communicate coherent policies and messages. Although it is important that any information disseminated should be as accurate as possible, it is also important for communication to take place in a timely matter. In the absence of messages from trusted sources, the information vacuum is quickly filled by less trustworthy messages, including mis- and disinformation. A balance must be struck between communicating accurately and at the earliest in uncertain times. A potential loss of trust among the public can be mitigated by being transparent from the start, acknowledging uncertainty and explaining that decisions may be revised. This may help to maintain confidence in decision-makers as reliable and credible informants when messages might otherwise be perceived as inconsistent.

Developing clear messages and two-way communication. The function of accessing health information and communicating it to different audiences puts additional pressure on decision-makers. Decision-makers must have the critical skills to access and interpret scientific data to develop evidence-based messages. In addition, participants agreed that effective communication must be sensitive to the cultures and psychologies of target communities and conveyed in the local language. In all cases, decision-makers should consult with their audiences, engaging in two-way communication to ensure that decision-making reflects the audience's need.

Communicating scientific contributions from all over the world. It was also suggested that communicators could do a better job of showing the broad influences on scientific discoveries from different cultures. While we hear a lot about Anglo-Saxon and European contributions to medicine and science, often little notice is paid to contributions from other regions and language areas. A reframing of public health measures that acknowledges the historical contributions of communities to the body of health science may improve contemporary communities' acceptance of those measures.

Politicizing scientific knowledge. As elsewhere in the discussions, the politicization of the response to COVID-19 was seen as a challenge. Public communication should seek to separate science from political decision-making. Scientists who work with and advise policy-makers must be sensitive to their needs, but also unafraid to criticize political decision-making when necessary. The group agreed that it is important for science communicators to avoid heated political discussions. Policy-makers may wish to provide clear, simple messages, while scientists may argue that science cannot be perceived as black or white. This tension between clarity and scientific complexity and uncertainty was emphasized as a main challenge to effective communication by the group.

Using central knowledge platforms to identify community needs and communicate science for decision-making. Efficient communication from governments and researchers is crucial to managing epidemics and infodemics, raising awareness and motivating people to engage in protective actions. The group recognized the important role knowledge platforms can play in building trusted relationships among local leaders, health workers and others. Knowledge platforms can promote multisectoral collaboration and the sharing of policy-relevant knowledge generated by national centres working in close collaboration with WHO and other trusted sources or partners. Examples were presented on addressing misinformation with facts and producing videos and other relatable content. Communication materials can then be circulated through partner networks and reappropriated and adapted to meet local needs.

Shifting the paradigm in error cultures in politics and health. The group discussed that the scientific community around the world needs to acknowledge its past failings – especially to communities that have been harmed – and associated injustices. There is a strong need to find and improve ways of communicating learning and improvements based on honest analysis of mistakes without unproductive blaming. This challenge relates to science communication, but also to the more general error culture in politics and health care. Changing the perception of errors from failures into opportunities to learn and improve could reopen communication channels with hard-to-reach communities and promote more effective and trusted science communication in the future. Science communicators can play a vital part in realizing this paradigm change, by explaining how science learns from trial and error and how great advances often come from mistakes rather than planned procedures.





Track 4: Perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education

This track was composed of professionals working in the health, education, travel, and culture sectors – all of whom have close contact with the public in their daily activities and communicated science during the pandemic.

The first session discussed communicating science during the pandemic while protecting one's identity, gaining trust, responding to controversies and identifying the appropriate bearer of information after assessing the context of the audience. The following sessions consisted of presentations by selected participants on how they adjusted their daily jobs to support communication for COVID-19, for instance, by developing serious games to inform about COVID-19 in classrooms or developing psychological guidance to support people from all walks of life. The presentations led to group discussions on challenges as well as proposed solutions, as delineated below.

Challenges and solutions discussed during the themed sessions

Health literacy and limited availability of information in local languages. Many marginalized and vulnerable populations around the world are not reached by mainstream science communication efforts. Information translated into the local languages is not always available. If minority groups are to be properly included in science communication efforts, it is important to have open lines of communication between those groups and the providers of information. Collaborating with local leaders and community representatives who can translate information in a culturally appropriate manner is essential to reaching these populations.

Building relationships outside crises. This group discussed the importance of priming audiences by developing long-standing relationships of trust and ensuring a focus on the “right audience, right message and right time” to maximize audiences’ receptivity to messages in times of crisis. Using these principles can help the development of useful narratives that reach the correct audiences.

Use of plain language communication. The group emphasized that in any language, plain language communication is important. This is not just about avoiding jargon: it is a core discipline that needs more recognition. The change from “social distancing” to “physical distancing” is a good example of shifting to approaches or phrases that can resonate better with audiences. Adopting the approach of reviewing language for its impact in context is essential for trusted and effective science communication.

Critical thinking. Participants called for efforts to build greater understanding of how science works. The group suggested that introducing science and critical thinking early and systematically in school curriculums can help build awareness of scientific processes and rigour and foster the ability to make reasoned and considered decisions. It also helps build skills to counter mis- and disinformation by ensuring that people are better at identifying and evaluating their sources of information.

Dealing with personal threats. The group discussed examples that left some communicators forced to deal with personal threats and internet trolls, especially in contexts where official sources of news are insufficient. Once subjected to this level of scrutiny, every piece of content is likely to be examined, edited or taken out of context. In science training, it is hard to prepare for such a hostile environment in which work in good faith can be turned against the communicator and their families. A neutral approach to potentially controversial topics may help, especially when coupled with a longer-term strategy that prepares to address those issues taking “indirect approaches to controversial topics”, so that audiences are in the right mindset and trust the communicator.

Proposed actions for WHO and partners that the themed discussions yielded



Develop trusted relationships and communication environments

- Build platforms for collaboration and coordination of research activities and exchange of knowledge.
 - Establish multistakeholder collaboration among journalists, science communicators, media professionals, researchers, scientists, and policy-makers at local, regional, and international levels.
- Build and maintain trusted relationships outside of crises with different stakeholders to co-develop and co-create tailored messages.
- Build the trust and credibility of sources.
 - Be transparent on who advises decision-makers and governments, how and when and on what topics. Scientific advisory boards should be diverse enough for people to perceive them as being legitimately representative.

Strengthen the public understanding of science

- Improve science literacy among media professionals and the public.
- Enhance the understanding and transparency of scientific processes, including publication processes.
- Establish an evidence base for effective science journalism, including the evaluation of communication approaches to improve scientific quality in reporting.
- Invest in multilingual capacity-building of science journalism, including on asking critical questions about the quality and circumstances of research production.
- Promote critical thinking by introducing science and critical thinking early in school curriculums. This can help build awareness of the scientific process and rigour and foster the ability to make reasoned and considered decisions.

Use innovative and inclusive communication strategies

- Enhance the understanding and use of different media channels.
- Build communication skills on communicating uncertainties, answering evidence-based policy questions, and scaling up messages for national or regional impact.
 - Establish a culture that accepts that mistakes are opportunities to learn and improve, thereby explaining how science learns from trial and error.
 - Listen to and acknowledge the contribution of communities by displaying the broad influences on

scientific discoveries from many cultures and acknowledge the historical contributions of marginalized communities to health science.

- Avoid politicization of communication. Public communications should seek to separate science from political decision-making.
- Improve and refine communications approaches.
 - Shift away from paternalistic communication styles and towards models that favour two-way conversations to make information more targeted and relatable.
 - In a pandemic, no tool for communication is likely to be perfect. Careful relationship-building is required to develop the best tools and approaches. Strong links with in-country partners are essential because they enable honest feedback about tools still in development and about what information is not out there.
 - Learning can be made easy through serious games.
- Create multilingual glossaries and tools.
 - There is a need for more translation of science into different languages, and for more plain language summaries that reach people in ways they understand.
 - When science communicators work with consumers of health information, this can help improve translation of information for target audiences.
- Deal with difficult or threatening responses to communication.
 - Where necessary, open access to live sessions can be removed and visual material copyrighted to try to prevent people from modifying it.
 - No details of communicators' personal lives should ever be shared online.
 - A neutral approach to potentially controversial topics can help, especially when coupled with a longer-term strategy that prepares to address those topics.



Closing plenary



All presentations from the conference plenary can be accessed online via the conference website³.

Opening speech

Dr Sylvie Briand, Director of the WHO Department of Epidemic and Pandemic Preparedness and Prevention, opened the plenary by emphasizing the significant potential of science communication in responding to the COVID-19 pandemic and future health emergencies. Dr Briand shared some of the reflections from the conference. First, the need to improve understanding among policy-makers, journalists, and the public that the process of developing scientific information is rigorous, thus lengthy, and that the information is prone to uncertainty. Second, the importance of communicators listening to the concerns, beliefs, and needs of audiences, via constant dialogues, to build trust in science and ensure that the information provided is reliable. Finally, the power of creativity and innovation in science communication, which enables people to consume information in befitting ways, tailored to their accessibility, context, language, and literacy levels.

Keynote speeches

In the first part of this session, two keynote speakers gave presentations on their science communication work during the pandemic. Elizabeth Ntonjira, Global Communication Director at Amref Health Africa, presented on rethinking communication and explained a range of core principles (collaborative effort, empowering audiences, diversity and inclusion, prioritization of health and science reporting, need for public-private alignment for communication) in addressing the COVID-19 infodemic. Mikhail "Doctor Mike" Varshavski, an American physician and content creator, then gave a talk on science communication, explaining the lessons from his own work on communicating about COVID-19 to a large online audience. Dr Varshavski revealed that the lack of online presence by physicians and health-care workers is a missed opportunity to reach the billions of online, social media users. Both keynote speakers reinforced a theme that had been stressed throughout the conference: choosing the right content for specific audiences and delivering it through correctly chosen channels, using credible sources, diligent research and fact-checking, are crucial steps. It also means using thought leaders and community champions to deliver messages adapted to context and sensitive to cultural considerations. Barriers to effective communication include a lack of clarity, information overload, and the challenges of communicating at a time when there is competition for attention.

Innovative science communication concepts

This part of the session consisted of three presentations outlining innovative practice examples submitted through a WHO call.

In the first, exploring the theme of finding ways to make content more appealing, Radhika Patnala, Founder and Director of Sci-Illustrate, presented a project that attempts to make the communication of science more interesting by using art. She delivered the message that people are more often motivated by curiosity than fear and that communicators need to capture attention and provoke feelings that generate empathy and hold interest.

Lindsey Leininger, Tuck School of Business at Dartmouth College, and Malia Jones, University of Wisconsin-Madison's Applied Population Laboratory, presented on "Dear Pandemic" – a collaborative effort of over 25 women from different scientific fields with the aim of disseminating trustworthy, comprehensive, and timely scientific content about the pandemic to lay audiences on social media; and promote media and science literacy, equipping readers to manage the COVID-19 infodemic better within their own networks. Some reflections from the project are that providing analogies, examples, visuals as well as storytelling are useful when communicating abstract and difficult topics such as the pandemic; and that trust builds the foundation of science communication.

³ <https://www.who.int/news-room/events/detail/2021/06/07/default-calendar/who-global-conference-on-communicating-science-during-health-emergencies>

The final presentation in this session came from a story in a children's storybook on COVID-19 called *My hero is you*, in which a child wakes up in a changed world, meets an imaginary character and travels the globe learning to cope with the stresses of the pandemic. It was presented by Fahmy Hanna of WHO and Ann Wilhoite of the United Nations Children's Fund (UNICEF). The book is aimed at children aged 6–11 years and was developed by the Interagency Standing Committee (IASC) on mental health and psychosocial support (MHPSS) in emergency settings. The book is available in 143 different language versions in over 50 accessible formats.

Thematic discussions reporting

Charles Ebikeme, Mohamed Elsonbaty, Francesca Hartley and Mirjam Jenny reported back on the insights from the thematic discussions of the conference.

Closing speech

Ramona Ludolph, Technical Officer, WHO, closed the session by re-emphasizing that science communication is a key tool in the fight against the COVID-19 pandemic and future health emergencies. She stated that there is a need to ensure that science becomes relevant, accessible and understandable to everyone, using innovative technologies and ideas. She reminded the participants that the discussions throughout the conference have shown that science communication requires listening to the audiences and adapting communication to their concerns, values, and beliefs, to provide them with meaningful and tailored support. It also requires rethinking existing scientific processes to ensure that research is shared in a timely manner, but that it still undergoes quality control and scientific debate.

Next steps in order to promote science communication during health emergencies

- WHO will work to build a global platform for knowledge exchange on science communication by maintaining and expanding the network of science communicators from all around the world who convened for this conference. A continuous dialogue with researchers, media representatives, decision-makers, and professionals working in health, education, culture, and tourism will help to identify and address challenges in a concerted, collaborative manner.
- WHO will work to develop capacity-building resources for science communicators, especially journalists, to empower them to judge the quality and independence of scientific research and share it with their audiences.
- WHO will work to strengthen scientific and health literacy among the public, helping to empower them to ask critical questions about the information they encounter both on- and offline and make evidence-informed decisions about their health.
- WHO will work to analyse existing good practice examples of science communication to understand what works and what does not work, in order to develop more effective, innovative science communication concepts for the future.

Declaration of interests

Participants in the thematic sessions were nominated through WHO's science communication network, with care taken to ensure gender balance and global representation. Each participant in the thematic sessions as well as the speakers in the opening and closing plenaries completed the WHO Declaration of Interest form. Potential conflicts of interest were assessed and no significant interests were identified.

Funder

Funded by WHO.



Annexes

ANNEX 1

Participants

Speakers at the opening plenary, 7 June 2021 (in order of appearance)

Tedros Adhanom Ghebreyesus

Director-General
World Health Organization
Switzerland

Sylvie Briand

Director, Department of
Epidemic and Pandemic
Preparedness and Prevention
World Health Organization
Switzerland

Shamila Nair-Bedouelle

Assistant Director-General
for Natural Sciences
UNESCO
Switzerland

Kasisomayajula Viswanath

Lee Kum Kee Professor of
Health Communication
Harvard T.H. Chan School
of Public Health
USA

Siouxie Wiles

Associate Professor Faculty of
Medical and Health sciences
University of Auckland
Te Whare Wānanga o Tāmaki
Makaurau, New Zealand

Alexandra Freeman

Executive Director of the
Winton Centre for Risk and
Evidence Communication
University of Cambridge
United Kingdom

Atila Iamarino

Social media science
communicator and biologist
Brazil

Speakers at the closing plenary, 25 June 2021 (in order of appearance)

Sylvie Briand

Director, Department of
Epidemic and Pandemic
Preparedness and Prevention
World Health Organization
Switzerland

Elizabeth Ntonjira

Global Communication Director
Amref Health Africa
Kenya

Mikhail Varshavski

Board-certified family medicine
physician and content creator
USA

Radhika Patnala

Sci-Illustrate founder and director
Germany

Malia Jones

Researcher, University of Wisconsin-
Madison's Applied Population
Laboratory, and Founding
Member, Dear Pandemic
USA

Lindsey Leininger

Public Health Scientist, Dartmouth
College Tuck School of Business, and
Founding Member, Dear Pandemic
USA

Fahmy Hanna

Technical Officer, Department of
Mental Health and Substance Use
World Health Organization
Switzerland

Zeinab Hijazi

Senior Mental Health Technical
Advisor, Programme Division
Director's Office
UNICEF
Switzerland

Charles Ebikeme

Writer and Researcher
African Health Observatory – Platform
on Health Systems & Policies
London School of Economics
and Political Science
United Kingdom

Mohamed Elsonbaty

Science Journalist
Egypt

Mirjam Jenny

Head, Science Communication Unit
Robert Koch Institute
Germany

Francesca Hartley

Intensive care nurse
Nottingham University Hospital
United Kingdom

External participants of the thematic sessions

Track 1: Engaging in science communication during health emergencies as a researcher

Kamran Abbasi

Executive Editor
British Medical Journal
United Kingdom

Marco Bardus

Assistant Professor
Department of Health Promotion
and Community Health,
American University of Beirut
Lebanon

Moriam Chibuzor

Senior Research Officer
Cochrane Nigeria, Institute of Tropical
Diseases Research and Prevention
Nigeria

María del Carmen Climent

Writer and Researcher
Winton Centre for Risk and
Evidence Communication
United Kingdom

Charles Ebikeme

Writer and Researcher
African Health Observatory – Platform
on Health Systems & Policies
London School of Economics
and Political Science
United Kingdom

Jacqueline Ho

Co-Director of Cochrane Malaysia
and Professor in Pediatrics
Cochrane Malaysia
Royal College of Surgeons in Ireland
& University College Dublin, Ireland

Malia Jones

Editor in Chief of “Dear Pandemic”
and Associate Scientist
University of Wisconsin-Madison
USA

Naomi Lee

Executive Editor
The Lancet
United Kingdom

Peninah Munyua

Public Health Specialist
Centers for Disease Control and
Prevention, Kenya Country Office
Kenya

Ramya Pinnamaneni

Research Fellow
Harvard T. H. Chan School
of Public Health
USA

Track 2: Connecting science and the media during health emergencies

Lina Ahmed

Health Promotion Coordinator
Ministry of Public Health
Qatar

Ola Al-Ghazawy

Freelance Science Journalist and Editor
Egypt

Sonia Awale

Associate Editor
Nepali Times
Nepal

Lyndal Byford

Director of News and Partnerships
Australian Science Media Centre
Australia

Vitalba Crivello

Policy Analyst
European Science-Media Hub
European Parliament, European
Parliamentary Research Service

Mohamed Elsonbaty Ramadan

Science Journalist
Egypt

Genevieve Hutchinson

Senior Health Advisor
BBC Media Action
United Kingdom

Ida Jooste

Global Health Media Adviser
Internews
South Africa

Tim Loughheed

Executive Director
World Federation of Science Journalists
United Kingdom

Malak Makki

Freelance Science Journalist
Lebanon

Mandi Smallhorne

President of the South African
Science Journalists Association
Vice-President of the World
Federation of Science Journalists
South Africa

Rick Weiss

Director
SciLine and American Association
for the Advancement of Science
USA

Track 3: Science communication during health emergencies for and by decision-makers

Shamaila Anwar

Science Communicator
National Institute for Health Research
Clinical Research Network
United Kingdom

Mathieu Denis

Science Director
International Science Council
France

Meghnath Dhimal

Chief Research Officer
Nepal Health Research Council
Nepal

Susannah Elliott

Chief Executive Officer
Australian Science Media Centre
Australia

Gideon Emukule

Epidemiologist
Centers for Disease Control and
Prevention, Kenya Country Office
Kenya

Paul Frank

Senior Advisor
SIL LEAD
USA

Alice Hazelton

Programme Lead, Science and Society
World Economic Forum
Switzerland

Susana Irles

Communications and Media
Relations Officer
European Federation of Academies
of Sciences and Humanities
Germany

Mirjam Jenny

Head, Science Communication Unit
Robert Koch Institute
Germany

Luis Ortiz Muñoz

Managing Editor
Chilean Satellite of the
Cochrane Effective Practice and
Organisation of Care Group
Chile

Mohamed Nour

Expert in Emergency Risk
Communication
Ministry of Public Health
Qatar

Toby Wardman

Head of Communications
Science Advice for Policy by
European Academies
Belgium

Track 4: Perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education

Emma Campbell

Director of Global Marketing
Tourism Fiji/Fiji Care Commitment
Fiji

Sarah Evanega

Director
Cornell Alliance for Science
USA

Ria Golecha

Project Coordinator SANCHAR project
India Research Center, Harvard T.
H. Chan School of Public Health
India

Nicole Grable

Social and Behavior Change &
Public Health Professional
Mercy Corps
USA

Francesca Hartley

Intensive care nurse
Nottingham University Hospital
United Kingdom

Atila Iamarino

Science Communicator and Biologist
Brazil

Ina Liu

Pharmacist
University of North Carolina
Medical Center
USA

Mia Marzotto

Senior Advocacy Officer
Translators Without
Borders/Clear Global
Italy

James Pridgeon

Chief Operations Officer
Tourism Fiji/Fiji Care Commitment
Fiji

Selena Ryan-Vig

Knowledge Broker
Cochrane United Kingdom
United Kingdom

Emma Thompson

Advocacy and Partnership Officer
Cochrane Central
USA

Speakers at the thematic sessions

Track 1: Engaging in science communication during health emergencies as a researcher

Kamran Abbasi

Executive Editor
British Medical Journal
United Kingdom

Marco Bardus

Assistant Professor
Department of Health Promotion
and Community Health,
American University of Beirut
Lebanon

Tamar Kabakian

Department of Health Promotion
and Community Health,
American University of Beirut
Lebanon

Naomi Lee

Executive Editor
The Lancet
United Kingdom

Jihad Makoul

Department of Health Promotion
and Community Health,
American University of Beirut
Lebanon

Track 2: Connecting science and the media during health emergencies

Vitalba Crivello

Policy Analyst
European Science-Media Hub
European Parliament, European
Parliamentary Research Service

Fergus Bell

Viral Facts / Fathm
South Africa

Kai Kupferschmidt

Science Journalist and Correspondent
Science

Adeline Marcos

Editor and Science Journalist
Agencia SINC

Pampa Molina

Editor in Chief of SINC

Ann Ngengere

Viral Facts / Fathm
South Africa

Vera Novais

Journalist and Free-Lance
Science Journalist
Observador

Tom Trewinnard

Viral Facts / Fathm
South Africa

Track 3: Science communication during health emergencies for and by decision-makers

Prince Agwu

AHOP Nigeria National Centre,
Health Policy Research Group
University of Nigeria
Nigeria

Charles Ebikeme

Writer and Researcher
African Health Observatory – Platform
on Health Systems & Policies
London School of Economics
and Political Science
United Kingdom

Fatuma Guleid

AHOP Kenya National Centre
Kenya Medical Research
Institute (KEMRI)
Kenya

Alice Hazelton

Programme Lead, Science and Society
World Economic Forum
Switzerland

Mirjam Jenny

Division Head, Science
Communication Unit
Robert Koch Institute
Germany

Alex Njeru

AHOP Kenya National Centre
Kenya Medical Research
Institute (KEMRI)
Kenya

Aminata Seydi

Integrated African Health Observatory
WHO Regional Office for Africa
WHO

Aurélien Skrobik

Africa Infodemic Response Alliance

Track 4: Perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education

Carmen Valle-Trabadelo

Co-Chair IASC Reference Group on
Mental Health and Psychosocial
Support in Emergency Settings
International Federation of Red
Cross and Red Crescent Societies
Reference Centre for
Psychosocial Support
Denmark

Atila Iamarino

Science Communicator and Biologist
Brazil

Julien Schekter

Department of Education,
Youth and Culture
Canton Vaud
Switzerland

ANNEX 2

Meeting programme

WHO GLOBAL CONFERENCE


LIVE
WEBINAR

Communicating
science
during health
emergencies

7 to 25 June 2021

See inside this programme for
individual time slots

Geneva, Switzerland
(Virtual)

 World Health
Organization

infodemic
MANAGEMENT

Ensuring people have
**the right information
at the right time
in the right format**

lowers barriers for individuals
to take steps to
protect themselves,
their families
and communities
against COVID-19.

© 2021 World Health Organization

Scope & purpose



Background

Since the beginning of the pandemic, the evidence on COVID-19 and related protective measures is continuously evolving. According to one estimate, scientists have published over 200,000 articles about COVID-19 in 2020¹. The outpour of research studies has been associated with both benefits and risks. On the positive side, the year 2020 has been ground-breaking for science. Extraordinary progress has been achieved at record time in all conceivable areas of the response. On the flip side, researchers, journalists, public health professionals and policy-makers are struggling to keep pace with the sheer number of studies, lacking time to digest and verify new evidence, its added value and limitations. Changing recommendations and pandemic response measures expose the public to high levels of uncertainty and are hence complicated to convey. Increasing pandemic fatigue and an overabundance of (scientific) information highlight the need for effective, innovative and reliable science communication. In addition to the traditional science communicators working in research, policy and the media, the all-disruptive nature of the pandemic demands also other stakeholders like teachers, health professionals or social media influencers to translate science into practice in their daily activities.

Aim

Many good practice examples of science communication have already emerged during the COVID-19 pandemic. These innovative solutions represent a valuable resource for the current and future health emergencies. The World Health Organization Information Network for Epidemics (WHO EPI-WIN) organizes a global conference on communicating science during health emergencies to facilitate the solution-oriented discussion of challenges and good practices in health science communication during the COVID-19 pandemic. The insights of the conference will eventually contribute to a repository of good practices and feed into the development of standards for effective science communication during health emergencies. The conference will further present innovative science communication concepts in the areas of (i) science communication for researchers, (ii) science and the media, and (iii) translating science into action.

¹ E Else, H. How a torrent of COVID science changed research publishing - in seven charts. Nature 588, 553 (2020)

Objectives

- Convene representatives of the multidisciplinary science communication community to map and address the challenges encountered during the COVID-19 pandemic;
- Facilitate the exchange of experiences and lessons learned;
- Identify and collate good practice examples of innovative science communication during the COVID-19 pandemic to inform the development of a set of principles for effective science communication during public health emergencies;
- Create a multidisciplinary network of 'science communicators' to be called upon for future science communication activities.

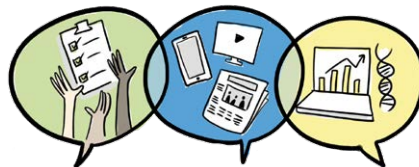
Participants

Participants include science communicators from a broad range of disciplines and areas of work including health, education, journalism and broadcasting, social media and culture, and represent research, policy, civil society and international organizations.

Format

The conference will have **public opening and closing panels open for anyone who previously registered online**. The remaining conference will be presented through a series of 'scopes' open to a limited number of invited participants:

- **Scope 1: Engaging in science communication during health emergencies as a researcher**
- **Scope 2: Connecting science and the media during health emergencies**
- **Scopes 3 & 4: Translating science into action**
 - Scope 3: Science communication during health emergencies for and by decision-makers
 - Scope 4: Perspectives of professionals working in health, culture and education on science communication during health emergencies



OPENING PANEL

Communicating science during health emergencies

7 June 2021

Objectives

- ★ **Highlight the importance of science communication** during public health emergencies
- ★ Provide an **overview of the main challenges of communicating science** during the COVID-19 pandemic
- ★ **Spark a global discussion** about how science communication can become more innovative and effective

Format

- ★ **Open to the public with 5 inspiring keynote presentations** on science communication as integral part of the pandemic response
- ★ **Live transmission** via Zoom and YouTube
- ★ **Session will be recorded** and made available online
- ★ **Anyone can join and listen upon registering** for the event and submit questions

THEMATIC SESSIONS

Communicating science during health emergencies

8 – 24 June 2021

Objectives

- ★ **Map challenges in communicating science** during the pandemic and discuss solutions to address these
- ★ **Facilitate the exchange of experiences** and lessons learned
- ★ **Identify and collate good practices** of innovative science communication during the COVID-19 pandemic
- ★ **Identify research gaps and support required** for effective science communication
- ★ **Create a community of research and practice** in science communication

Format

- ★ Conference scopes are by invitation only. Participants will be identified through targeted outreach
- ★ **Each scope will bring together stakeholders from similar areas of work** and focus on topics, challenges and solutions most relevant to this target group.
- ★ **Sessions will be a mix of expert presentations** and interactive discussions

Scope themes



Scope 1: Engaging in science communication during health emergencies as a researcher

Publishing and communicating science as researchers (e.g. exploring alternative peer review models to speed up the publication process; engaging in knowledge translation activities through summarizing findings in science briefs, plain language summaries or other formats; how to best communicate with specific audiences; how to deal with uncertainty and continuously evolving evidence)

Scope 2: Connecting science and the media during health emergencies

Distilling science and information sharing as part of the media (e.g. how to respond to the overload of research publications; differentiating between reliable and unreliable information and identifying trusted sources; how to increase science literacy; how to communicate uncertainty; how to respond to rapidly changing information and views; strategies to translate complex information into understandable language)

Scopes 3 & 4: Translating science into action

Scope 3: Science communication during health emergencies for and by decision-makers

Supporting the connection of science and society and basing decisions on evidence (e.g. how to respond to the overload of information; strategies to communicate with and inform the public during health emergencies; communicating uncertainty to the public; managing rumors and misinformation; dissemination of relevant materials adapted to the target audience; developing platforms for communication)

Scope 4: Perspectives of professionals working in health, culture and education on science communication during health emergencies

Managing science communication in everyday life situations (e.g. what can we learn from stakeholders outside the traditional science communication professions; science communication through social media platforms like YouTube, Twitter and Facebook; how to communicate science and uncertainty to children and older people; how to increase science literacy)

CLOSING PANEL

Communicating science during health emergencies

25 June 2021

Objectives

- ★ **Present innovative science communication concepts**
submitted through a public call for good practice examples
- ★ **Inform participants and the public about the main lessons learned**
from communicating science during the COVID-19 pandemic
- ★ **Discuss conclusions** and next steps

Format

- ★ **Open to the public** with 5 innovative practice presentations
- ★ **Closing panel discussion** with representatives from all scopes
- ★ **Live transmission recording** will be made available online
- ★ **Anyone can join upon registering for the event** and submit questions

OPENING PANEL

OPEN TO THE PUBLIC

Moderated by *Melinda Frost*, Technical Officer,
Global Infectious Hazard Preparedness Department,
World Health Organization

Monday, 7 June 2021, 13:00–16:00 CET

13:00 – 13:05	Opening <i>Tedros Adhanom Ghebreyesus</i> , Director-General, World Health Organization
13:05 – 13:10	Introduction <i>Sylvie Briand</i> , Director, Global Infectious Hazard Preparedness Department, World Health Organization
13:10 – 13:30	Science journalism needed now, more than ever <i>Shamila Nair-Bedouelle</i> , Assistant Director-General for Natural Sciences, UNESCO
13:30 – 13:50	Discussion with the audience <i>Sylvie Briand & Shamila Nair-Bedouelle</i>
13:50 – 14:00	Break
14:00 – 14:20	Drinking from a firehose: The communication of science and risk during a pan- and infodemic <i>Kasisomayajula Viswanath</i> , Lee Kum Kee Professor of Health Communication, Harvard T.H. Chan School of Public Health, USA, and Director, Harvard T.H. Chan School of Public Health India Research Center, India
14:20 – 14:40	Demystifying the science behind the COVID-19 pandemic <i>Siouxsie Wiles</i> , Associate Professor, Faculty of Medical & Health Sciences, The University of Auckland - Te Whare Wānanga o Tāmaki Makaurau, New Zealand
14:40 – 14:55	Discussion with the audience <i>Siouxsie Wiles & Kasisomayajula Viswanath</i>
14:55 – 15:00	Break
15:00 – 15:20	Trustworthy and useful evidence communication to decision-makers <i>Alexandra Freeman</i> , Executive Director of the Winton Centre for Risk and Evidence Communication, University of Cambridge, United Kingdom
15:20 – 15:40	Communicating science in a pandemic: when social media shapes the public discourse <i>Atila Iamarino</i> , Social Media Science Communicator & Biologist, Brazil
15:40 – 15:55	Discussion with the audience <i>Alexandra Freeman & Atila Iamarino</i>
15:55 – 16:00	Closing & outlook on closing panel <i>Tim Nguyen</i> , Unit Head, High Impact Events Preparedness Unit, World Health Organization

THEMATIC SESSIONS

Three Tuesdays: 8, 15, 22 June 2021, 13:00–14:30 CET

Scope 1: Engaging in science communication during health emergencies as a researcher

Tuesday, 8 June

13:00 – 13:30 Welcome to thematic track & introduction of participants

13:30 – 14:30 Discussion of science communication challenges & solutions encountered during the COVID-19 pandemic

Tuesday, 15 June

13:00 – 13:30 Ensuring scientific quality during health emergencies – going beyond peer-review & open access publications
Naomi Lee, Senior Executive Editor, The Lancet
Kamran Abbasi, Executive Editor, BMJ

13:30 – 14:30 Guided group discussion

Tuesday, 22 June

13:00 – 13:30 When science communication related to COVID-19 becomes a luxury: Reflections from the Eastern Mediterranean Region/Lebanon
Tamar Kabakian, *Jihad Makhoul*, & *Marco Bardus*, Department of Health Promotion and Community Health, American University of Beirut

13:30 – 14:30 Guided group discussion

THEMATIC SESSIONS

Three Wednesdays: 9, 16, 23 June 2021, 13:00–14:30 CET

Scope 2: Connecting science & the media during health emergencies

Wednesday, 9 June

13:00 – 13:30 Welcome to thematic track & introduction of participants

13:30 – 14:30 Discussion of science communication challenges & solutions encountered during the COVID-19 pandemic

Wednesday, 16 June

13:00 – 13:30 Knowledge-based science communication: quality reporting to help understand uncertainty
Vitalba Crivello, Policy Analyst, European Science-Media Hub (ESMH)
Vera Novais, Journalist at *Observador* and Free-lance Science Journalist
Kai Kupferschmidt, Science Journalist and Correspondent for *Science*
Adeline Marcos, Editor and Science Journalist at *Agencia SINC*

13:30 – 14:30 Guided group discussion

Wednesday, 23 June

13:00 – 13:30 Getting the science right – Tackling COVID-19 misinformation for media professionals
Ann Ngengere, *Fergus Bell* & *Tom Trewinnard*, Viral Facts (Fathm)

13:30 – 14:30 Guided group discussion

THEMATIC SESSIONS

Three Thursdays: 10, 17, 24 June 2021, 13:00–14:30 CET

Scope 3: Science communication during health emergencies for and by decision-makers

Thursday, 10 June

13:00 – 13:30 Welcome to thematic track & introduction of participants

13:30 – 14:30 Discussion of science communication challenges & solutions encountered during the COVID-19 pandemic

Thursday, 17 June

13:00 – 13:30 **Connecting science & society. How to create fora for dialogues with the public**
Alice Hazelton, Programme Lead, Science and Society, World Economic Forum
Mirjam Jenny, Head Science Communication Unit, Robert Koch Institute, Germany

13:30 – 14:30 Guided group discussion

Thursday, 24 June

13:00 – 13:45 **The role of knowledge platforms in communicating science around decision-making**
African Health Observatory - Platform on Health Systems & Policies (AHOP)
Charles Ebikeme, London School of Economics and Political Science
Aminata Seydi, World Health Organization Regional Office for Africa, Integrated African Health Observatory (IAHO)
Prince Agwu, AHOP Nigeria National Centre, Health Policy Research Group, University of Nigeria
Alex Njeru, & *Fatuma Guleid*, AHOP Kenya National Centre, Kenya Medical Research Institute (KEMRI)
Africa Infodemic Response Alliance
Aurélie Skrobik

13:45 – 14:30 Guided group discussion

THEMATIC SESSIONS

Two Fridays, One Thursday: 11, 18, 24 June 2021, 13:00–14:30 CET

Scope 4: Perspectives on science communication during health emergencies from professionals working in various sectors such as health, culture, and education

Friday, 11 June

13:00 – 13:30 Welcome to thematic track & introduction of participants

13:30 – 14:30 Discussion of science communication challenges & solutions encountered during the COVID-19 pandemic

Friday, 18 June

13:00 – 13:30 When communicating science puts you at risk – managing trolls & threats
Atila Iamarino, Social Media Science Communicator and Biologist, Brazil

13:30 – 14:30 Guided group discussion

Thursday, 24 June

13:00 – 13:15 CoronaQuest, a serious game to inform & fight against COVID-19 in classrooms & families
Julien Schekter, Department of Education, Youth & Culture, Canton Vaud, Switzerland13:15 – 13:30 Strengthening effective communication & basic psychosocial skills among COVID-19 responders
Carmen Valle, IFRC Psychosocial Center Copenhagen, co-Chair IASC MHPSS Reference Group & *Fahmy Hanna*, Technical Officer, Department of Mental Health and Substance Use, World Health Organization, and co-Chair IASC MHPSS Reference Group

13:30 – 14:30 Guided group discussion

CLOSING PANEL

OPEN TO THE PUBLIC

Moderated by *Melinda Frost*, Technical Officer,
Global Infectious Hazard Preparedness Department,
World Health Organization

Friday, 25 June 2021, 13:00–16:00 CET

- | | |
|---------------|---|
| 13:00 – 13:15 | Opening
<i>Sylvie Briand</i> , Director, Global Infectious Hazard Preparedness Department,
World Health Organization |
| 13:15 – 13:30 | Rethinking communication: storytelling in the age of misinformation & disinformation
<i>Elizabeth (Lizz) Ntonjira</i> , Global Communication Director,
Amref Health Africa, Kenya |
| 13:30 – 13:50 | Alert, not anxious
<i>Mikhail (Doctor Mike) Varshavski</i> , Board Certified Family Medicine Physician
and Content Creator, USA |
| 13:50 – 14:05 | Discussion with the audience
<i>Elizabeth (Lizz) Ntonjira & Mikhail (Doctor Mike) Varshavski</i> |
| 14:05 – 14:15 | Break |
| 14:15 – 14:35 | Covid dreams—visual science communications reimagined
<i>Radhika Patnala</i> , Founder and Director, Sci-Illustrate, Germany |
| 14:35 – 14:50 | Dear Pandemic: authentic dialogue between scientists and the public as a strategy to address the COVID-19 infodemic
<i>Malia Jones</i> , Researcher, University of Wisconsin-Madison's Applied Population Laboratory, and Founding Member, Dear Pandemic, USA
<i>Lindsey Leininger</i> , Public Health Scientist, Dartmouth College Tuck School of Business, and Founding Member, Dear Pandemic, USA |
| 14:50 – 15:05 | The story about the children's storybook on COVID-19
<i>Fahmy Hanna</i> , Technical Officer, Department of Mental Health and Substance Use, World Health Organization
<i>Zeinab Hijazi</i> , Senior Mental Health Technical Advisor, Programme Division Director's Office, UNICEF |
| 15:05 – 15:15 | Discussion with the audience
<i>Radhika Patnala, Fahmy Hanna, Zeinab Hijazi, Malia Jones & Lindsey Leininger</i> |

CLOSING PANEL

OPEN TO THE PUBLIC

Friday, 25 June 2021, 13:00–16:00 CET

15:15 – 15:35

Using science communication to tackle the COVID-19 pandemic: insights from the thematic discussions of the conference

Charles Ebikeme, London School of Economics and Political Science, United Kingdom

Mohamed Elsonbaty, Freelance Science Journalist and Science Communication Consultant, Egypt

Francesca Hartley, Intensive Care Nurse, Nottingham University Hospitals NHS Trust, United Kingdom

Mirjam Jenny, Head of Science Communication Unit, Robert Koch Institute, Germany

15:35 – 15:55

Discussion with the audience

Charles Ebikeme, Mohamed Elsonbaty, Francesca Hartley & Mirjam Jenny

15:55 – 16:00

Closing & next steps

Tim Nguyen, Unit Head, High Impact Events Preparedness Unit, World Health Organization





World Health
Organization

infodemic
MANAGEMENT

World Health Organization
20 Avenue Appia
CH 1211, Geneva 27
Switzerland

epi-win@who.int

www.who.int/epi-win



World Health Organization
20 Avenue Appia
CH 1211 Geneva 27
Switzerland

epi-win@who.int

www.who.int/epi-win

