

COMMENT

Open Access



# EGHRIN conclusions on pandemic preparedness: no whole-of-society approach without society

Stockman Marie<sup>1\*</sup>, Plasència Antonio<sup>2</sup>, Larson Heidi<sup>3,4,5</sup>, Lin Leesa<sup>3,6,7</sup>, Antic Ana<sup>8</sup>, Drost Janharmen<sup>9</sup>, Froeschl Guenter<sup>10</sup>, Skordis Jolene<sup>11</sup> and Vandamme Anne-Mieke<sup>1,12</sup>

## Abstract

Pandemic preparedness necessitates a multifaceted approach that emphasizes societal factors, such as building trust and acknowledges cultural and societal differences, with a focus on protecting vulnerable groups. To support these goals, the European Global Health Research Institutes Network has outlined a comprehensive transdisciplinary approach through a set of multilevel recommendations.

**Keywords** Pandemic preparedness, Health policy, Transdisciplinary, Society

\*Correspondence:

Stockman Marie  
marie.stockman@outlook.com

<sup>1</sup> KU Leuven, Department of Microbiology, Immunology and Transplantation, Rega Institute for Medical Research, Clinical and Epidemiological Virology, Institute for the Future, Herestraat 49, Louvain 3000, Belgium

<sup>2</sup> Barcelona Institute for Global Health (ISGlobal), Hospital Clínic, Universitat de Barcelona, Rosselló 132, Barcelona 08036, Spain

<sup>3</sup> Department of Infectious Disease Epidemiology and Dynamics, London School of Hygiene & Tropical Medicine, Keppel Street, London WC1E 7HT, UK

<sup>4</sup> Institute for Health Metrics Sciences & Evaluation, University of Washington, Seattle, WA, USA

<sup>5</sup> Centre for the Evaluation of Vaccination, Vaccine & Infectious Disease Institute, University of Antwerp, Antwerp, Belgium

<sup>6</sup> Laboratory of Data Discovery for Health Limited (D24H), Hong Kong Science Park, Pak Shek Kok, Hong Kong, New Territories, China

<sup>7</sup> WHO Collaborating Centre for Infectious Disease Epidemiology and Control, School of Public Health, LKS Faculty of Medicine, The University of Hong Kong, Hong Kong Special Administrative Region, Pok Fu Lam, Hong Kong, China

<sup>8</sup> Department of European History and Medical Humanities, Centre for Culture and the Mind, University of Copenhagen, Emil Holms Kanal 6, Copenhagen 2300, Denmark

<sup>9</sup> Institute for Global Health and Development, Paasheuvelweg 25, Amsterdam 1105 BP, Netherlands

<sup>10</sup> Division of Infectious Diseases and Tropical Medicine, University Hospital, Ludwig-Maximilians-Universität, Leopoldstr. 5, Munich 80802, Germany

<sup>11</sup> Institute for Global Health, University College London, Gower St, London WC1E 6BT, UK

<sup>12</sup> Center for Global Health and Tropical Medicine, Instituto de Higiene E Medicina Tropical, Universidade Nova de Lisboa, Lisbon, Portugal



© The Author(s) 2024. **Open Access** This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, which permits any non-commercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if you modified the licensed material. You do not have permission under this licence to share adapted material derived from this article or parts of it. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

## Introduction

Pandemics are inevitable, intervals between them might become shorter [1] and their impact might become greater. Avian flu H5N1 is a recent potential threat, and there have been several reports of this virus circulating among non-human mammals, with mortality in sporadic human cases approaching 60% [2, 3].

Pandemics demand the adoption of a whole-of-society approach to ensure effective responses [4]. Factors including trust, adherence to measures and communication with the public are often overlooked but are of utmost importance. For instance, researchers in the Vaccine Confidence Project found that the biggest predictor of vaccine acceptance in the context of the pandemic was trust in government, above age, education, employment, or income [5, 6]. The European Global Health Research Institutes Network (EGHRIN) [7] believes in transitioning from an epidemiology-centred strategy, that relies mainly on microbiological and medical information to tackle the pandemic, to an approach that emphasizes societal and cultural interests, to improve the effectiveness of pandemic preparedness. Transdisciplinary collaboration, which is the highest degree of collaboration between disciplines, is a necessary tool to achieve this goal [8].

In this context, EGHRIN organized its first seminar with the title “Pandemic preparedness: a whole-of-society approach”. The event hosted speakers such as Professor Anne-Mieke Vandamme, Professor Heidi Larson, Dr Leesa Lin and Professor Ana Antic, and attracted 150 participants. The objective of the seminar was to address pandemic preparedness with a transdisciplinary lens, including societal aspects rarely considered in the traditional debates about pandemic preparedness. With this seminar we built further on the conclusions of the Barcelona Town Hall meeting, organized by EGHRIN and the League of European Research Universities (LERU) [9], where non-health consequences of the pandemic were cited, including economic and political consequences, and attention was also paid to health literacy and health communication [10]. The following actionable recommendations were drafted as a result of the interactions during and immediately following these meetings.

## Actionable recommendations

### 1. Community-level approach

- I. Aim to work towards resilient communities in the light of the COVID-19 pandemic, which can be defined as communities who can continue to function while limiting any harmful systemic effects.

This definition encompasses pandemic preparedness a priori, and mitigation and flexibility during disruption. It also speaks to recovery and transformation when disruption recedes [11, 12].

- II. Societal resilience can be achieved through building upon existing trusted networks such as religious communities, local charities, non-governmental organizations, or grassroots political organizations to strengthen webs of mutual trust and cooperation. These networks within and across communities can help inform local ‘sensemaking’ of the pandemic. This includes understanding the historical, political, and cultural circumstances that link health events and policies to collective memories or trauma which often influence the nature and dynamics of hesitancy and misinformation and help guide a response. The Global Listening Project, an initiative to build social cohesion and to overcome polarization, is an example of large scale listening to understand societal perceptions and sentiments to guide crisis response more effectively [13]. Conversations must be held with citizens from different backgrounds to inform trust building including interpersonal trust. Stronger mutual trust is foundational to public cooperation, such as contributing to a higher vaccination coverage [6, 14].
- III. Local communities already have existing resources, initiatives, and manpower, and this needs to be empowered through cross-agency communication, which means nurturing collaboration e.g. between hospitals and police or fire departments. Efforts should be made to actively foster these relationships to build trust and preparedness ahead of a disaster [15].

### 2. System-level approach

- I. A shared global perspective for effective pandemic preparedness and for robust public health systems on a larger scale is needed. This vision needs to encompass dimensions beyond medical strategies to include, for example, communication, financing, and education. If this is left to chance or market mechanisms, local measures will have limited impact. To achieve this global goal, it is imperative to engage with political leaders and international stakeholders.
- II. Global health is only one dimension in a broader societal preparedness process. Most scientific societies and networks are organized by discipline, but these societies should reach out to other disciplines ahead of the next crisis to coordinate links between global health and other domains such as human

rights (e.g., Council of Europe), societal resilience (e.g., Stockholm resilience center), education, crisis management, industrial partners (e.g., technology, media), etc. Transdisciplinary meetings, focus groups and seminars need to be organized, in order to learn across subsystems and societies [16].

### 3. Research

- I. The challenges of miscommunication, misinformation and distrust were already present in previous pandemics; however, the landscape, and potential risks, have changed dramatically in the context of new technologies – from global social media platforms to artificial intelligence. Pandemic preparedness must now be a topic of continuous work and conversation in between pandemics, and implementation research and outreach to leaders is necessary.
- II. Disciplines such as humanities and social sciences contribute substantially to pandemic preparedness by researching and providing insights on the political framing, collective memories, and local meaning and interpretation of pandemic strategies. These insights are crucial to informing resilience and trust-building efforts.
- III. Funding is needed to support the type of transdisciplinary research and initiatives that bridge disciplines and the academic/society divide in order to establish a whole-of-society approach to health emergencies such as pandemics.

### 4. Education

- I. Stimulating education about global public health on a broad transdisciplinary scale can strengthen wider pandemic and health literacy, contributing to pandemic preparedness and a healthier society in general.

## Conclusion

In conclusion, the EGHRIN's seminar "Pandemic preparedness: a whole-of-society approach" highlighted the necessity of a transdisciplinary and inclusive strategy for addressing pandemic preparedness and response. The insightful discussions brought to light the critical importance of societal factors, including trust, community resilience, and cultural sensitivity, in fortifying collective defences against health emergencies. Emphasizing collaboration across various disciplines and sectors, alongside the imperative for ongoing research and education in global public health, our recommendations aim to enhance global connectivity and broaden the discourse on the complexities of pandemic

preparedness. Together, these efforts symbolize a significant step toward a society better equipped for the challenges of future pandemics, involving stakeholders ranging from grassroots communities to national governments and international organizations. For a more detailed exploration of these themes, we invite you to visit the EGHRIN website.

### Abbreviations

EGHRIN The European Global Health Research Institutes Network  
LERU The League of European Research Universities

### Acknowledgements

Otter.ai was used for the transcription of the video webinar into a written document.

### Authors' contributions

MS, the corresponding author, was responsible for data analysis, data interpretation and article writing. AV was involved in data collection as a speaker of the webinar and data interpretation. AP was involved in data collection as the moderator of the webinar. HL, LL and AA were involved in data collection as speakers of the webinar. GF and HL have written a contribution to the main text. LL has written a contribution to the conclusion section. MS, AV, AP, HL, LL, AA, GF, JD and JS reviewed and approved the final manuscript.

### Funding

No role of funding sources.

### Data availability

The EGHRIN symposium on pandemic preparedness was videorecorded and is accessible to all on EGHRIN's YouTube account (<https://www.youtube.com/watch?v=kN9nyQ8IDSY>). Otter.ai was used for the transcription of the video webinar into a written document. In addition, the data for this article consists of bibliographic references, which are included in the references section.

### Declarations

#### Ethics approval and consent to participate

Not applicable.

#### Consent for publication

Not applicable.

#### Competing interests

Heidi Larson has received funding or support from MacArthur Foundation, Merck, GSK, UK NIHR, Janssen, UK Cabinet Office, Merrimon Lecture UNC and "Trust in ..." NYC. Ana Antic has received a project grant from the Novo Nordisk Foundation about Covid-19 and mental health with a focus on cultural contexts.

The remaining authors do not have any conflicts of interest.

Received: 25 March 2024 Accepted: 11 December 2024

Published online: 18 December 2024

### References

1. Marani M, Katul GG, Pan WK, Parolari AJ. Intensity and frequency of extreme novel epidemics. *Proc Natl Acad Sci U S A*. 2021;118(35):e2105482118.
2. Agüero M, Monne I, Sánchez A, Zecchin B, Fusaro A, Ruano MJ, et al. Highly pathogenic avian influenza A(H5N1) virus infection in farmed minks, Spain, October 2022. *Eurosurveillance*. 2023;28(3).
3. Sutton TC. The Pandemic Threat of Emerging H5 and H7 Avian Influenza Viruses. *Viruses*. 2018;10(9). Available from: <https://pubmed.ncbi.nlm.nih.gov/6164301/>.

4. Clark H, Cárdenas M, Dybul M, Kazatchkine M, Liu J, Miliband D, et al. Transforming or tinkering: the world remains unprepared for the next pandemic threat. *Lancet*. 2022;399(10340):1995. Available from: <https://pubmed.ncbi.nlm.nih.gov/6164301/>.
5. de Figueiredo A, Larson HJ. Exploratory study of the global intent to accept COVID-19 vaccinations. *Communications Medicine* 2021 1:1. 2021;1(1):1–10. Available from: <https://www.nature.com/articles/s43856-021-00027-x>.
6. Bollyky TJ, Hulland EN, Barber RM, Collins JK, Kiernan S, Moses M, et al. Pandemic preparedness and COVID-19: an exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, from Jan 1, 2020, to Sept 30, 2021. *Lancet*. 2022;399(10334):1489–512. Available from: <http://www.thelancet.com/article/S0140673622001726/fulltext>.
7. The European Global Health Research Institutes Network (EGHRIN). Available from: <https://www.eghrin.eu/>.
8. Nguyen T, Ronse M, Kiekens A, Thyssen P, Nova Blanco JR, Van den Cruyce N, et al. Learning for the Future: A Case Study of Transdisciplinary Collaboration to Improve Pandemic Preparedness. *Transdisciplinary Insights*. 2022;5(2):41–54.
9. the League of European Research Universities (LERU). Available from: <https://www.leru.org/>.
10. Healthy People, Healthy Societies: An Integrated Approach. Results from the LERU-EGHRIN Town Hall meeting on Global Health. 2022. Available from: [https://static1.squarespace.com/static/638caba50aed5f2713d2cac3/t/64357fc022988457064363bf/1681227713446/Final+LERU\\_EGHRIN+TH+Meeting+June+2022.pdf](https://static1.squarespace.com/static/638caba50aed5f2713d2cac3/t/64357fc022988457064363bf/1681227713446/Final+LERU_EGHRIN+TH+Meeting+June+2022.pdf).
11. Linkov I, Trump BD. *The Science and Practice of Resilience*. Cham: Springer International Publishing; 2019. (Risk, Systems and Decisions). Available from: <http://link.springer.com/10.1007/978-3-030-04565-4>.
12. Wernli D, Clausin M, Antulov-Fantulin N, Berezowski J, Biller N, Blanchet K, et al. Building a multisystemic understanding of societal resilience to the COVID-19 pandemic. *BMJ Glob Health*. 2021;6(7):e006794. Available from: <https://gh.bmj.com/content/6/7/e006794>.
13. Larson HJ, Van Damme P. The Global Listening Project. Available from: <https://listeningproject.global/about/>.
14. Larson HJ, Toledo AH. Nurturing, nudging and navigating the increasingly precarious nature of cooperation in public health: the cases of vaccination and organ donation. *Global Discourse*. 2023;13(3–4):290–315.
15. WHO global strategy on people-centred and integrated health services: interim report. 2015. Available from: <https://iris.who.int/handle/10665/155002>.
16. Herzig Van Wees SL, Målvist M, Irwin R. Achieving the SDGs through interdisciplinary research in global health. *Scand J Public Health*. 2019;47(8):793–5. Available from: <https://pubmed.ncbi.nlm.nih.gov/30486761/>.

## Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.