

DEMOCRACY AND PANDEMIC



13 — 15.11.25

Fondazione Giorgio Cini, Venezia



DEMOCRACY AND PANDEMICS

A common ground for prevention and preparedness

Healthcare, Research and Industry links are essential to Public Health response

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**UNIVERSITÀ
DEGLI STUDI
DI UDINE**
hic sunt futura

«Public Health is the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities and individuals»



Sir Donald Acheson

Acheson, D. (1988). *Public health in England: The report of the Committee of Inquiry into the future development of the public health function*. London: Her Majesty's Stationery Office (HMSO).

American Public Health Association (APHA). (n.d.). *What is public health?* Retrieved from <https://www.apha.org>

Public Health perspectives and tools

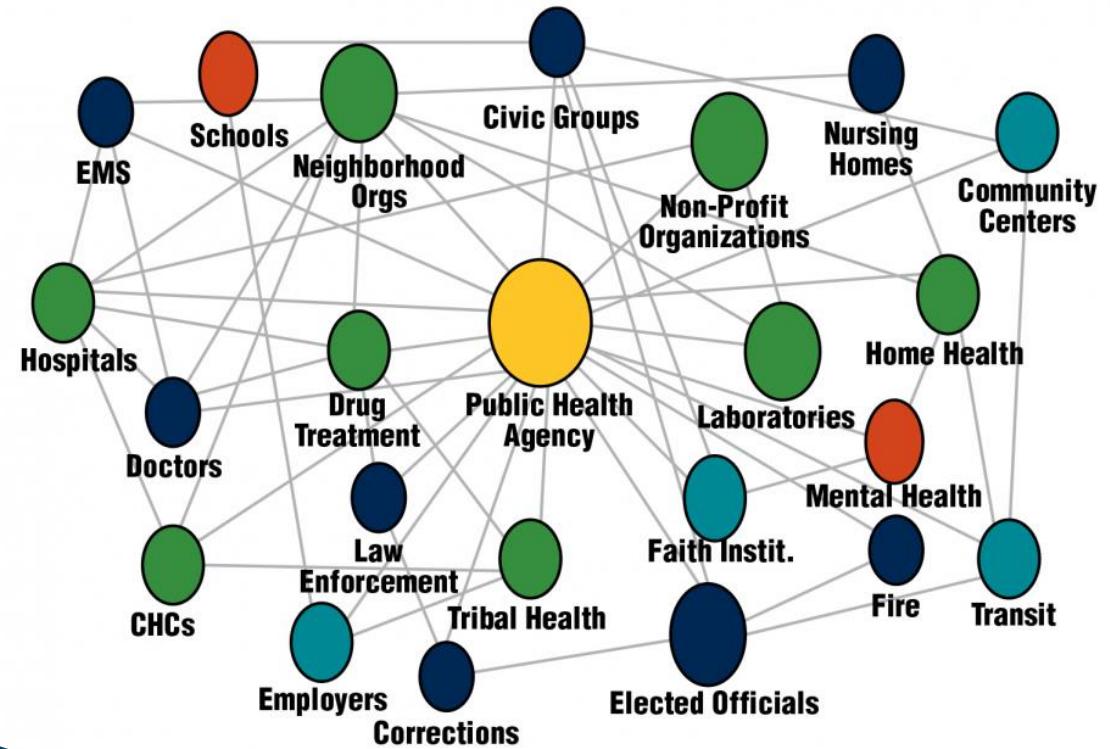
Essential Public Health Functions

1. Public Health Intelligence
2. **PH emergency management**
3. PH governance and legislation
4. Health Systems and multisectoral planning and financing
5. Health protection
6. Prevention and early detection
7. Health promotion
8. Community Engagement and social mobilization
9. PH workforce
10. Quality of and access to health services
11. PH research
12. Equitable access to and rational use of medical products and health technologies

Defining essential public health functions and services to strengthen national workforce capacity

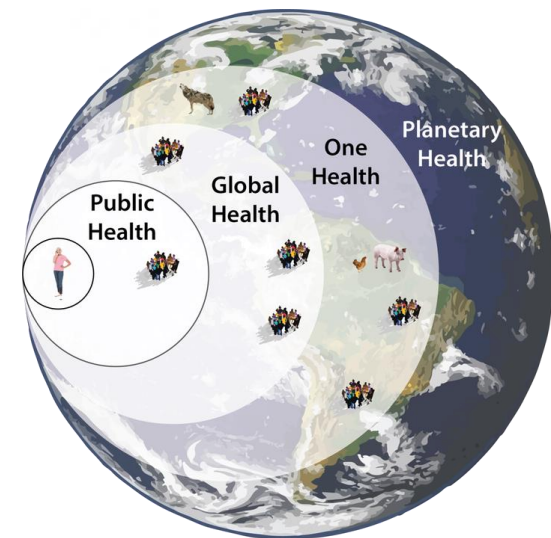


Public Health as a Network in a Complex Adaptive System



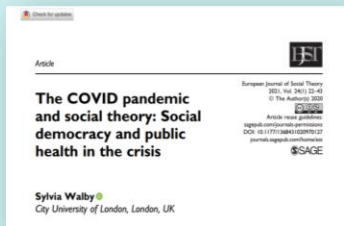
- Local Health Authorities
- District/ regional authorities
- Country Authorities
- International coordination
- WHO

Public Health
Professionals:
Scientific &
technical
support

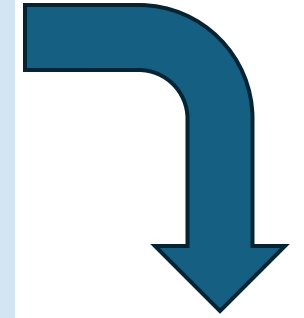


Pandemic and 'Syndemic'

“The crisis initiated by the pandemic, cascading through society



“Syndemics are characterised by biological and social interactions between conditions and states, interactions that increase a person's susceptibility to harm or worsen their health outcomes



<https://journals.sagepub.com/doi/pdf/10.1177/1368431020970127>

impact on the entire society

<https://www.un.org/development/desa/dspd/everyone-included-covid-19.html#:~:text=If%20not%20properly%20addressed%20through,the%20medium%20and%20long%20term.>

- morbidity and mortality (both as direct and indirect effects of the SARS CoV-2 infection)
- economic progress
- trust in governments
- social cohesion

first semester 2020 knowledge evolution

1. Initial Detection and Identification

(Dec 2019 – Jan 2020)

2. Naming and Early Understanding

(Feb 2020)

3. Pathophysiology and Prevention

(Mar -April 2020)

4. Expanding Clinical Understanding from respiratory to systemic disease

(Apr – August 2020)

5. Therapeutic Progress and Immune Response (May–Aug

2020)



Taking decisions.... with limited evidence and a lot of uncertainty

Review > Eur Rev Med Pharmacol Sci. 2020 Apr;24(8):4539-4547.
doi: 10.26355/eurrev_202004_21038.

Efficacy of chloroquine and hydroxychloroquine in the treatment of COVID-19

S A Meo¹, D C Klonoff, J Akram

Affiliations + expand

PMID: 32373993 DOI: 10.26355/eurrev_202004_21038

Free article

FDA cautions against use of hydroxychloroquine or chloroquine for COVID-19 outside of the hospital setting or a clinical trial due to risk of heart rhythm problems

Does not affect FDA-approved uses for malaria, lupus, and rheumatoid arthritis



Prioritizing relevant data in a deluge of information

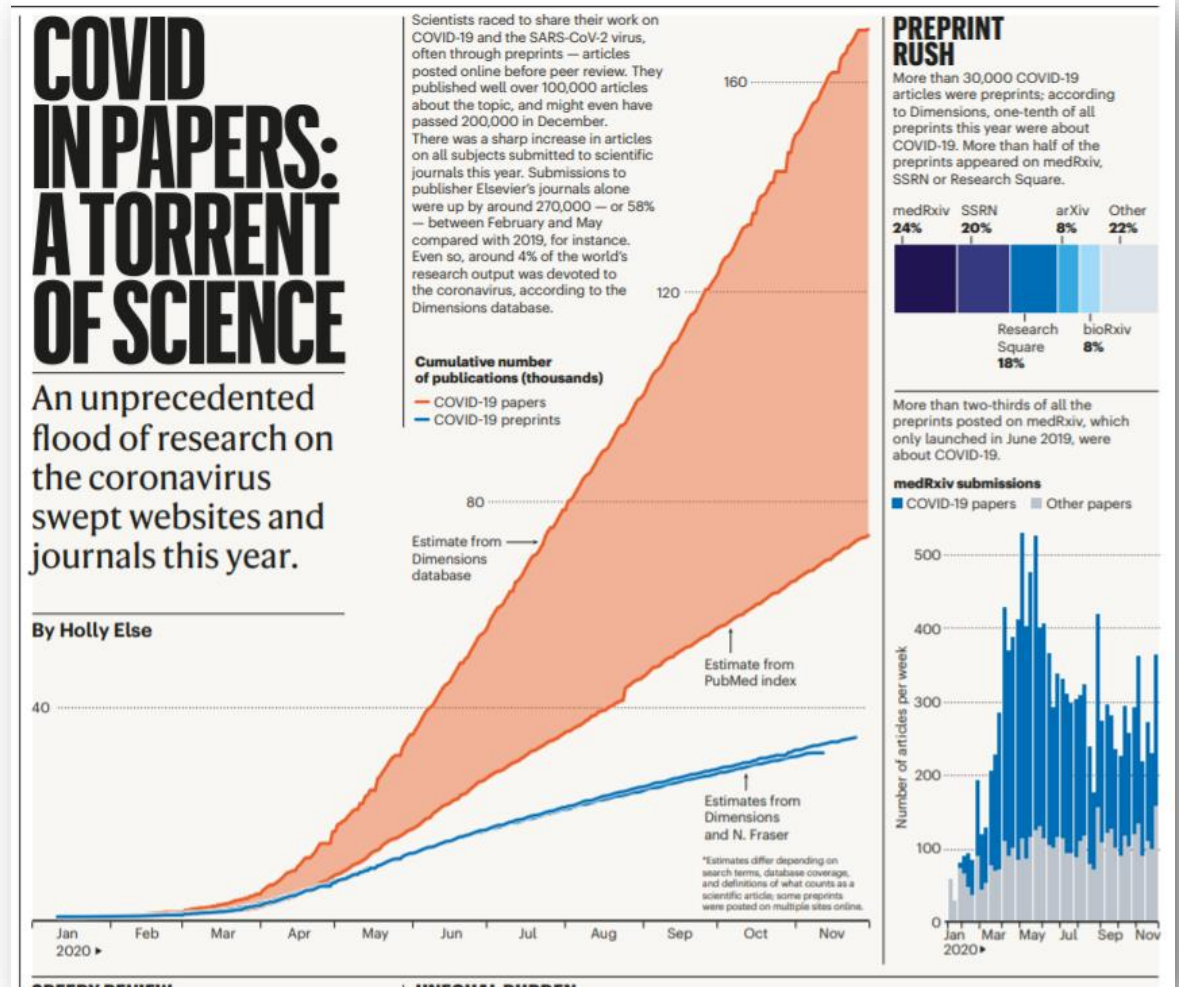
Abstract



medRxiv Preprint Submissions, Posts, and Key Metrics, 2019-2021

Joseph S. Ross,¹ Richard Sever,² Theodora Bloom,³ Samantha Hindle,² Dinar Yunusov,² Theodore Roeder,² John R. Inglis,² Harlan M. Krumholz⁴

On 27,674 preprints posted (2019-2021)
10,041 (36.3%) were subsequently published



<https://media.nature.com/original/magazine-assets/d41586-020-03564-y/d41586-020-03564-y.pdf>

PLOS ONE

RESEARCH ARTICLE

Reliability of citations of medRxiv preprints in articles published on COVID-19 in the world leading medical journals

Jean-Francois Gehanno^{1,2*}, Julien Grosjean^{2,3}, Stefan J. Darmoni^{2,3}, Laetitia Rollin²

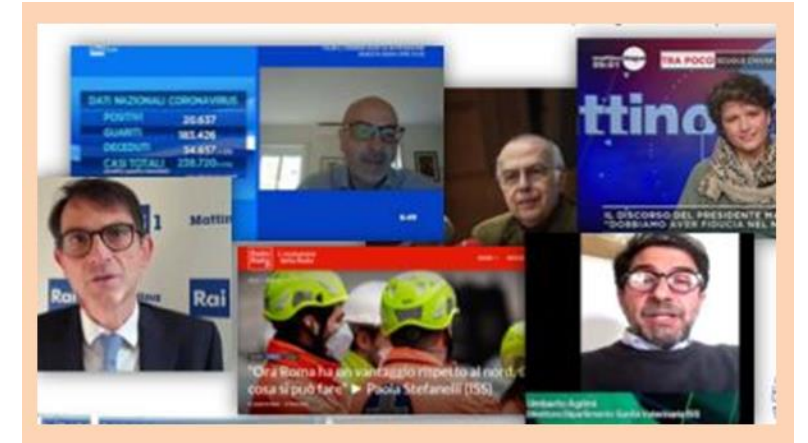
Citation: Gehanno J-F, Grosjean J, Darmoni SJ, Rollin L (2022) Reliability of citations of medRxiv preprints in articles published on COVID-19 in the world leading medical journals. PLoS ONE 17(8): e0264661. <https://doi.org/10.1371/journal.pone.0264661>

More than a quarter of preprints citations were inappropriate
 In 50% differences in the title, the data or the conclusion

The emerging need for a parallel and interrelated response

«infodemic»

Circulation of an excessive amount of information, sometimes not scrutinized with accuracy, which makes it difficult to orient oneself on a given topic due to the difficulty of identifying reliable sources (Treccani).



THE LANCET
Infectious Diseases

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EDITORIAL | VOLUME 20, ISSUE 8, P875, AUGUST 01, 2020

The COVID-19 infodemic

The Lancet Infectious Diseases

Published: July 17, 2020 • DOI: [https://doi.org/10.1016/S1473-3099\(20\)30565-X](https://doi.org/10.1016/S1473-3099(20)30565-X)

Check for updates

PDF [108 KB] Figures Save Share Reprints Request

PlumX Metrics

Article Info

Figures

“We're not just fighting a pandemic; we're fighting an infodemic,” said Tedros Adhanom Ghebreyesus, WHO's director-general, at the 2020 Munich Security Conference. Fake news, misinformation, and conspiracy theories have become prevalent in the age of social

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[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30565-X/fulltext?dgcid=raven_jbs_etoc_email](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30565-X/fulltext?dgcid=raven_jbs_etoc_email)

Research and PH:

Facial masks for population:

<https://www.cnn.com/2021/06/25/delta-who-urges-fully-vaccinated-people-to-continue-to-wear-masks-as-variant-spreads.html>

Responding to community spread of COVID-19

Interim guidance
7 March 2020

Key message

COVID-19 cases are spreading in the community in several countries. WHO is updating its guidance on how to respond to community spread of COVID-19. The updated guidance includes:

- People who are sick should wear a face mask to reduce the risk of spreading the virus to others.
- People who are not sick should wear a face mask to reduce the risk of spreading the virus to others if they are in close contact with someone who is sick.
- People who are not sick should wear a face mask to reduce the risk of spreading the virus to others if they are in a public place.
- People who are not sick should wear a face mask to reduce the risk of spreading the virus to others if they are in a public place.

<https://www.webmd.com/lung/news/20200608/who-changes-stance-says-public-should-wear-masks>

[WEBMD NEWS BRIEF]

WHO Changes Stance, Says Public Should Wear Masks

By Ralph Izzo

Medically Reviewed by Michael W. Smith, MD on June 08, 2020

Mask use in the context of COVID-19

Interim guidance
1 December 2020

The updated guidance is an update of the guidance published on 29 June 2020. It includes more detailed information on the use of masks to reduce the spread of SARS-CoV-2, the virus that causes COVID-19, and practical considerations for public use of masks. The updated guidance includes:

- Mask use in public places.
- Mask use in public places to reduce the risk of spreading the virus to others.
- Mask use in public places to reduce the risk of spreading the virus to others.
- Mask use in public places to reduce the risk of spreading the virus to others.

HEALTH AND SCIENCE

WHO urges fully vaccinated people to continue to wear masks as delta Covid variant spreads

PUBLISHED FRI, JUN 25 2021 2:02 PM EDT | UPDATED FRI, JUN 25 2021 4:34 PM EDT

CNN World Africa Americas Asia Australia China Europe India Middle East United Kingdom

WHO stands by recommendation to not wear masks if you are not sick or not caring for someone who is sick

Use evolution

By Jacqueline Howard, CNN

Updated 0624 GMT (1424 HKT) March 31, 2020

BBC Sign in Home News Sport Reel Worklife

NEWS

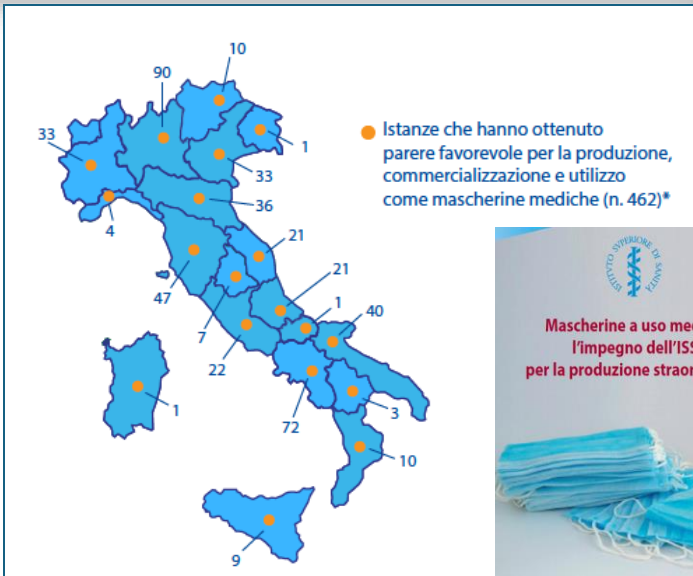
Home | Coronavirus | Climate | Video | World | UK | Business | Tech | Science | Stories | Entertainment

Health | Coronavirus

The Life Project
How to find success during unprecedented change

Coronavirus: WHO advises to wear masks in public areas

© 6 June 2020



Journal of Paediatrics and Child Health

Heads Up | Free Access

COVID-19 and the personal protection debate: An exposition on transmission

First published: 06 July 2020 | <https://doi.org/10.1111/jpc.15054>

edited by Craig Mellis (craig.mellis@sydney.edu.au)

2020
Surgical Masks availability

2020	2021								
marzo	aprile	maggio	giugno	luglio	agosto	settembre	ottobre	novembre	dicembre
27.996.247	75.720.486	92.767.878	114.830.530						

Preparing for the next pandemic threat

D+
PROTOTYPE pathogens
Representative pathogens from families with PHEIC and pandemic potential

D
PRIORITY pathogens
Recognized pathogens anticipated to pose a significant public health threat

R&D for the inevitable
PATHOGEN X

R for Research across all FAMILIES
regardless of perceived PHEIC/pandemic potential

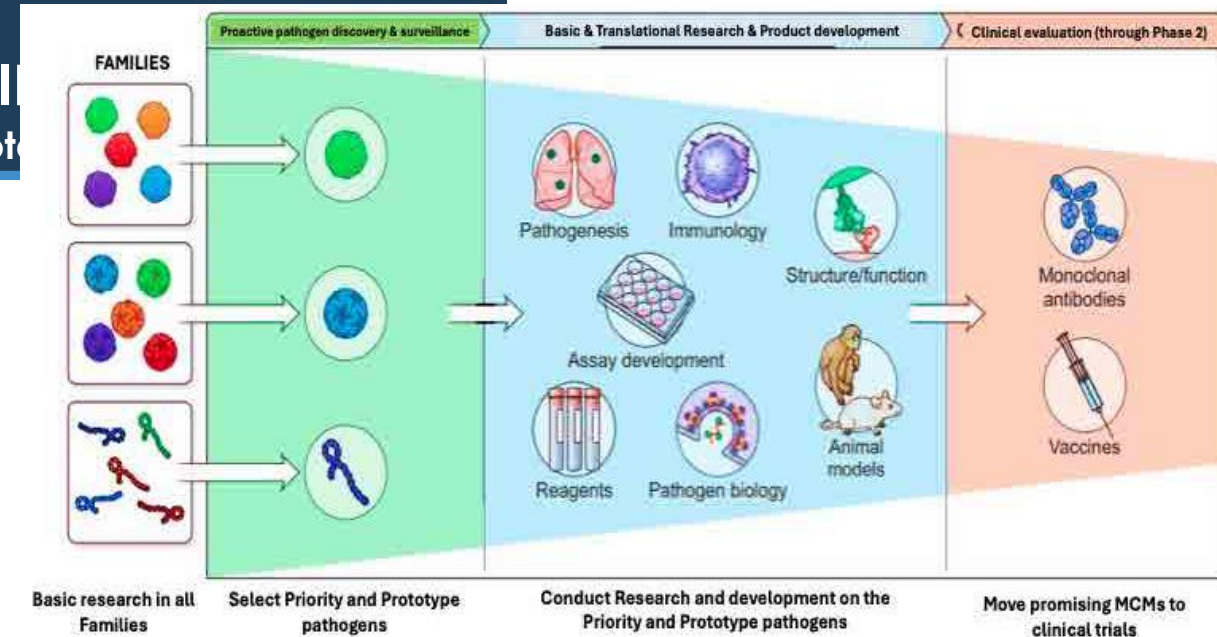
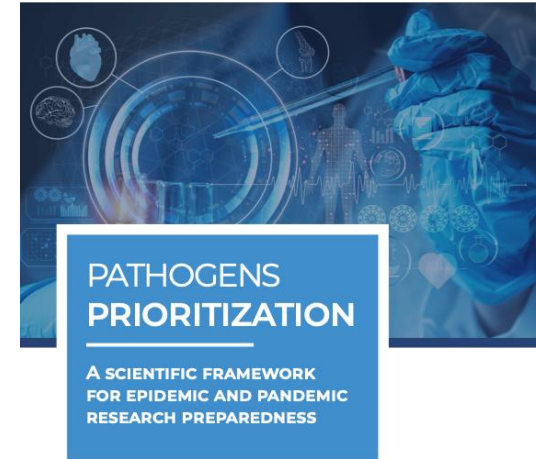


Figure adapted from the NIAID Pandemic Preparedness Plan, 2021

Pathogens prioritizations WHO 2024

Misleading contents and false balance

ing headline from the *Chicago Tribune*: “A ‘healthy’ doctor died two weeks after getting a COVID-19 vaccine; CDC is investigating why.” This headline is misleading because the framing falsely implies causation where there is only correlation (i.e., there was no evidence that the vaccine had anything to

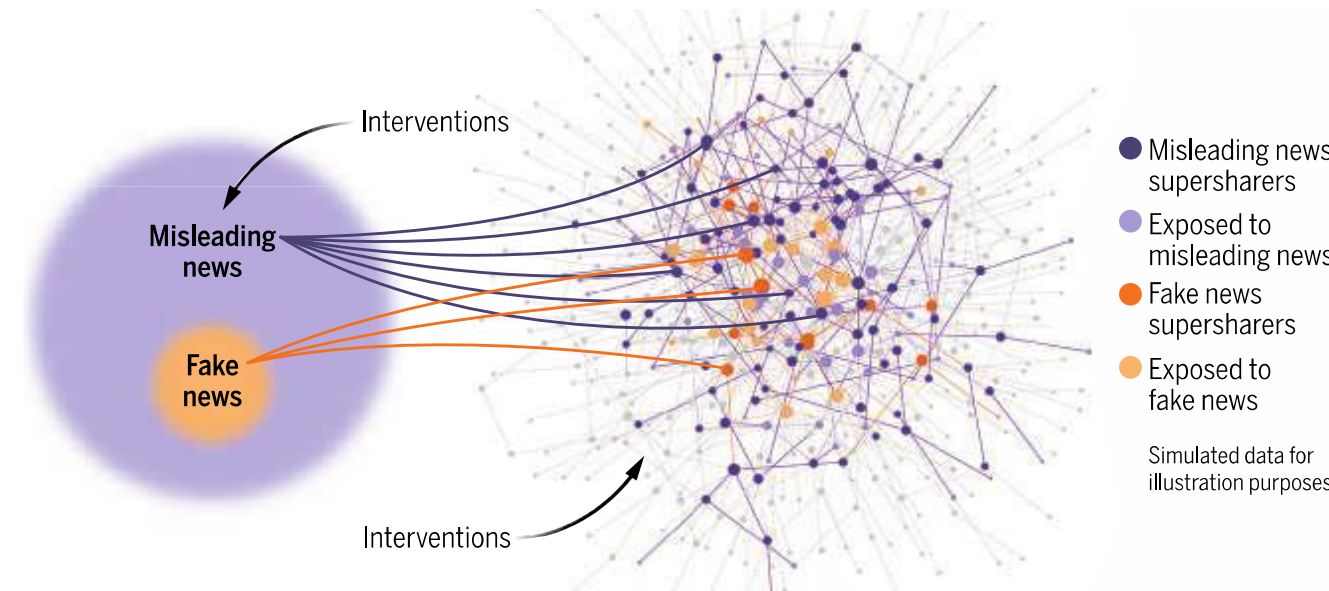
A multi-disciplinary exploration of the press review of the Italian National Institute of Health during the COVID-19 pandemic

Carlotta Fiammenghi , Elisabetta Ceretti , Loredana Covolo , Nicola Pelizzari , Mirella Anna Taranto , Luana Penna , Laura Brunelli , Silvio Brusaferrero & Umberto Gelatti

To cite this article: Carlotta Fiammenghi , Elisabetta Ceretti , Loredana Covolo , Nicola Pelizzari , Mirella Anna Taranto , Luana Penna , Laura Brunelli , Silvio Brusaferrero & Umberto Gelatti (2025) A multi-disciplinary exploration of the press review of the Italian National Institute of Health during the COVID-19 pandemic, *Human Vaccines & Immunotherapeutics*, 21:1, 2567680, DOI: 10.1080/21645515.2025.2567680

Abroader view of misinformation reveals potential for intervention

Misleading claims from credible sources can be more damaging than blatant falsehoods



Italian national newspapers portrayed COVID-19 vaccines during 2020–2021: 5,621 articles from seven newspapers.

Qualitative analysis revealed instances of “false balance,” where anti-vaccine views were presented alongside pro-vaccine perspectives as if equally supported by evidence.

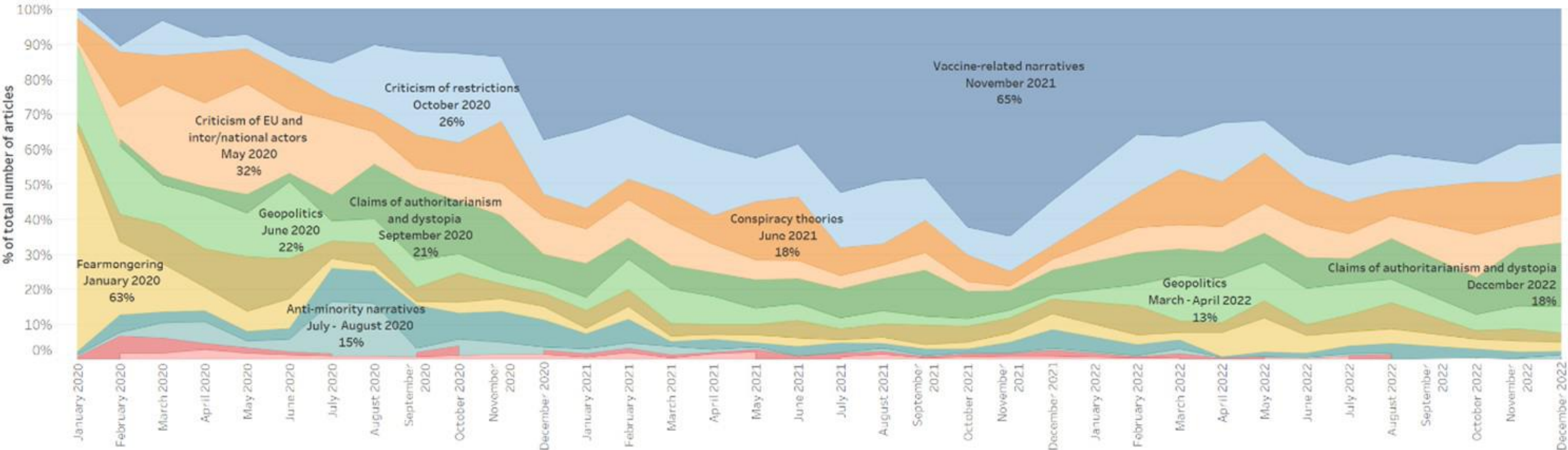
The narratives evolution during COVID 19 pandemic

RESEARCH ARTICLE

Trend analysis of COVID-19 mis/disinformation narratives—A 3-year study

Bonka Kotseva^{1*}, Irene Vianini^{1*}, Nikolaos Nikolaidis², Nicolò Faggiani³, Kristina Potapova³, Caroline Gasparro⁴, Yaniv Steiner³, Jessica Scornavacche⁵, Guillaume Jacquet⁶, Vlad Dragu⁷, Leonida della Rocca³, Stefano Bucchi⁸, Aldo Podavini⁹, Marco Verile⁶, Charles Macmillan⁶, Jens P. Linge^{6*}

Citation: Kotseva B, Vianini I, Nikolaidis N, Faggiani N, Potapova K, Gasparro C, et al. (2023) Trend analysis of COVID-19 mis/disinformation narratives—A 3-year study. PLoS ONE 18(11): e0291423. <https://doi.org/10.1371/journal.pone.0291423>



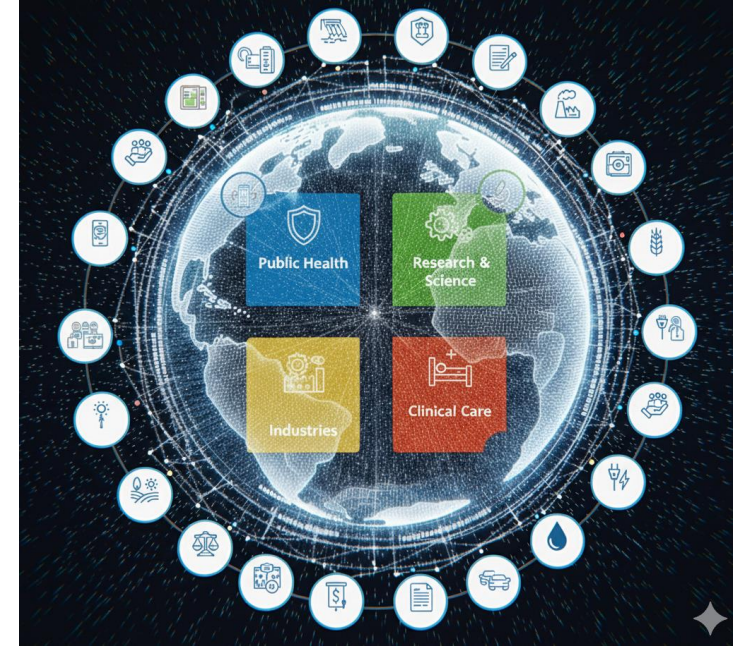
- Supernarrative
- Vaccine-related narratives
 - Criticism of restrictions
 - Conspiracy theories
 - Criticism of EU and inter/national actors
 - Claims of authoritarianism and dystopia
 - Geopolitics
 - Health-related narratives
 - Fearmongering
 - Downplaying COVID-19
 - Anti-minority narratives
 - Other
 - Distrust towards media

Using the transformer-based model, we identified 12 supernarratives that evolved over the three years studied.

The analysis shows that there are often real events behind mis/disinformation trends, which unverified sources misrepresent or take out of context

Public Health and Research

- R&D is part of PH preparedness
- Research results impact on PH possible action
- Research capacity can affect equity
- Open data necessary for for both sides
- Funding streams linking R&D and Public Health priorities
- Common ground the difficulty to communicate uncertainty to public



Use of Corona virus (COVID-19) tests in Italy

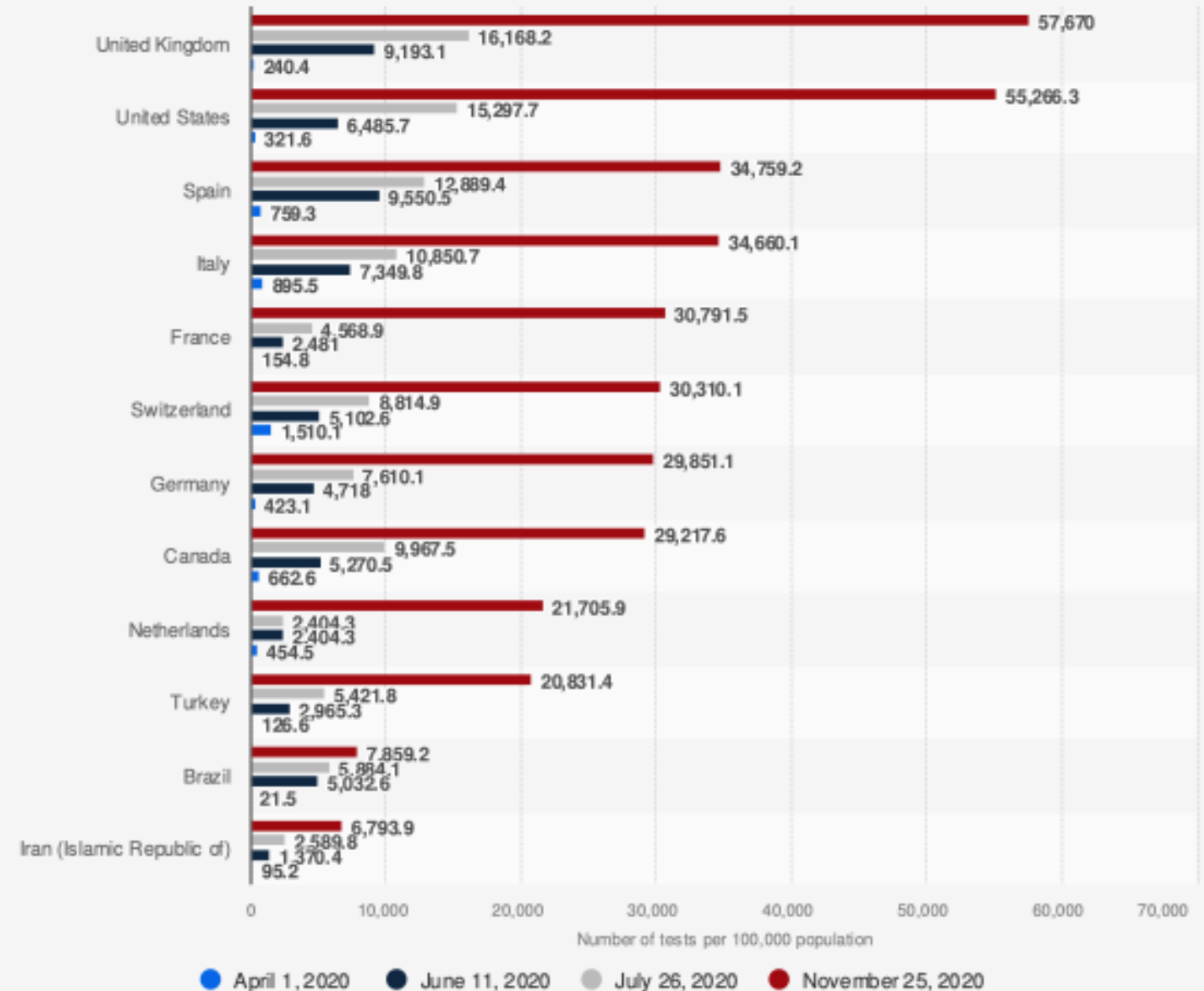
Nasal Swabs by month in 2020
source: Protezione Civile

	Tamponi effettuati
Febbraio	18661
Marzo	488307
Aprile	1472249
Maggio	1899522
Giugno	1511371

Mean N. tests / per day

- February 2020 : 643
- June 2020 : 50.379

Rate of coronavirus (COVID-19) tests performed in selected countries between April 1st and November 25, 2020 (per 100,000 population)



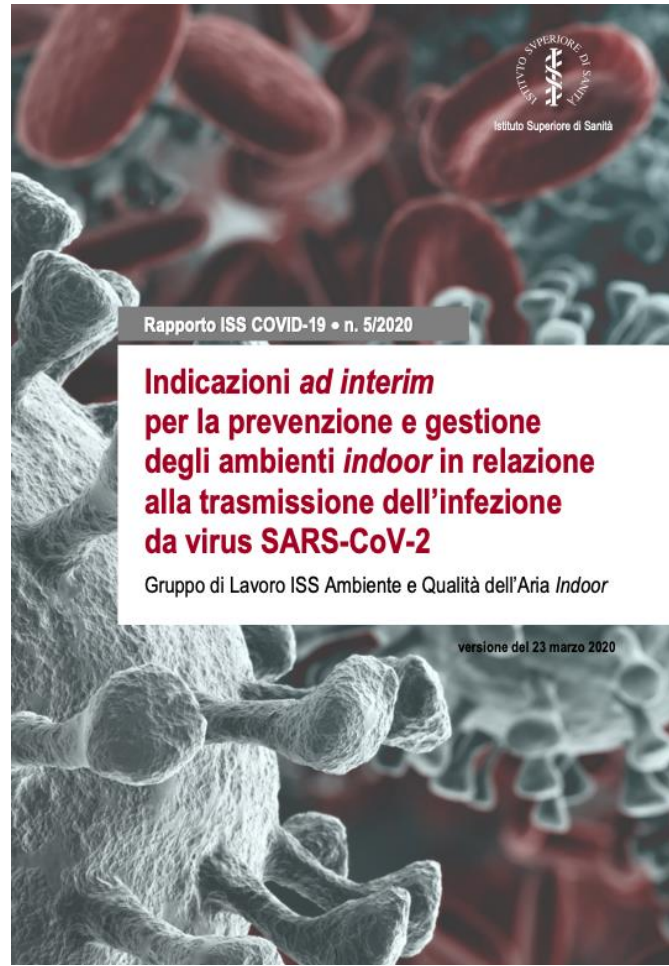
Source
Foundation for Innovative New Diagnostics
© Statista 2024

Additional Information:
Worldwide; as of November 25, 2020

Debate and controversy over air disinfection during the COVID-19 pandemic in Italy

Various devices entered the market from the beginning of pandemic:

- ozone generators,
- UV-C lamps,
- ionizers,
- HEPA air purifiers,
- plasma systems,
- and others.

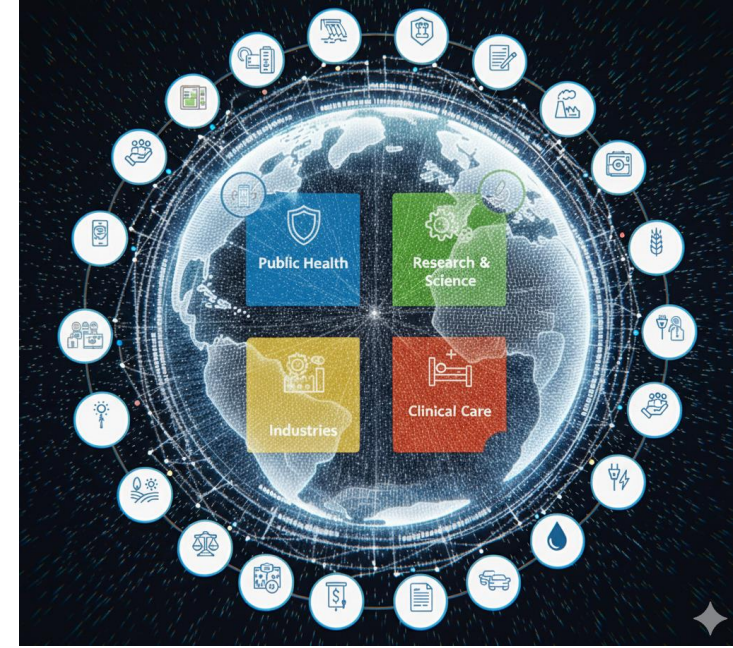


Main debated issues:

- Effectiveness vs efficacy
- Health and safety
- Regulation and misleading claims
- Misinformation and «miracle cures»
- Unsafe use
- Public spending appropriateness

Public Health and Industry

- PH actions influenced by tools and services availability
- Standards, procurement, supply chains predefinition
- Interaction ways preliminary definition
- Equity issues (international, national subnational)
- Public financing and scientific evidence background



Some critical issues

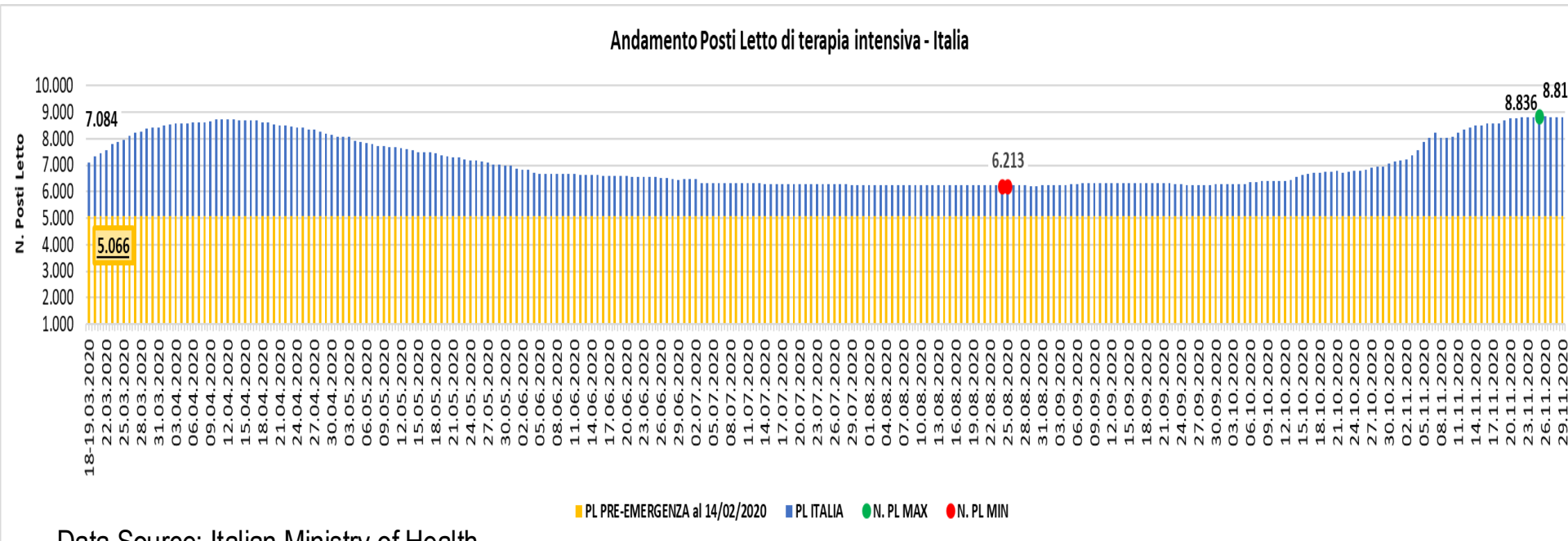
- Different /conflicting standards/tools in the market
 - public opinion disoriented
 - Safety issues
- Availability and equity
- Shortage which brings to prioritization (potentially to black market!)
- Accessibility (different barriers)

Italy's Health Care System Groans Under Coronavirus — a Warning to the World

In less than three weeks, the virus has overloaded hospitals in northern Italy, offering a glimpse of what countries face if they cannot slow the contagion.

Healthcare response : flexible hospital capacity

Emergency upscale of hospital beds (below the example of ICU bed capacity)



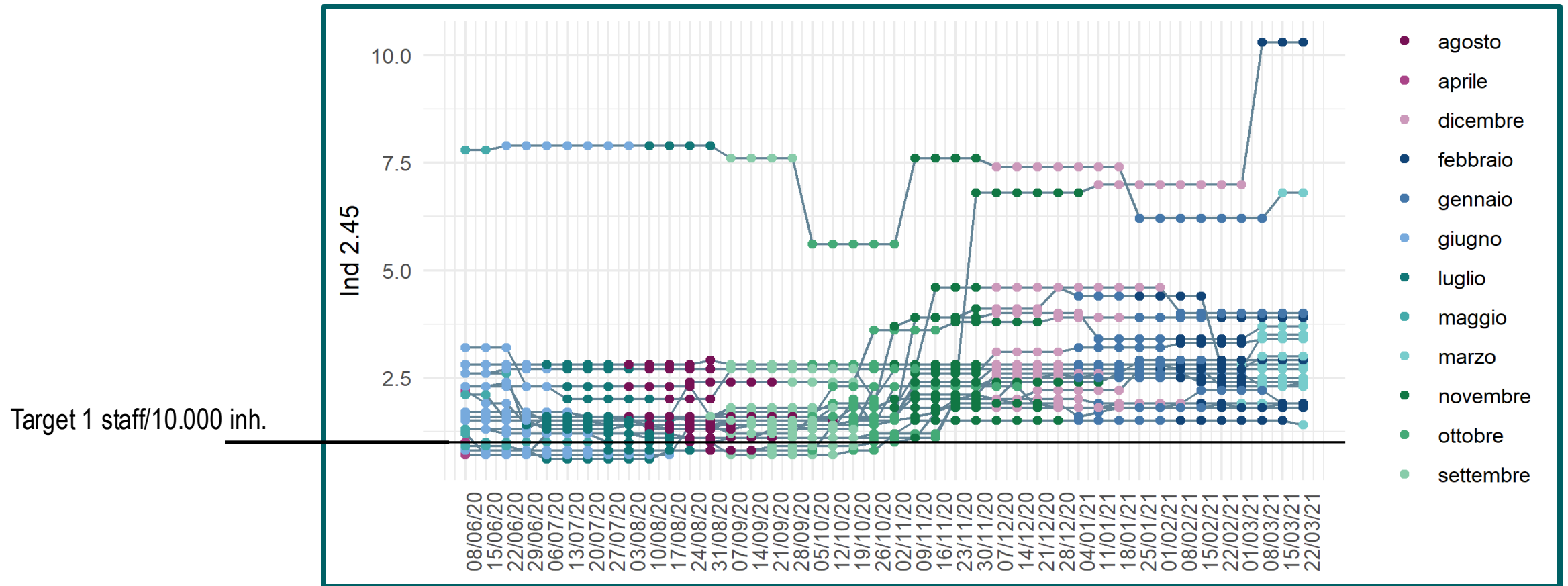
Data Source: Italian Ministry of Health



Fiera Milano (exhibition space), adapted for COVID-19 management

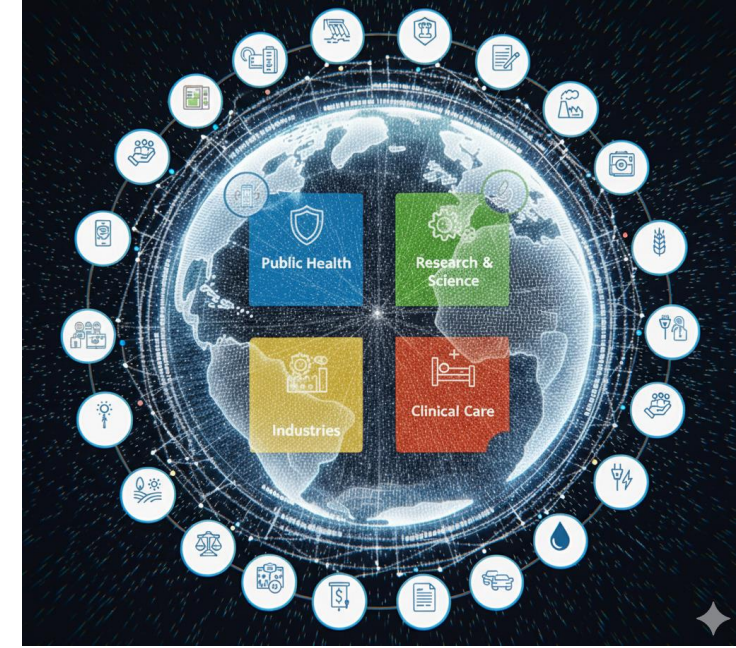
Health system strenghtening : increase in human resources

Human Resources dedicated to contact tracing, diagnoses, monitoring of quarantine and isolation procedures



Public Health and Healthcare

- PH and Health care have complementary roles
- PH often underfunded
 - Unified procurement and ethical allocation frameworks
- Public Health imperative in pandemics is to guarantee response to health needs:
- Interchangeability (partially) of health professionals
- Digital health standards and Integrated/interoperable Information Systems can make the difference



Some critical issues

- Possible different approaches to communication (patient vs community perspective)
 - mixed messages can reduce trust and compliance
- Mismatch in the role played
- Competition in resources allocation:

Final Remarks

- Should we remind to communities what is Public Health and its role?
- Public Health still is
 - a mix of science and art
 - adapted to local situation
 - coordinated at national, international and global level.
 - needs a multilateral approach
- Training in Public Health human resources
- The range of possible Public Health actions (science and art) is always influenced by interactions with Research, Healthcare and Industry :
 - Tintegration on routinary base
- Public Health, Reseach, Healthcare and Industry play together in a complex system game
 - acting as a team increases the best possible response and promotes «Trust» in the community.
- Research on Communication understanding and management is a priority

Health Magistracy



«Salus Populi
Suprema Lex Esto»

