



COVID-19 epidemiology, impact and responses in 2021

A summary report of the track on COVID-19 epidemiology, impact and responses at the 14th European Public Health conference 2021

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The 14th European Public Health conference was held 10 - 12 November 2021, online. This report summarises the key messages from the track 'COVID-19 epidemiology, impact and responses', and plenary sessions 'Learning from the pandemic and getting ready for the next one' and 'Capturing the breadth and depth of the digital health era – beyond the COVID-19 pandemic'. A list of the sessions that were summarized for the report can be found in the Annex. Subscribe to the EUPHA Infectious diseases control section on the section's webpage, right menu, [here](#).

| Key Messages

1. Communication played a crucial role in the pandemic in several ways, from risk communication to infodemic management, and investments in health literacy are advocated for the future.
2. In addition to being a health emergency, COVID-19 also raised a legal regime governed by the principles of legality of administration and should use the emergency law. Implementation of legal determinants during the pandemic faces many challenges.
3. Digital health technologies have undergone intense development during the pandemic, and this calls for attention regarding systems' transparency and reliability, and to the rights of individuals.
4. The pandemic had major implications on the management of non-COVID health issues, such as primary health care and chronic conditions, and will also have an impact on future approaches.

| Introduction

The COVID-19 epidemiology, impact and responses sessions at the 14th European Public Health conference were one of the main tracks of the scientific contributions to the conference. In the last two years, the attention of the world has been almost completely absorbed by the pandemic emergency and its developments and implications, and this was reflected by the attention given during the conference to the themes related to this health crisis.

One of the issues that received the most attention was certainly communication during COVID-19 pandemic. During the sessions, aspects of public health communication were analysed and discussed, ranging from reports of individuals' and European countries' experiences during the various phases of the pandemic, to the analysis of the strategies used, with the contribution of professionals including journalists and editors of scientific journals. A vivid debate was held about the lessons learned from the pandemic experience in order to understand how to design the future of scientific communication, not only for information related to the COVID-19 emergency but more generally for health-related issues.

Related in some way to this theme was the debate around new digital health technologies, which has become prominent due to the sudden surge in available technologies and their use during the pandemic. Their rapid implementation has certainly brought countless benefits for the health of the population, but it also raises questions about transparency, accessibility of the data collected, and respect for the fundamental rights of the individuals concerned. The debate involves various professionals, not only usual public health stakeholders, but also technology and human rights experts, and seeks to map out the way forward for a conscious and fair use and development of digital technologies, which will play an increasingly important role in the future in improving community health.

The COVID-19 epidemiology, impact and responses sessions complemented the EUPHA Infectious diseases control section led by the newly-elected section president Ricardo Mexia (National Health Institute Doutor Ricardo Jorge, Portugal). Several sessions at the conference were (co-)organised by the section, and the joint network meeting was the time to define the vision of the years to come and the agenda for future projects.

The 14th European Public Health conference indicated the past and future main challenges that COVID-19 poses and public health has to face, which include: a) continuing to improve the assessment of the determinants in the COVID-19 pandemic; b) keep on monitoring the wider impacts of COVID-19 on the population; c) continually adjusting communication strategies especially in the face of changing evidence; and d) tackling the management of digital resources used for data collection and health purposes.

| Main outcomes

Implications of COVID-19 on public health and the future after the pandemic

The COVID-19 pandemic has affected almost all areas of public health. Throughout the sessions, the common message that emerged was that public health should take advantage of the COVID-19 experience to address improvements and focus on lessons learned.

Impact analysis was one of the first topics to be addressed, with a pre-conference dedicated specifically to alteration of safety, behaviour and injury patterns during the pandemic and beyond. In most European countries, the number of road accidents has decreased during the pandemic due to the reduced number of cars on the road, which by itself resulted in the increased intensity of collisions as the speed increased (1).

Broadening the view, management of chronic conditions was also affected. The lockdown and the pandemic have led to late diagnosis of chronic diseases such as type 2 diabetes or cancer. Some of the causes for this are a fear of visiting health care centres and physicians, increased hours of staying at home, and deviated focus on the pandemic rather than other diseases. Unfortunately, COVID-19 emerged during an already ongoing epidemic of chronic diseases. This other epidemic was worsened by the COVID-19 pandemic, as pre-existing health conditions worsened as well as unfavourable social determinants (e.g. unemployment risk, poverty trap, risk of isolation, etc.). Nonetheless, some examples of positive changes were reported during a roundtable on health determinants in the pandemic: from a cross-sectional survey in the Netherlands, changes to healthier lifestyle after the pandemic were recorded in 19.3% of the population.

Another area that was given prominence and space was the primary care sector, with a workshop dedicated to monitoring the response of health systems to COVID-19. This sector was the frontline dealing not only with the pandemic, as the focus of care progressively shifted from hospitals to primary care. Pressure from the new challenges brought on by COVID-19 was faced even from the countries with well-resourced health systems. In a near future, primary health care will have to remember the multidisciplinary collaborations seen during the pandemic, improve its risk stratification approaches and sharing 'how to' approaches, and continue to use and build on strides made in digital innovations where beneficial. Balanced choices have to be made about maintaining access to essential care and treatment of the novel disease.

The pandemic also showed that people also experienced social and psychological problems which resulted in heavy economical costs. Studies on this topic were extensively reported in a dedicated session on COPERS, an international longitudinal study on coping and resilience during the COVID-19 pandemic, showing an increase in psychological distress especially among female, younger and older age groups, and in eastern European countries (2).

One workshop was dedicated to the prison populations which include socially deprived and marginalised communities and vulnerable groups. The COVID-19 prevention and control measures in prison settings across Europe were heterogeneous and the burden of disease was measured using different indicators. Data from WHO Health in Prisons Program (HIPP) Surveillance Dataset suggest the level of infections in prison, in some cases and periods, were double of that observed in the general population (3).

Given the complexity of monitoring the wider impacts of COVID-19 on population health, we found the session organised by WHO Regional Office for Europe of particular interest, which presented a tool for selecting indicators to signal and monitor the wider effects of the COVID-19 pandemic on population health (4). Developing a conceptual framework is a useful approach for disentangling and structuring the wider health impacts of the COVID-19 pandemic; however, when interpreting indicator values one must 'bear in mind that reality is more complex than the framework', to use the developers' own words.

Health communication and risk management

The impact of Disinformation is another element that was highlighted during this pandemic and constituted one of the main topics that nurtured a vivid discussion during the conference. A plenary session was entirely dedicated to communication and public health and discussed communication strategies during the pandemic, and indications for the future of health and risk communication to the population. The first pandemic in the internet era was accompanied by the unique paradox of the availability of too much information, which unfortunately came along with significant misinformation spread by individuals and politicians, and also instances where the information was given 'too fast and too early' by the scientific community (e.g. the chloroquine studies). In addition, the media appeared overall unprepared to deal with the new scenario, with communication

frequently left to freelance professionals rather than to the few expert science journalists. The major challenges identified in the communication process were political-technical interaction and integration, uncertainty (from science being produced 'live' resulting in confusion for non-scientists), and slow reaction of national organizations in response to the new evidences. Nevertheless, the plenary session also offered the positive impression of how science communication is nowadays a priority, as three EU-Horizon 2020 projects currently point towards the identification of new communication models to overcome outdated standards that are no longer suitable.¹ Comprehensive risk communication strategies that integrate patients' into decision-making, enhance adherence to the measures that are proposed/imposed by policy bodies.

"We're not just fighting an epidemic; we're fighting an infodemic." - Dr. Tedros Adhanom Ghebreyesus, WHO Director - General

The role of behavioural and social sciences was also given wide emphasis with relation to COVID-19 behaviour. In fact, successful adherence to COVID-19 rules relies on understanding behaviours. Difficulties to implement COVID-19 protective measures also resides in cultural diversity, often accompanied by mistrust, leading to non-adherence to restrictions. The study conducted by the Dutch Corona Behavioural Unit focused on how communication and policy during the pandemic affect knowledge, attitudes and behaviour and highlighted that context is often key to understand which interventions work best (5).

Overall, risk communication and community engagement have never been so prominent in emergency responses, and have become a true public health intervention. These changes call for new areas of research and policy making, focusing not only on

¹ The CONCISE project (<https://concise-h2020.eu/>), Quest project (<https://questproject.eu/>), and rethink project (<https://www.rethinkscicomm.eu/>).

medical aspects but also on other scientific disciplines which focus on people behaviour and perceptions. This is also underlined by WHO, which assigns an important role to behavioural science in the fight against pandemics, alongside other essential expertise in fields such as virology, epidemiology, and medicine.

New implications from digital era

The implications of the digital era on the pandemic, and beyond, found primary attention in another plenary session, which certainly offered some of the most novel insights on the topic. The discussion started from an assumption, namely that digital health is no longer an adjunct to public health means, it is indeed an asset. From this assumption, emphasis was placed on the importance of good use of data to guide good decision-making, and examples were given on how to use innovation to mitigate the pandemic. While the positives of the digitisation of health and the massive and rapid entry of digital health technologies into practice are certainly evident, they also open up a whole new but much-felt debate, which starts from the credibility of the architecture to gather and use data. To give an example, the vaccination/immunity passport (also known as “green pass”) was introduced and developed to protect public health and ensure freedom of movement. But are they in line with human rights? Read the [‘Digitalization in health in 2021’](#) track report to learn more about the discussions and key messages from the digital health track.

| Conclusions

Almost two years after its emergence, the COVID-19 pandemic still has profound and complex implications on public health systems of European countries. The sessions at the 14th European Public Health conference outlined the challenges for the future of public health. Data reported from the COVID-19 Health System Response Monitor (HSRM) in different European countries bring out both deep asymmetries and points of convergence

(6). It is hoped that the future will see countries increasingly aligned in their response to the still ongoing pandemic, especially in terms of monitoring outcomes, communication and use of health technologies. There are still many challenges to be met, and in some cases they are completely new compared to the past of public health. Occasions such as the World Congress on Public Health 2020 (7) and the annual European Public Health conferences, with the special contribution made by EUPHA's Infectious diseases control section, offer an opportunity to share experience and knowledge in order to move forward in a unified and sustainable way along unexplored paths.

To conclude, preparedness should include both the general population and health care workers. It should be a systematic approach toward building preparedness protocols including different sectors to deal with the problem. The pandemic showed that not only the health sector needs to address the problem: multisectoral approaches inspired by synergic actions are the ones which will lead to a successful response on public health emergencies.

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| Annex - List of the sessions attended for this track report

Wednesday 10th Nov 2021

INJU - Safety challenges and altered injury patterns in Europe during COVID-19 and beyond.

GERM - Re-boosting public health in Germany – bottom-up and top-down initiatives with the potential for an informal public health system.

PL0 - Opening Ceremony: Public health futures in a changing world.

PL1 - Plenary 1: Public health practice, training and workforces for the future - Lessons from the pandemic.

1.B. - Round table: Biological, socioeconomic, legal and environmental health determinants in the COVID-19 pandemic.

2.C. - Round table: COVID-19.

Thursday 11th Nov 2021

3.B. - Workshop: Monitoring the wider impacts of COVID-19 on population health.

PL2 - Plenary 2: Communication and public health.

4.B. - Workshop: Data collection during COVID-19 pandemic and its policy impacts.

4.F. - Round table: Clear communication in the face of changing evidence: the example of COVID-19 prophylaxis.

5.B. - Workshop: Combining surveillance, survey and outbreak data for monitoring COVID-19 in German day care centres.

5.C. - Workshop: COVID-19 response in Europe one year on: a tale of five countries.

6.F. - Workshop: Risk communication in the context of a pandemic event.

PL3 - Plenary 3: Learning from the pandemic and getting ready for the next one.

7.C. - Workshop: Dashboards for COVID-19: Lessons learned.

7.K. - Workshop: The impact of COVID-19 response measures on health and healthcare for people in detention in Europe.

Friday 12th 2021

8.C. - Round table: COVID-19: What have we learned? What are the public health challenges?

PL4 - Plenary 4: Capturing the breadth and depth of the digital health era – beyond the COVID-19 pandemic.

9.B. - Workshop: Burden of disease of COVID-19: strengthening the collaboration for national studies.

10.B. - Workshop: The COVID-19 Health Systems Response Monitor: what can we learn for the future.

11.G. - Round table: EU Digital COVID Certificate: Hope for restoring freedom or simply opening Pandora's box?

11.B. - Workshop: COPERS - an international longitudinal study on coping and resilience during the COVID-19 pandemic.

PL5 - Plenary 5: Climate change, justice and public health.

PL6 - Closing Ceremony of the 14th European Public Health Conference.



The European Public Health Association, or EUPHA in short, is an umbrella organisation for public health associations in Europe. Our network of national associations of public health represents around 23'000 public health professionals. Our mission is to facilitate and activate a strong voice of the public health network by enhancing visibility of the evidence and by strengthening the capacity of public health professionals. EUPHA contributes to the preservation and improvement of public health in the European region through capacity and knowledge building. We are committed to creating a more inclusive Europe, narrowing all health inequalities among Europeans, by facilitating, activating, and disseminating strong evidence-based voices from the public health community and by strengthening the capacity of public health professionals to achieve evidence-based change.



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