



Digital Health in 2019

A summary report of the track on Digital Health

at the 12th European Public Health conference 2019 in Marseille, France

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The 12th European Public Health conference was held between 20 - 23 November 2019 in Marseille, France. This report summarises the key messages from the track on Digital Health.

| Key Messages

1. As public health professionals, we must lead the vanguard of the digital health revolution in order to guarantee that innovation is concurrent with public health goals.
2. Technology is a tool; it is up to us to use it effectively and implement it in a way that does not propagate health inequity.
3. The ethical implications of new health technologies must be discussed in a proactive and anticipated manner, before those technologies impact public health.

| Introduction

The “digital transformation of health services” is seen as a complex, but an important and influential process that has already had a substantial impact on current health care in Europe. Health systems are expected to have a further fundamental impact on health care delivery in the future. Digitalization refers to the use of digital technologies in the context of the production and delivery of a product or service. Such digital technologies allow health care services to be organized, produced and delivered in new ways. Digitalization is therefore less of a ‘technical’ process as in digitization (see Figure 1), but mainly an organizational and cultural process (Walter Ricciardi, 2019). Among ten threats to global health identified this year by the World Health Organization (WHO), many of them are related to or have great potential to be tackled by digital health. Vaccine hesitancy, for example, has lack of confidence as one of its main drivers, which is partly fuelled by online misinformation and disinformation (World Health Organization, 2019; Martin McKee, 2019).

Within its mission as a leading public health organization in Europe, European Public Health Association (EUPHA) is committed to supporting the process of effective public health digitalization by ensuring that the digital potential is ‘used’ to pursue and fulfil European public health goals for improving health and well-being as well as narrowing health inequalities (Anna Odone, 2019). For that reason, the European Public Health (EPH) Conference 2019 featured two full tracks on Digital Health, with a programme developed in collaboration with the Digital Public Health (DPH) Conference series, a world leading annual interdisciplinary event bringing together experts and audiences from public health, computer and data science, medical technology industry as well as NGOs.

Beyond that, the launch of the European Journal of Public Health [Supplement](#) “Digitalization: Potentials and Pitfalls from a Public Health Perspective” took place at the Conference. It comprises not only of thematical issues around the digital health but also of its governance in Europe, opportunities and ethical considerations which is at the end rounded up comprehensively with the paper “Public health digitalization in Europe: EUPHA vision, action and role in digital public health”. Between workshops, round tables and oral presentations, many aspects of digital public health were discussed during the event, including the potential of small islands and countries as digital innovation hubs, the use of digital health technologies in the humanitarian context, the ethical challenges and health opportunities of Artificial Intelligence (AI) and Big Data, the role of social media in public health communications, the online anti-vaccination movements and the impact of digital technologies on health management (EUPHA, 2019).

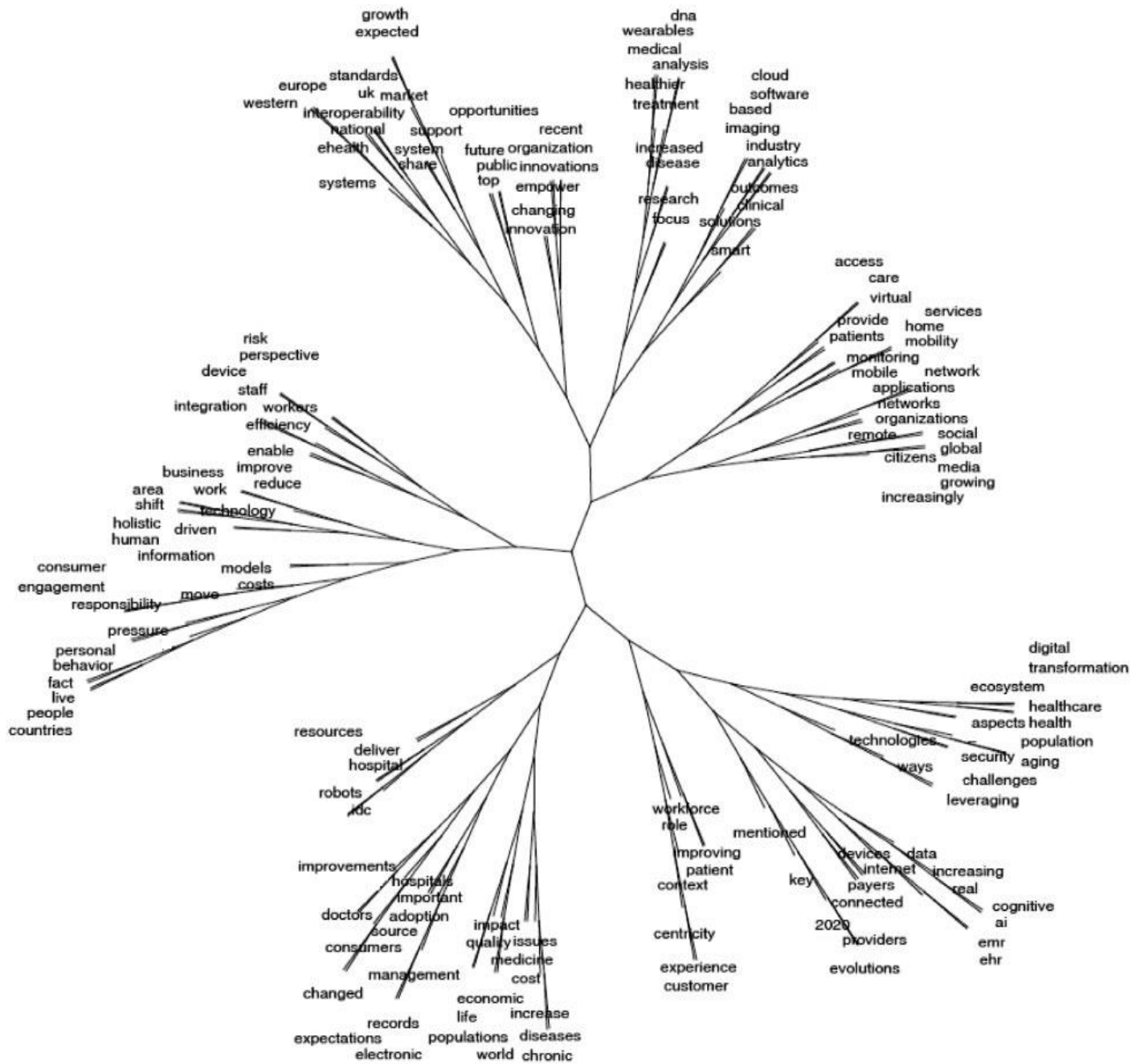


Figure 1 – Illustration of the complexity of the digital transformation of health services.
 Source: [2]

| Managing the adoption of new technologies

Driven by the global market, private companies and other stakeholders invest significant resources in digital innovation every year, with no signs of slowing down, and the fast-paced advances of the technological world are affecting every aspect of our lives, including public health. Many of the discussions had at the EPH 2019 tried to answer the following question: **How can we harness the momentum of the “Digital Health Revolution” in order to empower public health goals?** Though digitalization may bring many changes, it should not alter the health system goals of quality, accessibility, efficiency and equity. As stated by EUPHA, the pillars for a successful European strategy for public health digitalization are as follows (Anna Odone, 2019):

- **Political commitment** of governments and leaders to implement digital public health strategies at national level and across Europe
- **Normative and regulatory frameworks** that are clear and allow for interoperability
- **Technical infrastructure** that can support the necessary implementation
- **Economic investments**, both public and private
- **Training and education** of the public health workforce in order to make the most of digital solutions
- **Research** on the impact, efficacy and cost-effectiveness of digital health interventions
- **Monitoring and evaluation** of digital solutions based on targeted, solid and shared Health Technology Assessment (HTA) methods

Several examples of the benefits of digital public health solutions were given at the Conference. Speakers from France, Great Britain, Greece, Italy and Malta showed how digital health solutions could create access to health services on islands and in remote communities. For instance, in the case of Italy, a mobile application was used to facilitate to find the location and aid of individuals in need of emergency care in the most remote regions of the country. In France, teleradiology was used to provide medical care to Caribbean islands on which there has been no access to that kind of specialized care. Other innovative solutions included the Guardians of Health platform, which was effectively used to facilitate epidemiologic surveillance during the 2016 Olympics and Paralympics in Rio de Janeiro, and another one from the iNternational Resource for Infection Control (iNRIC), a government funded platform that consists of an easy to navigate, one-stop-shop for quality-assured infection prevention and control resources for medical staff. The great public value of digital health in infectious diseases has been discussed, as digital tool can disrupt the spread of infections.

| Health equity

Currently many countries in Europe are already experiencing increasing relative and absolute health inequalities. Albeit the many examples of successfully implemented digital public health solutions, there is a constant risk that digital technologies will increase health inequities associated with increased age, lower level of educational attainment and lower socio-economic status. The resulting positive or negative impact in health equity is dependent on how those solutions are implemented. Geographical inequity, for instance, may increase as a result of poor infrastructure, but may decrease (as mentioned above) if digital technologies can be effectively widely deployed to compensate for health workforce and health system deficiencies (Natasha Azzopardi-Muscat, 2019). Three main ideas were recurrently discussed during the EPH Conference 2019:

How to assess health equity: not only the whole field of assessing the impact of health technology has often a paucity of evidence, as equity is usually not among the aspects assessed when researching the effects of a digital health solution. It is paramount that health equity becomes one of the main aspects that can support decision making about what digital health solutions to fund or discontinue.

The need for “equity by design”: the development of new healthcare technologies is often driven either by market opportunities or by the need to solve issues of a specific population. Sometimes the resulting propagation in health inequities is only understood after their implementation. Thus, it is necessary to account for health equity from the beginning, designing digital public health solutions with equity as a priority and a requirement.

The intersectionality of health equity: although problems may arise that are specifically related to the implementation of a digital health solution, equity is a multidimensional problem that needs to be approached accordingly. For instance, guaranteeing access of a new healthcare technology to every citizen does not prevent health inequity if there is a proportion of the population who is digitally illiterate and will not be able to make the most of it. The ability to pay for new services, level of education, age, computer skills, literacy, baseline penetration levels, cultural attitudes, infrastructure around digital technology and culture are all factors that must be accounted for.

A final key aspect for European countries is that most of the new technologies that are developed do not have any borders, as global enterprises, social media, health care apps, online resources and other platforms influence the global population. However, governance frameworks at national and international levels have not kept up with the digital industry and there still seems to be a belief that health systems can be fully governed at regional or national level with visible reluctance to relinquish regulatory authority to the level of the European Union, which might be exactly what is needed: an international or global authority in order to adequately regulate global technologies (Natasha Azzopardi-Muscat, 2019).

| Ethical implications

Innovation is necessarily associated with to some degree of uncertainty, and not every effect of a digital health solution can be predicted or prepared for. However, one area should be mandatory to consider before the advent of any new technology: the ethical implications. The main ethical challenges of digital public health solutions' implementation can be divided into two main phases (Caroline Brall, 2019):

Before utilization of digital health

- **Access**
- **Truthful information**
- **Empowerment**
- **Informed consent**

During utilization of digital health

- **Fairness in storage, access, sharing and ownership of data**
- **Dignity**
- **Autonomy**

Some key ethical implications discussed at EPH 2019 were data ownership, privacy and transparency. Many of the digital health solutions offered to patients today are not clear about the legal implications of the data they are collecting, its purpose and possible uses, as well as the nature of that data. Future regulations should focus on demanding transparency from companies that develop those products in order to safeguard its users, providing them with relevant and easy to understand information about the way their data is collected, shared and even monetized.

The peculiarity about ethical problems is that they seldom have an easy and permanent answer, and they require constant debate with frequent reconsideration of updated evidence and values. Those debates begin in a proactive manner, always before a new technology is implemented, to allow for a level of maturity in the discussions about the matter that can maximize the prevention of unethical consequences.

| Conclusion

Acknowledging the importance of digital technologies in the future of Public Health, EUPHA approved a new section this year at the EPH 2019: Digital Health Section. The Section will work across competences, disciplines and settings to support the process of public health digitalization in Europe, keeping it aligned with EUPHA's strategic objectives and mission. It will aim at building advocacy, and at gathering, producing and disseminating evidence on the need for and on the impact of digital solutions for public health. It will bring together a core group of experts in selected digital health aspects, facilitate the exchange of national-level best practices and stimulate the Europe-level debate to place digital public health high in the EU policy, research and education agenda (Anna Odone, 2019).

The Digital Health Section will give continuity to the discussions held at the EPH conference 2019 and bring updated and innovative views to the World Congress of Public Health in 2020. The digital format of the Congress is very promising and an example of the opportunities that digitalization brings. We are eager to support the World Congress of Public Health going digital. What about you?



Anna Odone, EUPHA Digital health section president, on the stage at the European Public Health Conference in Marseille 2019.

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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 20'000 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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