

Plenary 4: Health technologies, personalized health and equity: conflict or alignment?

Friday 11 November, 17:50 – 18:50

Organised by European Commission and European Observatory on Health Systems and Policies

Abstract:

An individual's health depends on four levels of determinants: genetic predisposition; individual lifestyle with regards to behaviours such as nutrition, physical activity or substance abuse etc; socio-economic determinants including living and working conditions; and the health system's performance.

Modern technologies are in the process of revolutionizing how we tackle these determinants, whether through genomics; personalized diagnostics, treatments and prevention; telemedicine and IT solutions (health apps, smart watches, etc.), big data or the internet of things.

Are these changes supportive or disruptive for traditional public health practice? Do they spell the end of population health approaches in favour of individual choice and behaviour interventions? How do they fit into the traditional "trilogy" of promotion, prevention and cure? What are the implications for health inequalities? And what can the public health community do to adapt to this changing field?

Background:

- In one of the plenary sessions under the 6th European Public Health Conference, in 2013, [Sir Muir Gray](#) reflected on the onset of the third healthcare revolution, which to his own words would "come out of the barrel of the Smartphone" and would see data centres replacing the cathedrals and train stations as the totems of human civilization of our times. He further reflected on the paradigm shift in delivering care, moving from hierarchy to network mode and the rising importance of the self-care component.
 - In the same conference, Professor [Johan Mackenbach](#) presented "[Successes and Failures of Health Policy in Europe](#)" where he provided new insight into the uptake and implementation of evidence-based interventions in public health. The selected interventions were not out of the ordinary: seat belts, cancer screening, vaccination or smoking bans. And yet the rate of uptake varied hugely, with a significant public health burden. Prof. Mackenbach further quantified the huge potential savings in health expectancy and disability-free life years if all EU Member States could achieve the same degree of uptake of such interventions as the "top of the class", i.e. Sweden.
 - The session in the present conference will try to link these two discussions –and will aim to do so by shedding light to the potential for significant public health benefit, as well as the risks of disruption that new technologies can bring.
 - [Peter Piot](#), in his article [Innovation and technology for global public health](#) asks a series of key questions: Who sets the agenda for technological innovation? How do we ensure equity and access for all? How do we engage people?
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- The proposed plenary proposes a series of additional questions: is technological innovation supportive or disruptive for traditional public health practice? Does it spell the end of population health approaches in favour of individual choice and behaviour interventions? How does it fit into the traditional "trilogy" of promotion, prevention and cure? And what are the implications for health inequalities? Indeed, if Prof Mackenbach identified limitations to the traditional public health approach, on evidence-based (and beyond any contestation) interventions, how can we ensure that the public health community and its dedicated professionals will be able to navigate a much more complex field?

Session outline:

The panel is structured purposefully to bring together people from very different organisations and backgrounds. Moreover, it supports the aim of providing public health professionals with insight into how industry and healthcare providers are moving to bring new technologies to the fore, as well as their perspective on the value of innovation, including their potential for disrupting traditional connections and relationships in the public health arena.

[Rod Collins](#), Director of Innovation, Optimity Advisors (US) and [Fabrizio Renzi](#), Director Technology and Innovation IBM Italia, are expected to describe the potential implications of key technological innovations such as the encryption behind blockchain technology, artificial intelligence and the internet of things. They will, in a sense "pitch" for the potential benefits arising from rapid technological change and the many uses that can be made of information, the essential commodity of our time.

They are not however expected to be "public-health" compatible, in the same way that the technologies that they bring forward do not have this purpose. It is for the public health community at large, including academia, practitioners and policy makers, to understand and harness the potential of such technological change, while safeguarding the public health interest.

This public health perspective will be brought foreword by the representatives of EUPHA and the European Commission. [Martin McKee](#) (LSHTM, United Kingdom) will focus on what the public health community needs to do to shape the agenda of innovation, to harness it for the common good and enrol it into existing or yet to come public health tools. [Andrej Rys](#), (DG SANTE) will show how the EU is shaping policies and approaches that can help bridge the potential gap between intended benefits and unwanted effects of technological innovation.

The session will be moderated by [Anjana Ahuja](#), science writer and commentator and Financial Times contributor.