

The patient-doctor relationship in the digital era. The impact of social media and influencers on human behaviour and perceptions

Context

The Covid-19 pandemic highlighted the many disparities in human behaviour related to health and healthcare. On the one hand we had the infodemic that spread even faster than the virus. The term refers not only to false or incomplete information, but also to the unstructured, raw data that resulted during the efforts in combating the pandemic. The society, the governments, the people feel the need for direction. The Infodemic grows and spreads faster in populations where the literacy level (health literacy, scientific literacy, technologic literacy, digital literacy - including social media literacy and so on) is reduced. And multiple studies showed that the more people are prone to listen to false news and incapable of filtering them, the more they don't comply with the measures imposed to limit the transmission of the virus¹.

On the other hand, the role of social media and influencers is more important than ever in influencing individual behaviour - this health determinant impacts by no less than 36% our health². Recently, the World Health Organization highlighted the role of influencers and social media in promoting healthy habits³ (e.g. the Ronaldo and Coca-cola case) and the positive impact they could have on children, adolescents and young adults. But how prepared are these influencers (when they are not Doctor Anthony Fauci, Eric Topol or Sanjay Gupta) to understand and relate to the health subjects?

All this background noise (because the patients are first of all citizens, persons) is reflected in the patient's relationship with the attending physician and on how the patient relates to the healthcare system and sees himself as part of it. Dr. Google phenomenon is a reality, as well as the Peoples' Advocate, Facebook (specialized in matters of conspiracy theory) and the Cook&Fitness expert, Instagram, that promotes diets for all sorts of diseases or Professor TikTok. If used properly, these platforms can bring a lot of long-term benefits.

We briefly presented above the influence that digital entities have on people⁴, but there are always multiple sizes of the story - we, as individuals, are content creators on these platforms, we train their algorithms with our data. They give us back highly

¹ https://kclpure.kcl.ac.uk/portal/files/127048253/Allington_and_Dhavan_2020.pdf

² <https://www.goinvo.com/vision/determinants-of-health/>

³ <https://www.euro.who.int/en/health-topics/noncommunicable-diseases/pages/who-european-office-for-the-prevention-and-control-of-noncommunicable-diseases-ncd-office/news/news/2021/6/our-choices-are-individual-but-can-be-influenced-high-profile-celebrities-have-the-power-to-encourage-healthy-behaviours>

⁴ <https://reutersinstitute.politics.ox.ac.uk/types-sources-and-claims-covid-19-misinformation>

personalized content, based on our preferences. Our digital footprint cannot be ignored, most of us exist virtually - about 4 billion people globally are active on social media⁵. We emphasize again how important it is to have a high level of digital literacy. And this applies to healthcare professionals as well.

Moreover, the Medicine and healthcare of our century cannot be imagined without technology and innovation. The approach based on the disease and not the disease in relationship with the individual organism changed - precision medicine and personalized medicine are a reality in certain fields. The “omics” sciences evolved more than ever. As compared to only 20 years ago, we now have a high-resolution image of our body, at molecular and genomic level, making it even difficult to define the state of health and infirmity based on physiological factors only. The need to integrate human behaviour and perception is more important than ever.

These advances in the medical field made it possible to have an effective Covid-19 vaccine in less than a year. Last years' Nobel Chemistry Prize was awarded for CRISPR-Cas-9 gene-editing technology, a technology that has the potential to cure diseases that had no options of treatment available. The ethical challenges are more complex than ever before, but is it ethical not to give the best treatment available to the patient? **The innovative technologies themselves are not sufficient if society is not prepared to adopt them.** Moreover, there is an acute demand for data in healthcare (for either research purposes or validation purposes). We share our data and preferences more easily on social media, but when it comes to our health, we are more reluctant to it.

The role of digital behaviour in determining one's health and the relationship to their clinician

Medical humanities represent an interdisciplinary field of medicine which includes the humanities, social science and their application to medical education and practice. Social science is the branch of science devoted to the study of societies and the relationships among individuals within those societies. In our times, you can't study human behaviour without a closer look at its digital behaviour and how everything reflects in the individuals' health and at the public health level.

At the beginning of the pandemic, multiple studies showed the correlation between what people follow and read on the internet and how they act during the lockdowns imposed by the authorities. The persons who were most likely to believe in conspiracy theories were more reluctant to respect the mitigation measures. The conclusion seems obvious, right? **But there is more to it. We have seen the results, but we don't fully understand the patterns behind it.** Sociological studies also showed that even with all the informational noise that there was at the beginning

⁵ <https://www.statista.com/topics/7863/social-media-use-during-coronavirus-covid-19-worldwide/>

of the Covid-19 pandemic, **people still believed most in medical doctors and their clinicians⁶ - even if other studies showed that the clinicians are not enough patient centred⁷, that they don't pay enough attention to the patient's needs and don't display a human approach⁸.**

So, there is a lot of potential in clinicians and medical doctors to influence the public health approach, but an equilibrium is needed. In Romania, in an effort to increase the Covid-19 vaccination rate, medical influencers (medical doctors that are popular on Instagram, Facebook and other platforms) were brought to public attention (note that they were not exclusively public health experts). Did the vaccination rate increase? Absolutely not. One possible explanation could be that they lost their credibility as health experts when they came forward and were perceived as being aligned with political propaganda.

This is only a facet of this complex problem, and we would like to find out more about it.

- How does social networks and media relate to people's decision to get vaccinated, to wear a mask, to make healthier choices?
- How are these behaviours reflected in the doctor-patient relationship: extended to the relationship human - health decision - health system?
- What kind of influencers are needed to really make a difference in influencing human decisions towards health?
- What is the right approach to have in the highly personalized medicine era when it comes to citizens?

Actions proposed

Based on this complex context, we propose a set of 3 actions, to better understand the relationship between patients-doctors-health system in the digital era.

- I. A pilot project made of a series of six webinars (3hrs monthly - 1h theory) with a focus group composed of students who are also patients and professors that are health professionals at the same time (max. 2 people of each category, from different universities inside CIVIS). The level of health literacy and how they relate with subjects such as health innovation or digital health will be measured at the beginning by questionnaire, and we'll try to assess how it changed after the 6 months period. The project will also include guided

⁶ <https://rgmedia.raportuldegarda.ro/resurse/Barometru-de-s%C4%83n%C4%83tate-public%C4%83-final.pdf>

⁷ <https://www.ajmc.com/view/contributor-a-vision-for-patient-centered-core-impact-sets-a-unifying-approach-to-patient-centricity>

⁸ <https://bmcfampract.biomedcentral.com/articles/10.1186/s12875-019-0959-y>

play role workshops designed to help the targeted audiences to better understand each other's position.

The six webinars we propose at this point will be organized online and have the following main topics:

- A. #1 Meeting - Introduction: The medical innovations of the present
 - B. #2 Meeting - Health literacy: why it should be at the base of all health strategies
 - C. #3 Meeting - How the human behaviour is influenced by social media
 - D. #4 Meeting - The healthy influencers: the positive impact on human health
 - E. #5 Meeting - The evolution of the patient - doctor relationship through time
 - F. #6 Meeting - Conclusions: the adaptation of patient - doctor relationship to the digital context
- II. A two-week virtual mini programme on how the level of Health Literacy is reflected on human behaviour and is interrelated to the social determinants of health.
- III. A summer school that focuses on improving the doctor-patient relationship using the communication and technology of the present, highlighting how the improvement will be reflected at every level of the healthcare system and society. The „**Re-inventing the patient-doctor relationship in the digital age**” Summer School will be offered to around 50 participants, with two main clusters: academics who are also health professionals and students. One possibility is to include all the participants from the pilot project detailed at (I.) and then include other 15 participants via open call inside the CIVIS alliance.

We hope that the Summer school could be held in physical format, over a period of 5 days, around June 2022, in Bucharest or a conference centre in Romania. It will feature lectures from key opinion leaders, workshops, debates, and other communication activities on the subjects presented at the beginning of this proposal. Participants to the Pilot project (I.) are guaranteed participation in the Summer School which is designed to end the webinars series.

What we hope to achieve

At the end of the activities, we hope to be able to write a detailed scientific report on the experience and what we observed.

Also, we will have a group of young people that understand the present challenges better and will become opinion leaders among the other students from the university,

and a group of academic teachers, researchers and health professionals who better understand how to relate to the patients in the digital era and how to properly share information and educate the next generation of health professionals.

Project coordinators:

“The patient-doctor relationship in the digital era. The impact of social media and influencers on human behaviour and perceptions” project is organized by the University of Bucharest and The Center for Innovation in Medicine ([Ino-Med](#)), and is currently looking for CIVIS partners to join.

The Center for Innovation in Medicine is an organisation based in Bucharest, Romania, focused on the innovation in healthcare. It is a non-governmental organisation who has the aim to shorten the time between the emergence of innovations in medical sector and their application for patients benefit in Romania and elsewhere. The Center for Innovation in Medicine develops programs to educate, inform and engage all audiences about innovation in medicine in an attempt to create a friendly environment for early adoption of innovative technologies, ideas, products and services. To achieve those objectives, the Center for Innovation in Medicine has developed with his partners a series of dedicated communication, education, advocacy and policy channels but also research activities.