

## **COVID-19: The key to flattening the curve is health literacy**

Due to the overarching threat of the coronavirus pandemic, “flatten the curve” recently became the new catch phrase echoing on the news, on the social media, and decorating every front page of the printed press. But what does it really mean and how does it relate to health literacy?

The currently available technology and resources allow experts in epidemiology and public health to closely monitor health and illness, to make predictions about outcomes, model the spread of the disease, and track down the root causes. However, until we know more, and develop effective treatments and a vaccine, measures as simple as good hygiene, social distancing and isolation remain the most effective ways of containment.<sup>1</sup> This is essentially what flattening the curve means; slowing the rate of infection and reducing the number of cases so that it does not overburden the health care system. In any given country, the number of beds and medical personnel is limited, thus a quick, exponential surge overloads the system and results in higher number of preventable deaths.

Flattening the curve is not a novel phenomenon. An important lesson can be revealed from how two American cities handled the Spanish Flu in 1918. St. Louis enforced strict social distancing within two days of tracing the flu, which limited the number of cases. In contrast, Philadelphia neglecting the situation, uninterruptedly hosted a large parade and suffered a high number of casualties just a few days later. Hence, the epidemiological curve differed considerably between the two places.<sup>2</sup>

**Today**, in contrast to 1918, we have many more resources and information available, often just a few clicks away. But while the shift towards personal responsibility in one’s health management is desired, it also brings about novel challenges, namely knowing how to act, and whom to trust. To meet these novel demands, we need health literacy.

Defined as the knowledge, motivation, and ability to access, understand, appraise, and apply information to manage health,<sup>3</sup> health literacy has been labeled a key determinant of health.<sup>4</sup> Higher levels of health literacy within groups (be it a country or an organization) consistently correspond to improved safety, higher quality of life, reduced disparities in health outcomes, and a more prosperous and equitable society.<sup>5</sup> However, research has shown that more than a third of populations might face difficulties.<sup>6</sup>

Increasing public health literacy will mean improving the collective awareness of health-related business, empowering citizens and patients and entrusting them with active participation in the health systems. The investment in health literacy of populations and organizations will flatten the curve for the novel SARS-CoV-2 virus, as well as for many other diseases. We have seen this approach work in other communicable diseases such as flu,<sup>7</sup> or in promoting positive changes in lifestyle such as smoking cessation.<sup>8</sup>

To some, health literacy may just seem a “new wine in old bottles” and be viewed as health promotion;<sup>9</sup> however, health literacy is what enables and drives health promotion, carrying an added value. But how, and why are we still behind in attaining a health literate society?

Firstly, the investment in health literacy as a political priority is often missing, and the lack of preparedness and slow response to the COVID-19 pandemic are a proof of that. Moreover, despite a global call for making health an educational priority, only few countries, namely Finland, include health literacy in the core school curricula.<sup>10</sup> Lastly, it is important to recognize that our systems are complex, and it will require a transformation of services to develop and facilitate an appropriate systemic health literacy response. Perhaps a crisis like the COVID-19 outbreak, which has shaken the very foundations of many health care systems, is just what we need to enable us to move from the disease-centered to health- and people-centered approaches to care.

The combination of improving people's skills to meet the complex demands of health systems, and developing the health system's capability to meet the demands of people, implies that health literacy will not only make us better equipped to cope with similar occurrences to COVID-19 and mobilize fast, but also help people lead healthier lives, thus reducing the need for medical care in the first place.

Today, "flattening the curve" is being used as an argument by politicians, decision-makers and public health advisors to call the public to action. The two curves are used as a recognizable illustration to inform people on why governmental restrictions are made and behavioral change required. If the pandemic spread is not controlled, the curve will exceed the capacity of health systems; while in a controlled fashion, it might be possible to balance the number of cases with the ability of systems to provide the necessary services and reliable information.

We can see the current situation unfolding; because of the acute threat and exponential spread of COVID-19, most places have already shifted towards damage control. **While** the infections will eventually stop, the damage won't, and yet again, groups already disadvantaged and marginalized will take the hardest hit.

This is an unprecedented situation and we are learning new things by day. Because health literacy carries the potential to transform the health systems and societies,<sup>9</sup> now is the time to implement the programs and policies for which the evidence is already there.<sup>10</sup> It's not too late to alter the course of our outcomes, not even those of COVID-19 pandemic.

#### **Reference:**

1. Franz-Josef Schmitt. A simplified model for expected development of the sars-cov-2 (corona) spread in Germany and us after social distancing. <https://arxiv.org/abs/2003.10891>, 2020.

2. Hatchett, RJ, Mecher, C.E., Lipsitch, M. (2007). Public health interventions and epidemic intensity during the 1918 influenza pandemic. *PNAS* 2007; 104 (18) 7582-7587; DOI: 10.1073/pnas.0610941104.
3. Sørensen K, Van den Broucke S, Fullam J, Doyle G, Pelikan J, Slonska Z et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health* 2012;12:80. doi:10.1186/1471-2458-12-80.
4. Shanghai Declaration on promoting health in the 2030 Agenda for Sustainable Development. Geneva: WHO; 2016 (<http://www.who.int/entity/healthpromotion/conferences/9gchp/shanghai-declaration.pdf>)
5. Kickbusch I, Pelikan J, Apfel F, Agis T. Health literacy: the solid facts. Copenhagen: WHO Regional Office for Europe; 2013 (<http://www.euro.who.int/en/publications/abstracts/health-literacy.-the-solid-facts>).
6. Sørensen K, Pelikan JM, Röthlin F, Ganahl K, Slonska Z, Doyle G et al. Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU). *Eur J Public Health* 2015;25:1053–8. doi:10.1093/eurpub/ckv043.
7. Zhang, F., Or, P.P. & Chung, J.W. The effects of health literacy in influenza vaccination competencies among community-dwelling older adults in Hong Kong. *BMC Geriatr* **20**, 103 (2020). <https://doi.org/10.1186/s12877-020-1504-5>.
8. Marteau T et al. Judging nudging: can nudging improve population health? *British Medical Journal*, 2011, 342:d228.
9. Tones K. Health literacy: new wine in old bottles? *Health Educ Res.* 2002;17(3):287-290. doi:10.1093/her/17.3.287
10. WHO. Health literacy counts as academic competence in Finnish schools. <http://www.euro.who.int/en/countries/finland/news/news/2019/9/health-literacy->

counts-as-academic-competence-in-finnish-schools. Published 2019. Accessed May 6, 2020.

11. Sørensen, K., Trezona, A., Levin-Zamir, D., Kosir, U., Nutbeam, D. (2019). Transforming health systems and societies by investing in health literacy policy and strategy. WHO Panorama (5)2-3, p259-263.
12. Quaglio G, Sørensen K, Rübig P, Bertinato L, Brand H, Karapiperis T, Dinca I, Peetso T, Kadenbach K, Dario C. Accelerating the health literacy agenda in Europe. Health Promot Int. 2017 Dec 1, 32, (6): 1074-1080. doi: 10.1093/heapro/daw028.