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Public Health Education Proposal

As seen by the COVID-19 pandemic, the public is highly prone to misinformation. In the age of the information technology boom, misinformation spreads simultaneously with infectious diseases themselves [1]. Even beyond misinformation, a lack of public health understanding places citizens in the dark about the health crises and the best ways to stay safe. When one fails to understand the mechanisms behind disease transmission and the ability and mechanism by which infectious diseases propagate among populations, citizens are given no rationale as to the necessity of following public safety protocols. It may seem completely obvious to public health professionals regarding the importance of social distancing and masks, but to many citizens who do not understand particulate transmission or viral load, a mask is just another garment that the government is pushing them to wear. Some may come to resent public health protocols aimed toward saving lives [2]. This goes hand in hand with the misinformation epidemic—without a basis to draw the line between fact and fiction, the public is placed in a vulnerable, gullible state [3]. It is a contributing factor in why United States, like many other countries, has been unprepared to face this global public health crisis.

As a witness to this underemphasized issue plaguing our communities, I propose to integrate public health education in high school biology and/or health curriculums.

Public health has gained tremendous popularity in the past few years in undergraduate studies; however, it has yet to be truly emphasized in the K-12 curriculum [4]. Epidemiology, which is the science of public health, fosters critical thinking and explains the fundamentals of disease transmission in populations. As Professor Michael Braken of Yale University put it, epidemiological education can “inoculate [the public] against a tsunami of biased and fraudulent media messaging” [5].

On the specifics of this proposal, I recognize the difficulty of implementing public health or epidemiology as an actual course. Epidemiology is a rather niche subject, and there is a lack of qualified teachers in the field [4]. That is why I have prepared a pre-designed, problem-based instruction lesson for teachers to use. The lesson will cover the basics of public health, epidemiology, and most importantly, how these concepts can be applied to real-world situations. This curriculum is hands-on, focused on self-learning and an immersion into a real-world epidemiological outbreak through an investigation-based learning approach. As these students enter the course fresh from a grueling pandemic, they will have the ability to internalize this information for future generations to come and remain educated from a public health standpoint. As for future generations, the need for public health education will be continually emphasized. With this, we, as citizens, can stand together to fight the next pandemic more ready than ever.

References

- [1] Bagherpour, Amir. "COVID Misinformation Is Killing People." *Scientific American*, Scientific American, 11 Oct. 2020, www.scientificamerican.com/article/covid-misinformation-is-killing-people1/.
- [2] McKelvey, Tara. "Coronavirus: Why Are Americans so Angry about Masks?" *BBC News*, BBC, 20 July 2020, www.bbc.com/news/world-us-canada-53477121.
- [3] Barua, Zapan et al. "Effects of misinformation on COVID-19 individual responses and recommendations for resilience of disastrous consequences of misinformation." *Progress in Disaster Science* vol. 8 (2020): 100119. doi:10.1016/j.pdisas.2020.100119
- [4] D'Agostino, E.M., Freudenberg, N. Population Thinking Instruction in High Schools: a Public Health Intervention with Triple Benefits. *J Urban Health* 96, 902–911 (2019).
<https://doi.org/10.1007/s11524-019-00383-z>
- [5] Bracken MB. Epidemiology as a liberal art: from graduate school to middle school, an unfulfilled agenda. *Ann Epidemiol.* 2014 Mar;24(3):171-3. doi: 10.1016/j.annepidem.2013.11.010. Epub 2014 Jan 3. PMID: 24530409.