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Title: Public Health Literacy and the COVID-19 Challenge

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In August 2020, the U.S. Department of Health and Human Services (HHS) released *Healthy People 2030*, the fifth iteration of an initiative to improve health and well-being nationwide. Of the six objectives included in *Healthy People 2030* that are related to Health Literacy, the one that pertains most directly to the role of public education in promoting Health Literacy is the objective entitled *Increase the health literacy of the population — HC/HIT-R01*.¹ However, this objective is relegated by HHS to “research status,” with the explanation that it “may or may not have reliable baseline data available.”² Evidence suggests that insufficient adherence to public health recommendations such as mask wearing, physical distancing and hygiene practices by the American public during the COVID-19 pandemic in 2020 has contributed to the disproportionately high toll taken by COVID-19 in the U.S. and has been at least in part attributed to misinformation and limited health literacy.^{3,4} A Health Literacy deficiency in this country is particularly apparent if we include Public Health Literacy as a critical component of our definition of Health Literacy. To address this, public health education must become a sentinel priority.

Now that a new definition for “Health Literacy” has been provided in *Healthy People 2030*, formal metrics for measuring Health Literacy will require reconsideration. The new definition of Health Literacy includes two components. The first describes “personal health literacy” as “the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.”² The second component is “organizational health literacy,” which uses the same language but addresses how “organizations equitably enable individuals” to meet the same objectives. Missing from this definition is the concept of Public Health Literacy which was described by Freedman et al as “the degree to which individuals and groups can obtain, process, understand, evaluate, and act upon information needed to make public health decisions that benefit the community.”⁵ The lack of appreciation for the relationship between personal behavior and community health is at the root of the untethered spread of SARS-CoV-2 across the U.S. in 2020. Teaching such principles should be as central to public education as is reading, writing and STEM subject matter.

The traditional definition of Health Literacy has been laden with a focus on communication skills and personal health rather than on a skill set that includes critical thinking and community health.⁶ While understanding language and numeracy are indeed critical skills in today’s information-rich world, understanding the concepts behind the language of science and public health are often even more important to voluntarily practicing healthy behaviors like mask-wearing in public spaces during a pandemic.

¹ <https://health.gov/our-work/healthy-people/healthy-people-2030/health-literacy-healthy-people-2030>

² <https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-communication/increase-health-literacy-population-hchit-r01>

³ Wilson, RF et al Factors Influencing Risk for COVID-19 Exposure Among Young Adults Aged 18-23 Years – Winnebago County, Wisconsin, March – July 2020 MMWR Vol 69 early release October 9, 2020
<https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6941e2-H.pdf>

⁴ Van Dyke, M et al Trends in County-Level COVID-19 Incidence in Counties With and Without a Mask Mandate — Kansas, June 1–August 23, 2020 MMWR Vol. 69 <https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6947e2-H.pdf>

⁵ Freedman, D.A. et al. Public Health Literacy Defined Am J Prev Med 2009;36(5)
<https://doi.org/10.1016/j.amepre.2009.02.001>

⁶ <https://www.cdc.gov/healthliteracy/index.html>

Experts in health communications point out that educating the public about public health principles alone is not enough to influence behavior.⁷ At the same time, these experts confirm that adherence to healthy behaviors and avoidance of unhealthy practices in a population presupposes an informed public. To build arguments to counter reasoned motivations for not properly wearing a mask during a respiratory pandemic, both leaders and the general public must have a basic understanding of the science that supports the mitigations.

Consider the simple definitions of “quarantine” and “isolation.” *Quarantine* represents a period of incubation during which a person is separated from others to determine if they have been infected by an exposure, and *isolation* refers to the separation from others of an individual *who has been determined to be infected* to prevent spreading the active illness to others. These are public health principles that go beyond simple vocabulary. Understanding the notion of quarantine, incubation periods and infectious periods provides the explanation for why social distancing and mask-wearing is critical for the control of infectious diseases like COVID-19 that can be transmitted while an infected person is without symptoms. Educating the public about such concepts, along with education about vaccination strategies, blood pressure monitoring, mental health topics and routine preventive care should be central to the curriculum in primary and secondary schools. Doing so would also address issues of equity by employing our universal educational system to fill gaps in a disproportionately accessible and non-universal health care system.

Consider the kinds of knowledge that could buttress our communities as we face the spread of SARS-CoV-2. How many understand the difference between a virus and a bacterium, and what do those differences mean to an outbreak response? What is the difference between contact, droplet and aerosol transmission of different diseases? How does the incubation period, infectious period and the presence or absence of symptoms affect the transmission of diseases? These questions pertain not only to the COVID-19 virus, but also to long-term foes like chlamydia, HIV and influenza.

In 2019 the California Department of Education adopted a revised Health Education Framework to guide K-12th grade health education in California schools. Because California health education standards were separated from the science standards in the early 1990s, diligent efforts are required to maintain bridges between cross-cutting topics in science and health. A broad range of opportunities exist to further expand science-based insights into community health. How are the principles of natural selection at play as organisms evolve and become resistant to antibiotics? How do such principles relate to the ability of a virus like the COVID-19 virus to leap from one species to another?

Shortcomings in Public Health Literacy lead to misguided beliefs. While humble skepticism is a welcome foundation for science, irrational skepticism about vaccine recommendations and climate change undermines our social responsibilities. An educational system that encourages critical thinking and rational debate on scientific matters is a most potent ally in our efforts to disarm the flood of misinformation that has accompanied the digital age.

In a country for which personal freedom is a treasured value and a protected right, a high level of Health Literacy is essential. But that definition of Health Literacy must include Public Health Literacy if we expect public behaviors to include the choice of practices that protect not only our own personal health, but also the health of our loved ones, our neighbors and our communities. It is time for the objective entitled *Increase the health literacy of the population* to become a core objective of *Healthy People 2030*, and for our health care, public health and educational experts to join together in pursuit of this goal.

⁷ Brossard, D et al Encouraging Adoption of Protective Behaviors to Mitigate the Spread of COVID-19, Nat Academies of Science, July 2020 ISBN 978-0-309-68101-8 <https://doi.org/10.17226/25881>