

UNRAVELING THE INFECTIOUS DISEASE OUTBREAK INVESTIGATION PROCESS FOR YOUTH EPIDEMIOLOGICAL PEDAGOGY

Wang SW¹

¹*Student, Seven Lakes High School, USA*

*stephanie.wang2004@gmail.com

ABSTRACT

The COVID-19 pandemic has laid bare existing health inequities in society, namely misinformation and personal health responsibility. These social challenges are exacerbated by a populace vulnerable to misinformation due to a lack of access to comprehensible epidemiology principles. Previous research has suggested that population-level epidemiological instruction promotes critical thinking among high school students and immunizes students against potential misinformation exacerbated by the increasing ease of access to online information. In this research, a pedagogical strategy of a hypothetical infectious disease outbreak scenario is introduced. By tracing through the four main steps of an infectious disease outbreak investigation—background information, data collection, data analysis, and implementing prevention and control measures—students are provided the opportunity to experience an epidemiologist’s role while learning basic epidemiological concepts that prove useful in solving the outbreak scenario. This lesson was administered to grade 9 biology students at a public high school in Katy, Texas. After administration, students were asked a series of questions designed to assess their understanding of public health and epidemiology. Findings indicate that with this interactive lesson design, students learn epidemiology as it relates to the greater society and employ skills in critical thinking, problem-solving, concept-based learning, and problem-based learning. Notable findings include large majorities of students who are better motivated to protect their health, debunk misinformation, follow public safety protocols, and prefer a problem-based approach for their epidemiological instruction.

Keywords: pedagogy, outbreak, epidemiology

Themes: Building health skills and knowledge, improving the public health information infrastructure