


Chapter 5

The Impact of Epidemiology on COVID-19 Vaccine Confidence

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ABSTRACT

In consideration of the importance and scope of epidemiology on SARS-CoV-2 (COVID-19), essential aspects are conveyed regarding how to improve vaccine confidence through awareness and education. Further, from a natural history context, the outbreak of the 2019 novel coronavirus diseases (COVID-19) occurred in Wuhan, Hubei Province, China and spread throughout the world. As a result, governments and organizations experienced challenges managing the pandemic. Explained are characteristics of the COVID-19 epidemiological approach. For example, the utilization of epidemiological studies is performed to obtain rates and probability of occurrence. Reviewed are the use of epidemiology in determining COVID-19 causality, the health status of the population, delivery of services, program planning, and social policy.

INTRODUCTION

The global COVID-19 initiative was developed to improve population health status and to proactively eliminate the disease. COVID-19 mitigation strategies and programs have been implemented to mitigate disease transmission by utilizing quarantining, isolation, social distancing, and improved sanitation measures (Liu et

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al., 2020; El-Amin, 2022). Anecdotal evidence suggests that many people still do not understand the harmful effects of COVID-19 and subsequent variants. Nevertheless, governments have used their authority to contain COVID-19 and reduce transmission incidence since December 2019. Organizations and governments use public health to educate healthcare workers, policymakers, and the government. Additionally, to reduce COVID-19 virulency, public health must improve vaccine confidence through awareness and education.

BACKGROUND

Epidemiology

The study of disease transmission or epidemiology is a term that provides an understanding of its importance. The study of disease transmission originates from the Greek words *epi* (upon) + *demos* (individuals) + *logy* (investigation of) (Friis & Dealers, 2014). The study of disease transmission is concerned with the incidence, conveyance, and determinants of healthcare-related instances. Epidemiologic investigations are applied to contain medical issues in populations (Friis & Dealers, 2014). The central aspects of the epidemiological definition are determinants, distribution, population, and health care delivery.

The study of disease transmission examines disease among population groups rather than individuals (Jin et al., 2020). Thus, epidemiology is the study of disease transmission as an interdisciplinary field; the study of disease transmission draws from biostatistics, the social and behavioral sciences, and natural history just as from the therapeutically related fields, for example, toxicology, pathology, virology, hereditary qualities, microbiology, and clinical medicine (Friis & Venders, 2014; Kakodkar et al., 2020).

Issues, Controversies, Problems

Workplace Stress During the COVID-19 Epidemic and Post COVID-19

Workplace stress arises when an individual is overworked or has poor management experience, whereas they need to understand the needs and time constraints under division of work practice. COVID-19 has made simple tasks more stressful than not, which may impact a company's performance (El-Amin, 2022). For instance, an example of workplace stress arises when a report is expected for a quarterly meeting. Still, the requested ad hoc report needs at least 6 hours of completion

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