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PUBLIC HEALTH AND THE ROLE OF ADVANCEMENTS IN LABORATORY

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ABSTRACT

Disease surveillance and diagnosis are essential aspects of public health management, and the role of laboratories contributes to this. Progress in the laboratory plays an essential role in public health through efficient and effective diagnosis, leading to better public health management. In this article, we have discussed how advancements in laboratories have contributed to public health by being efficient to diagnose and cost-effective, available to all economic strata.

Keywords: Public health, Diagnosis, Laboratories.

PUBLIC HEALTH

Public health is the science of promoting and improving human health through research and education through organized efforts (public health improvement programs). It focuses on studies and research on various topics that affect human health, whether psychological or physical, and its impacts on society to improve human health. The history of public health goes back centuries. Public health has been threatened by diseases such as plague, smallpox, and cholera in the past. Later, in the 19th-century, public health became more focused on environmental issues such as clean water supplies, waste disposal and better housing, which were responsible for spreading infectious diseases such as cholera. Over the next century, the main public health threat shifted from infection to chronic diseases such as heart disease, cancer, stroke, respiratory disease, and accidents caused by lifestyle changes. Public health services are also involved in mass screening and vaccinations to educate and raise awareness in society (Naidoo et al., 2010).

LABORATORIES IN PUBLIC HEALTH

Laboratories play a significant role in public health by engaging in emergency preparedness

and response, environmental health, food safety, global health, infectious diseases, informatics etc., from the past five decades, the laboratories are advancing as we discover new techniques and technologies. These advancements play a vital role in public health by knowing diseases and their effective diagnosis, surveillance, relevancy and capacity, and creating effective control strategies (CDC, 2018; Dowdle et al., 2011).

ADVANCEMENTS IN LABORATORIES

The advancements in laboratories lead to the retrieval of valuable and precise data about diseases. More precisely, molecular biology and advanced electronic technologies are revolutionizing clinical diagnosis in this modern world, which has a valuable and essential role in public health management (Dowdle et al., 2011). However, not all are lucky enough to receive the expanded diagnosis (Balarajan et al., 2011; Younger, 2016). Advances in the laboratory play an inevitable role in public health. As science improves, it becomes easier and, in the meantime, it becomes difficult to organize.

CONCLUSION

The overall concept should be non-discriminatory and serve all people; the findings for the further development of laboratory diagnostics should be geared towards economic efficiency; and more studies should be focused on the economic efficiency of various tests (Babigumira et al., 2017) so that it can better serve all sections of people.

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