

Economics and Public Health

Public health in simple terms refers to protecting and improving the health of the population. It covers the entire ecosystem responsible for the overall health of individuals and their community which consists of physical, mental, social, and spiritual aspects.

Economics can be defined as the study of decisions related to the production, distribution, and consumption of goods and services in limited resource availability and when the resources have alternative uses. The role of economics in public health includes identifying measures, and values, and comparing the costs and consequences of preventive and treatment strategies. These can be measured by estimating the incidence or prevalence of diseases, and a number of adverse events, or by using utility measures such as quality-adjusted life years, and monetary values.

Health economics is a field which connects both public health and economics by applying economics theories, models, and techniques in analysing decision-making by individuals, service providers, and government in the health sector. The role of economics in the public health field can be emphasized under the following heads:

- **Impact of population health on a country's economy-** Public health economics studies the health-related determinants of a country's economic growth. A population composite of people living with disabilities and reportedly higher early death rates share an inverse relationship with the nation's economy. The field enlightens about the precise cumulative values on losses incurred during years living with disabilities or chronic diseases when an individual's economic growth was affected, and due to reduced life expectancy.
- **Role in healthcare intervention designing-** Health economics applies the techniques of economic evaluation to design cost-effective healthcare intervention packages customized as per the countries' economic conditions. It provides a comparative cost analysis of various treatment approaches for critical health problems. Many times, public health interventions target individual or population behaviour for better compliance and these behavioural changes are modelled into the economic analysis. It measures a full range of outcomes considering all the stakeholders, and its impact on addressing health inequalities.
- **Decision making and predictions-** The practical knowledge about healthcare intervention costs, their outcomes, and impacts facilitates effective decision-making pertaining to funds deployment, allocation of finite resources, their demands and supply with a principle of maximising efficiency and minimising cost. It also predicts future demands of resources and drives mobilization and effective utilization of resources. For instance, in the current scenario, the expected future rise in the ageing population will pose an increasing demand for more hospitals and facilities related to geriatric needs. The insights of economic analysis help quantify the need and design the policies and schemes to address future requirements.
- **Economic evaluation of health programmes-** The policymakers and researchers gain an understanding of financial needs as per the programme's scalability through macroeconomic analysis of costs and benefits. The scope of economic evaluation covers the macroeconomic analysis of the economic and societal impact of healthcare at international and national levels.

Conclusion:

Economics plays a crucial role in public health by providing insights into how health impacts a country's economy, guiding the design of cost-effective healthcare interventions, supporting evidence-based

decision-making, and predicting future healthcare needs. By evaluating the economic and societal impacts of health programs, public health economics informs policymakers and stakeholders, helping them optimize resource allocation and develop strategies that enhance health outcomes and address inequalities.

References:

1. Edwards, R.T., Charles, J.M. & Lloyd-Williams, H. Public health economics: a systematic review of guidance for the economic evaluation of public health interventions and discussion of key methodological issues. *BMC Public Health* **13**, 1001 (2013). <https://doi.org/10.1186/1471-2458-13-1001>
2. Van Ourti, T., Erreygers, G., & Clarke, P. (2014). Measuring Equality and Equity in Health and Health Care. *Encyclopedia of Health Economics*, 234–239. doi:10.1016/b978-0-12-375678-7.00205-4
3. Mackillop, W. J., Hanna, T. P., & Brundage, M. D. (2016). Health Services Research in Radiation Oncology. *Clinical Radiation Oncology*, 217–238.e2. doi:10.1016/b978-0-323-24098-7.00012-5
4. <https://www.cdcfoundation.org/what-public-health>