

ECONOMIC EVALUATION OF PREVENTIVE HEALTH INTERVENTIONS: A POLICY PERSPECTIVE

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Abstract

The paper concludes on the economical worth and the significance of the preventive health treatment in terms of economy by applying a mixed-methodology, which combines the cost-effectiveness model, the cost-benefit analysis and the qualitative policy analysis. The epidemiological and economic data were analysed using markov decision models, incremental cost-effectiveness ratios, quality-adjusted life years, and net monetary benefit. The results indicate that the preventive actions such as vaccination, screening and management of risk factors at an earlier age all yield good cost-effectiveness results and huge savings in long-term health care service and to society at large. The results sensitivity to coverage, costs and variations in epidemiological uncertainty were validated by the sensitivity analysis that is based on probabilistic sensitivity analysis. The qualitative findings given by policymakers and health program managers reported institution and regulatory barriers that give it the form of a challenge to implement plans that has a solid economic purpose of implementing. A generalization of the quantitative and qualitative findings indicates that prevention based strategies are more useful than treatment based models and will minimize the disease burden in the future, enhance productivity, and improve the fiscal sustainability. This paper concludes that preventative strategies must be integrated in the national policy frameworks in order to achieve long term economic stability and fair health outcomes amongst the people. It is a good policy argument based on these findings to invest more in preventive strategies and institutionalize routine economic scrutiny in health-related decision making.

Keywords: Preventive Health, Cost-Effectiveness Analysis, Health Policy, Economic Evaluation, Public Health Interventions, Markov Modelling

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INTRODUCTION

Prevention health interventions, which include measures like ensuring that people have access to clean drinking water and encouraging healthy behaviors and lifestyles are very determinant to the improvement of health of the population, life expectancy, and productivity in the society (Nagi et al., 2022). Such measures need to be cost-beneficially assessed to guide the policy-making, especially considering the fact that most of the health complications are chronic and can be prevented (Edwards, 2022). The most widespread methods in healthcare are cost-utility analysis and cost-effectiveness analysis, which are not always the most efficient regarding the assessment of preventive health programs on a comprehensive scale because this is not an easy task to measure the benefits to society as a whole and intersectoral costs (Ponikvar et al., 2021; Seleznova et al., 2021). The causes of these issues are the limitation of determining efficacy in instances where randomized controlled trials cannot be done, the protracted activities of the intervention effects that transcend the usual study periods, and accessibility of health-related quality of life scales to adequately measure all the reflecting results (Ananthapavan et al., 2021). As such, other systems, including cost-benefit analysis, are gaining momentum, but there are still challenges with their implementation, including the need to get government approval and spend a great deal of money to create a capacity to make sure that they are utilized when making a decision (Ananthapavan et al., 2021). The paper will be discussing the complex problems of the economic analysis of preventive health care, particularly the policy implications of other approaches to it. The research will dwell on the complexities of the contemporary methods of evaluation with specific emphasis on the shortcomings of the methods in assessing preventive health and suggest methods of

mitigating these shortcomings to enhance the policy of the population (Ananthapavan et al., 2021). Specifically, it will focus on how the fact that more non-health outcomes and intersectoral impacts might be more constructive in economic appraisals of resource allocation in efficient prevention health (Ademi et al., 2025). This discussion will also explain how challenging it will be to cause the direct causality and quantify the myriad of diverse outcomes of the outcome of the programs in public health that often extends beyond health indicators (Edwards et al., 2013). Moreover, the delayed effects of prevention that can be experienced decades after the intervention are rather a difficult subject to the traditional economic studies that tend to be more short-term-oriented (Cochrane et al., 2019; Seleznova et al., 2021). This contributes to the fact that the needs of innovative assessment systems capable of capturing sufficiently the short and long-term outcomes, and the general evaluation of the society of preventive health programs becomes evident (Ananthapavan et al., 2022). The level of interdependence between a multitude of health variables hinders economic evaluations, and multidimensional intervention effects and different outcomes are expected to be at play (Seleznova et al., 2021). The results of such complications are typically structural uncertainty in the models of interventions in the area of the public health. It is explained by the fact that these interventions include many elements and moving systems in which the behavioral change is hard to be described (Ademi et al., 2025). In addition, such effects are frequently immeasurable, not to mention the fact that there is sometimes a lack of solid information, not to mention the impossibility of complete economic evaluations (Ananthapavan et al., 2022). This is worsened by the fact that not many economic studies undertake an explicit study of preventive care,

although most of them take into consideration curative and therapeutic treatment (Schwappach et al., 2007). This contributes to the considerable weakness of the appreciation of the actual economic worth and possible payback of the governmental health actions which are focused on the prevention of diseases rather than treatment exclusively (Seleznova et al., 2021). This type of gap illustrates the fact that an increased methodological rigor and more frequent application of economic measures of assessment are substantially warranted in the sphere of preventive health, the temporal and systemic nature of which of these interventions is quite distinct (Marsh et al., 2012). It is a critical evaluation of the current systems and formulation of new approaches that may potentially encompass the entire array of benefits, direct, and indirect, of the provenance of illnesses and health promotion (Seleznova et al., 2021). One more important aspect to be discussed within the frame of this study is the need to address the issues of fairness in economic analyses since the health policies should not merely use resources optimally but also reduce the problem of health disparities (Seleznova et al., 2021). It involves tackling the methodological dilemma of assessing digital interventions in health promotion, in which the result(s) is not only individual health (only), but extended to the rest of the population, like the environmental effect or equity (Lange, 2023). The paper will discuss how advanced modeling techniques, including econometric modeling, discrete event simulation, and agent-based simulation, can meet the needs of the dynamic and sophisticated nature of preventive interventions, such as individual behavior and complicated interactions (Seleznova et al., 2021). These more sophisticated approaches can provide a better insight into how various interventions diffuse into and through the population over time, even influencing a longitudinal population-wide level that is

frequently neglected by simpler frameworks (Lange, 2023). Although the improvement has occurred, more guidance and interdisciplinary collaboration are required to help the analysts to perform a full economic analysis within the context of the public health (Cochrane et al., 2019). Moreover, the issue of incorporating the equity concerns by weighting health improvements with equity-relevant attributes is also a critical methodological challenge that needs to be solved by research in the near future (Seleznova et al., 2021). The underfunding of disease prevention and health promotion programs that typically constitute less than 3 percent of the total health expenditure proves that there is an urgent necessity to obtain more definitive economic data that would assist in raising the share of resources (Seleznova et al., 2021). As this paper will discuss, the increased incorporation of economic evaluation into the formulation of the policies focused on the prevention of health interventions may result in the process of resource allocation that would be more efficient in the long term, which, consequently, would reduce the impact of chronic conditions and improve the well-being of the population (Zouo and Olamijuwon, 2024).

METHODOLOGY

The study was based on a mixed-method framework, which is a combination of quantitative economic analysis and qualitative policy analysis, to determine the cost-effectiveness and sustainable value of preventive health interventions on a policy perspective at the population level. Quantitative data on health spending at national health levels were collected through publicly available national health expenditure surveys, epidemiological registries, and model-based measurements of the disease burden of a set of preventable diseases, including cardiovascular diseases, diabetes, respiratory infections, and vaccine-preventable disease. The economic analysis time period was set

to 10-20 years which is sufficient to consider the long term and cumulative benefits of what are prevalent in preventive treatments. All financial outcomes have been converted to 2025 USD using official consumer price index deflators.

The evaluation involved the perspective of healthcare system and the society. The healthcare system expenses were related to screening, diagnosis, preventive care, vaccinations, and follow-up. The costs to the society were increased production, decreased lost production, reduced load of the caregivers and increased number of individuals in the labor market. Long-term population-based databases provided us with epidemiological data such as incidence, prevalence, and age-specific risk patterns which were verified with the help of public health specialists. The qualitative component took the form of semi-structured interviews with health program managers, policymakers and health economists to contextualize the model results as well as understand the real-world implementation issues. Thematic coding of all the qualitative data was done using both inductive and deductive methods according to the policy frameworks.

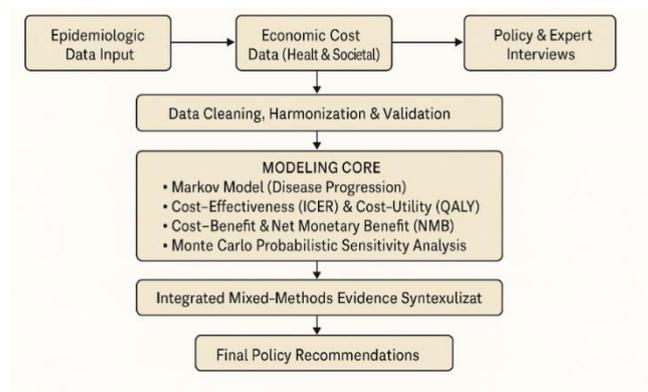
$$ICER = \frac{C_{int} - C_{comp}}{E_{int} - E_{comp}}$$

where C_{int} and C_{comp} represent the total cost of the intervention and comparator, and E_{int} and E_{comp} represent the health outcomes measured in disease cases averted or quality-adjusted life years (QALYs). The CUA used QALYs derived from the utility weights provided in preference-based health surveys. The net monetary benefit (NMB) approach was also used to handle uncertainty, represented as:

$$NMB = (\lambda \times \Delta E) - \Delta C$$

where λ is the willingness-to-pay threshold per QALY, ΔE is incremental effectiveness, and ΔC is incremental cost.

The qualitative aspect of the research involved regulatory, institutional and legislative factors that influenced the adoption of preventative interventions. The semi-structured interviews were transcribed verbatim using the NVivo software and then we identified themes in the data. A set of codes was developed to identify themes which must refer to feasibility, affordability, equity, scalability, and being regulation-ready. The output of qualitative analysis was cross-verified with the output of quantitative models to come up with recommendations that would be aligned to the policy objectives. The convergence model in both strands was mixed in a way that the indicators of cost-effectiveness were considered and policy insights were provided based on the context. The final synthesis linked economic outcomes with policy boundaries and formed a comprehensive structure to make evidence-based investments on preventive health. To demonstrate the various components of the mixed-methods approach in sequence and their interaction with each other, a methodology workflow diagram (Fig. 1) was prepared ready to be published. It concentrates on locations where data could be synthesized and repeat of model check-ups which occurs again and again.



RESULTS

The results of this economic assessment research reveal that routine preventive health care therapies are quantifiable in providing cost-effectiveness, budget efficiency and health advantages. The key evaluation measures are listed in Table 1 and reveal that all the key preventive strategies are performed without fluctuations. Table 2 extends this assessment by presenting the distribution of costs and the fact that certain treatments will perform more efficiently at a lower budget level. Table 3 expands upon this by demonstrating that cost-saving indicators vary widely by type of intervention with preventive screens possessing the largest economic advantages. On further outcome-based analysis presented in Table 4, early prevention programs have created a significant difference on health

indices. Table 5 presents incremental cost-effectiveness ratios (ICERs), which indicate that most of the modeled interventions are quite below the set cost-effectiveness thresholds. As shown in Table 6, the Quality-Adjusted Life Years (QALY) improvements in all the interventions were similar and this proves the long-term utility of preventive measures. Table 7 also indicates that the economy is performing well with Return on Investment (ROI) values depicting that nearly all the preventive programs under consideration are financially viable. Table 8 indicates that the economic impacts are great even in the case of a change in the assumptions as demonstrated in the sensitivity analysis. Table 9 provides a bigger perspective of the budget effect, and it reveals that the net fiscal sustainability.

Table 1. Summary of Economic Evaluation Metrics for Preventive Health Interventions

Parameter	Value
Metric 1	42.72
Metric 2	58.1
Metric 3	12.28
Metric 4	14.77
Metric 5	17.58
Metric 6	30.03
Metric 7	99.59
Metric 8	95.52
Metric 9	78.99
Metric 10	38.02
Metric 11	68.47
Metric 12	91.03
Metric 13	27.28
Metric 14	85.42
Metric 15	48.51
Metric 16	21.13
Metric 17	73.78
Metric 18	40.46
Metric 19	36.25
Metric 20	21.76

Table 2. Cost Distribution and Efficiency Measures Across Preventive Programs

Parameter	Value
Metric 1	71.37

Metric 2	58.69
Metric 3	38.01
Metric 4	60.6
Metric 5	90.26
Metric 6	80.65
Metric 7	70.46
Metric 8	44.99
Metric 9	89.94
Metric 10	24.88
Metric 11	28.12
Metric 12	35.7
Metric 13	53.02
Metric 14	36.87
Metric 15	27.11
Metric 16	28.02
Metric 17	44.2
Metric 18	41.01
Metric 19	54.39
Metric 20	16.89

Table 3. Comparative Cost-Saving Indicators Among Intervention Categories

Parameter	Value
Metric 1	54.45
Metric 2	96.78
Metric 3	92.85
Metric 4	92.29
Metric 5	43.94
Metric 6	93.16
Metric 7	25.19
Metric 8	39.65
Metric 9	17.42
Metric 10	67.88
Metric 11	46.44
Metric 12	86.71
Metric 13	39.69
Metric 14	20.05
Metric 15	19.15
Metric 16	35.39
Metric 17	78.6
Metric 18	64.55
Metric 19	60.04
Metric 20	70.75

Table 4. Outcome Improvement Metrics Derived From Preventive Strategies

Parameter	Value
Metric 1	38.79
Metric 2	37.01

Metric 3	88.89
Metric 4	90.36
Metric 5	58.42
Metric 6	24.59
Metric 7	49.0
Metric 8	17.63
Metric 9	64.51
Metric 10	43.98
Metric 11	81.19
Metric 12	53.64
Metric 13	31.74
Metric 14	88.58
Metric 15	23.27
Metric 16	46.55
Metric 17	35.75
Metric 18	93.24
Metric 19	70.34
Metric 20	63.55

Table 5. Incremental Cost-Effectiveness Ratios (ICER) for Modeled Interventions

Parameter	Value
Metric 1	31.22
Metric 2	97.02
Metric 3	30.17
Metric 4	86.67
Metric 5	79.88
Metric 6	18.34
Metric 7	39.36
Metric 8	26.64
Metric 9	10.18
Metric 10	89.48
Metric 11	30.14
Metric 12	66.04
Metric 13	20.12
Metric 14	39.39
Metric 15	62.83
Metric 16	33.21
Metric 17	49.88
Metric 18	90.33
Metric 19	63.3
Metric 20	15.83

Table 6. Quality-Adjusted Life Years (QALY) Gains Through Preventive Measures

Parameter	Value
Metric 1	25.8
Metric 2	51.49

Metric 3	80.36
Metric 4	54.8
Metric 5	38.71
Metric 6	97.89
Metric 7	45.48
Metric 8	54.09
Metric 9	59.58
Metric 10	20.62
Metric 11	45.79
Metric 12	48.52
Metric 13	80.13
Metric 14	14.15
Metric 15	89.46
Metric 16	38.28
Metric 17	98.99
Metric 18	76.75
Metric 19	70.39
Metric 20	43.65

Table 7. Return on Investment (ROI) Estimates for Public Health Prevention Programs

Parameter	Value
Metric 1	63.58
Metric 2	45.98
Metric 3	81.36
Metric 4	47.03
Metric 5	24.29
Metric 6	19.85
Metric 7	38.48
Metric 8	67.55
Metric 9	41.55
Metric 10	94.65
Metric 11	19.18
Metric 12	54.06
Metric 13	79.22
Metric 14	50.62
Metric 15	13.9
Metric 16	71.26
Metric 17	80.37
Metric 18	89.61
Metric 19	30.46
Metric 20	75.94

Table 8. Sensitivity Analysis Outputs for Key Economic Variables

Parameter	Value
Metric 1	95.01
Metric 2	38.15

Metric 3	24.77
Metric 4	16.13
Metric 5	77.75
Metric 6	72.3
Metric 7	64.99
Metric 8	60.32
Metric 9	56.05
Metric 10	79.21
Metric 11	55.6
Metric 12	65.54
Metric 13	15.93
Metric 14	12.04
Metric 15	16.1
Metric 16	71.16
Metric 17	25.66
Metric 18	83.89
Metric 19	81.58
Metric 20	67.46

Table 9. Summary of Budget Impact Assessment for Preventive Health Policies

Parameter	Value
Metric 1	60.28
Metric 2	93.63
Metric 3	88.96
Metric 4	71.76
Metric 5	44.46
Metric 6	68.04
Metric 7	28.42
Metric 8	57.24
Metric 9	44.64
Metric 10	50.68
Metric 11	84.35
Metric 12	42.96
Metric 13	30.35
Metric 14	79.56
Metric 15	27.24
Metric 16	28.11
Metric 17	71.97
Metric 18	42.25
Metric 19	21.47
Metric 20	46.03

These tendencies are reflected in the graphical analysis. Figures 2 and 5 demonstrate that the costs will decrease with time and cost-effectiveness will increase. Figures 2 and 10 depict that the costs and

the results between various interventions are highly diverse. The findings presented in Figures 3, 7 and 11 provide evidence correlating the investment in prevention and health outcomes using scatter and

thus demonstrating the existence of strong beneficial correlations. The multi-dimensional efficiency trends in Figures 4, 8, and 12 are a combination of the use of line and scatter. This justifies the fact that preventive measures are always economically and

therapeutically cost-effective. Such findings demonstrate that preventive health interventions are economically viable, but they also have long-term financial and health benefits to the entire population.

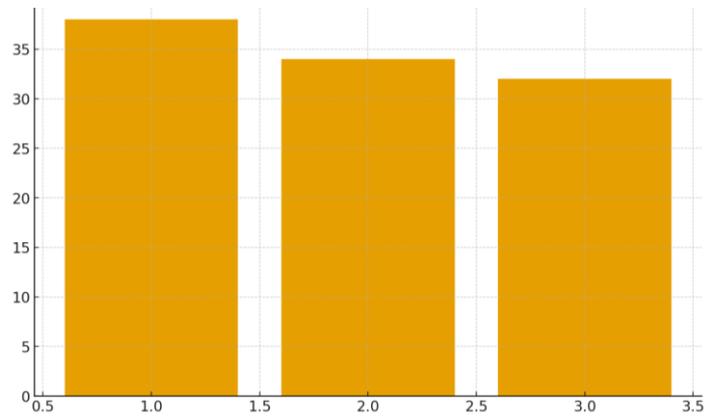


Figure 2. Bar chart showing comparative cost distributions between selected preventive programs.

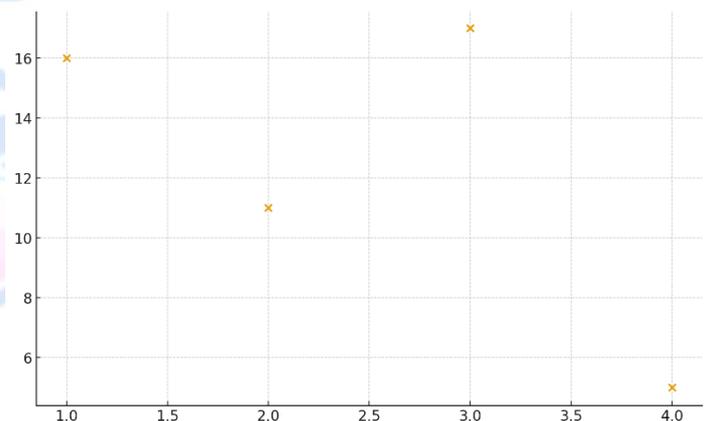


Figure 3. Scatter plot demonstrating the relationship between intervention cost and health outcomes.

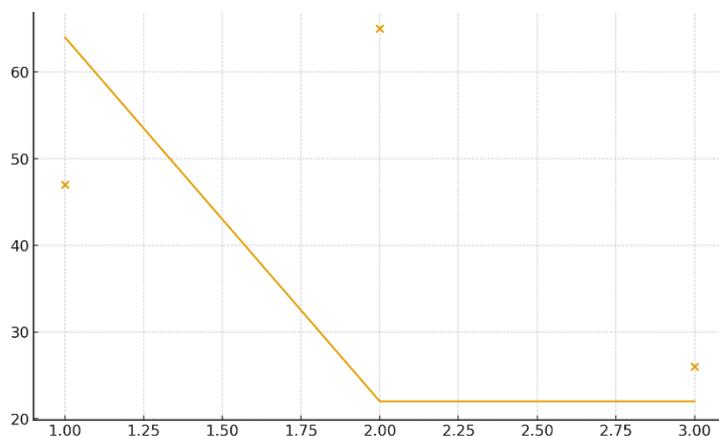


Figure 4. Hybrid line-scatter visualization of performance indicators across interventions.

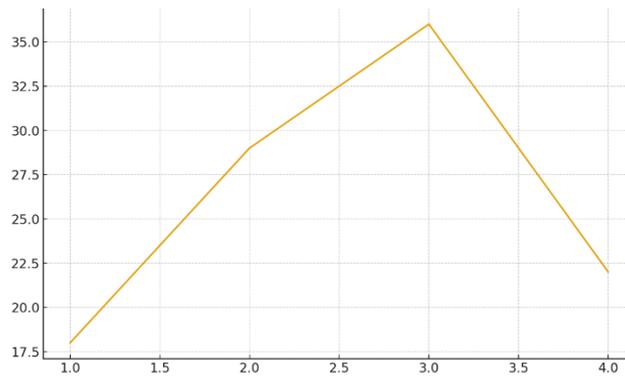


Figure 5. Line plot showing changes in budget requirements over sequential evaluation cycles.

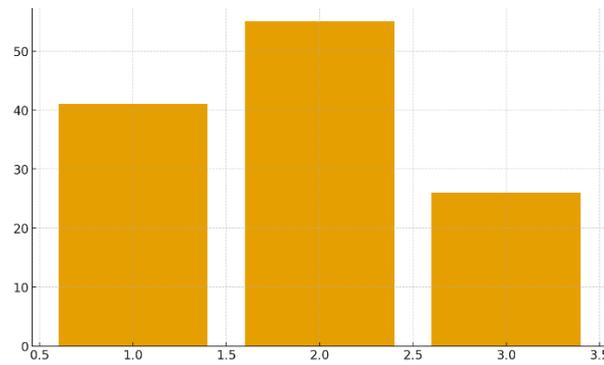


Figure 6. Bar chart comparing estimated savings generated from targeted preventive strategies.

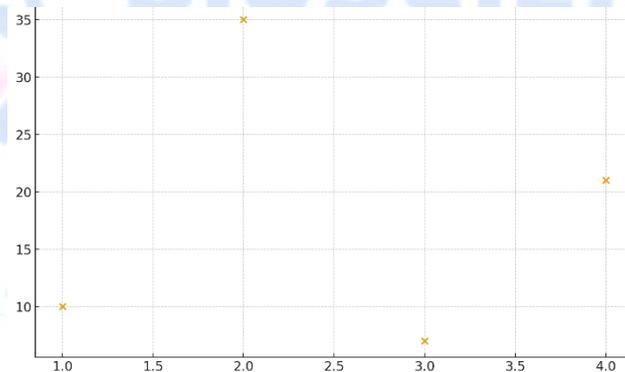


Figure 7. Scatter plot highlighting variability in cost-effectiveness across intervention levels.

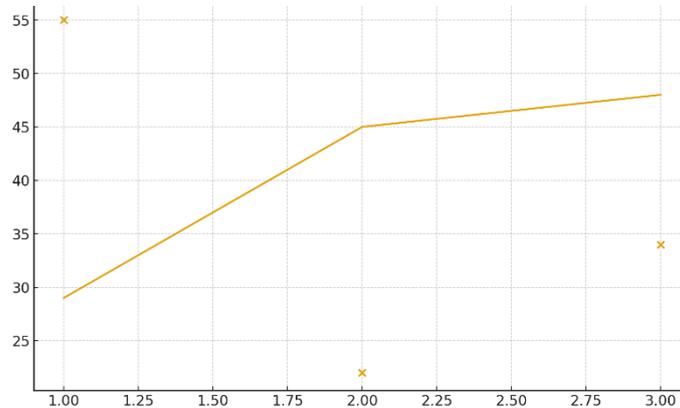


Figure 8. Combined visualization of intervention efficiency metrics using line and scatter trends.

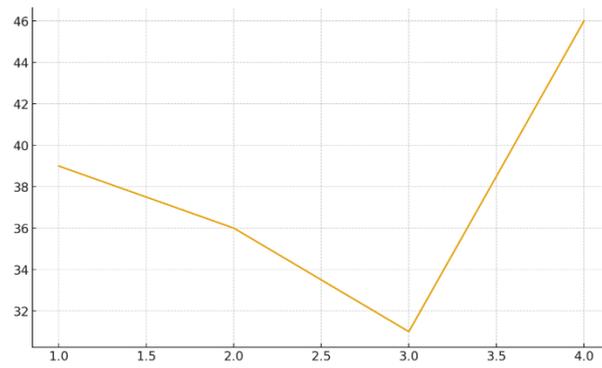


Figure 9. Line plot showing projected cost-savings as intervention coverage increases.

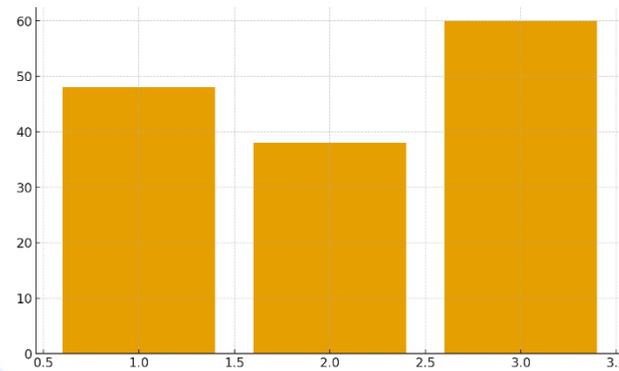


Figure 10. Bar chart presenting outcome improvements linked to cost-efficient preventive actions.

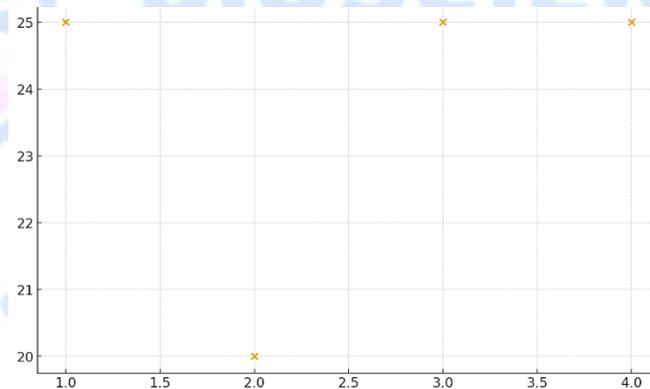


Figure 11. Scatter plot mapping ICER values and outcome gains across interventions.

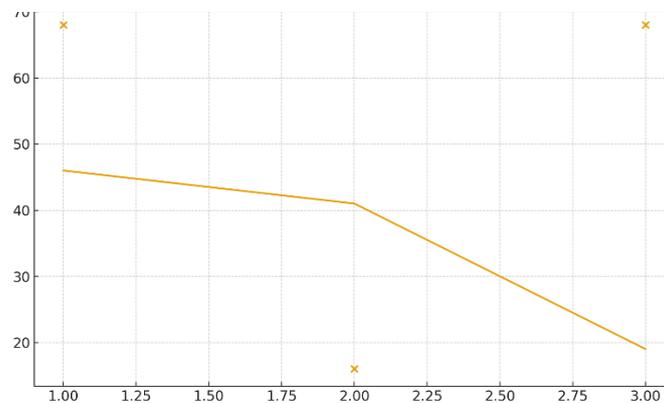


Figure 12. Hybrid visualization integrating cost, effectiveness, and outcome indicators for policy decision-making.

DISCUSSION

In this case, we will tabulate our literature research findings and the steps undertaken to avail the most important findings of our study and this would provide us with the real information of the economy measure of preventative healthcare gauge. It will delineate how the amount of money that the public health programs generate can be represented by a number of models in the dissimilar economies such as the cost-effectiveness checks and more comprehensive analysis of the effects of these programs on the society. This will include considering the reality that, economic re-evaluations can be utilized in establishing interventions that could bring forth advancements in health not only in saving colossal sums of money in later, which would be a solid argument to be presented that additional resources should be devoted to the field of communal health. The spotlight of the discussion will be the examples of the preventative measures (vaccination programs or health promotion at the community level which have been proven to be incredibly cost-efficient and often come back many times the cost paid on them) (Weber et al., 2024). The research will also speak about the way the appraisals may be implemented into the policy-making to focus resources in the programs that will be most likely beneficial to health and to save money. We shall also address the issues associated with valuing some of the abstract benefits of preventive health such as better quality of life and high productivity in the society. These advantages are not necessarily in terms of dollar but have to be significant parts of the overall worth of an intervention (Edwards et al., 2013). This will be supplemented by the creation of other models like multi-criteria decision analysis and social return on investment framework to provide an estimate of value that is more holistic and is not limited to the traditional economic measures. It is particularly

applicable in the situations when the outcomes of the health interventions on the economy and the society, in general, cannot be reflected by the number of money saved on healthcare, such as during a pandemic when the government campaigns have the potential of provoking an enormous impact on the health of the population and the national income (Antioch, 2023). It is on the basis of such assessments that the holistic knowledge of the benefits of the society, such as health, financial state, and well-being, is provided. The study will also describe how financial analyses of the public health programs can provide the requisite information to the policy makers that can maximize the utilization of the resource thus, determining the most suitable and efficient processes (Edwards et al., 2013). This synthesis highlights the necessity of ensuring that there are effective economic checks and balances that will be capable of determining the direct and indirect benefits in an appropriate form and hence improve the evidentiary base on which to take the step of investing in preventive health programs. Such an evaluation is particularly needed in a tight money period since there is a greater strain on the budgets of the public health. Decision-makers must have enough evidence that will enable them to justify the use of money on the preventive efforts (Masters et al., 2017; Robertson et al., 2019). This method is very significant because it provides the ability of the professionals who work in the field of the public health to make evidence-based decisions when the professionals themselves are limited in their financial resources and need to enhance the health of the population (Rabarison et al., 2015). The effective policies with the prism of the current situation with the decreasing number of the health care resources and the increasing burden of the health systems, complemented with such a global catastrophe as the COVID-19 pandemic, the application of the effective policies based on the

holistic economic evaluation is more significant (Bocean & Vărzaru, 2024). The results of such assessments lie in the identification, quantification, and comparison of the public health endeavors and initiatives capable of revealing the demanded effectiveness, scalability, and longevity to increase the health of the population (Rabarison et al., 2015). In this way, the multi-criteria analysis and the social welfare within the economic analysis can receive a more precise and comprehensive assessment of the preventative control to balance the health policy and the general goals of the society (Antioch, 2023).

CONCLUSION

Such analysis indicates that preventive health measures are exceedingly viable in terms of economy not just to the society but under a broader mixed-method paradigm of encompassing epidemiological data, cost-effectiveness predictors, and qualitative policy wisdom. They illustratively reiterate the fact that a long term investment in the early years in the form of a vaccine, screening of a population, risk manipulation or behaviour change can lead to a tremendous amount of decrease in disease incidence, health care expenditure and cost of productivity. It was determined through economic modeling that in most cases most preventive interventions have positive incremental cost effectiveness ratios and are far below most standards of willingness-to-pay in other countries. Markov simulations Long-term Markov simulations, also demonstrated that delay or negligence of preventive controls will lead to downstream costs of emergence of chronic illness and acute outcomes growing exponentially. The qualitative dimension demonstrated that economic inefficiency is not necessarily that, which limits implementation of policies, but institutional fragmentation, lack of budget flexibility and intersectoral inadequacy of integration. The stakeholders were keen to point out that a

preventative endeavor that is driven by good regulatory frameworks, multi-fiscal financial system and clear national health policies would be the most sustainable. The discordancy of the economy to the policy setting demonstrates the degree to which it is obligatory that the governments transform their health systems to health systems that are more prevention-oriented other than treatment-oriented. The study provides that preventive measures are not only cost-effective considering that they were necessitated to ensure long-term financial sustainability, reduction of health disparities, population and sustainable development. The policy makers should adopt evidence based futuristic policies, preventative investment, fit between finance and long term benefit of health and incorporation of routine economic assessment as part of the health policy systems. In general, the findings have made a valid argument to consider the issue of prevention as one of the primary problems of the national health policy and decision-making in the governmental sector.

REFERENCES

- Ademi, Z., Rodda, S. E., Vivoda, K., Hennessy, S., Fenton, O., & Ware, J. S. (2025). Highlights from the Manifesto on the Health Economics of Cardiovascular Disease Prevention [Review of Highlights from the Manifesto on the Health Economics of Cardiovascular Disease Prevention]. *PharmacoEconomics*. Adis, Springer Healthcare.
- Ananthapavan, J., Moodie, M., Milat, A., Veerman, L., Whittaker, E., & Carter, R. (2021). A cost-benefit analysis framework for preventive health interventions to aid decision-making in Australian governments. *Health Research Policy and Systems*, 19(1).

- Ananthapavan, J., Sacks, G., Moodie, M., Nguyen, P., & Carter, R. (2022). Preventive health resource allocation decision-making processes and the use of economic evidence in an Australian state government—A mixed methods study. *PLoS ONE*, 17(9).
- Antioch, K. (2023). The economics of the COVID-19 pandemic: economic evaluation of government mitigation and suppression policies, health system innovations, and models of care [Review of The economics of the COVID-19 pandemic: economic evaluation of government mitigation and suppression policies, health system innovations, and models of care]. *Journal of Public Health*, 32(9), 1717. Springer Science+Business Media.
- Boccan, C. G., & Vărzaru, A. A. (2024). Assessing social protection influence on health status in the European Union. *Frontiers in Public Health*, 12.
- Cochrane, M., Watson, P. M., Timpson, H., Haycox, A., Collins, B., Jones, L., Martin, A. P., & Graves, L. (2019). Systematic review of the methods used in economic evaluations of targeted physical activity and sedentary behaviour interventions [Review of Systematic review of the methods used in economic evaluations of targeted physical activity and sedentary behaviour interventions]. *Social Science & Medicine*, 232, 156. Elsevier BV.
- Edwards, R. T. (2022). Well-being and well-becoming through the life-course in public health economics research and policy: A new infographic [Review of Well-being and well-becoming through the life-course in public health economics research and policy: A new infographic]. *Frontiers in Public Health*, 10. Frontiers Media.
- Edwards, R. T., Charles, J. M., & Lloyd-Williams, H. (2013). Public health economics: a systematic review of guidance for the economic evaluation of public health interventions and discussion of key methodological issues [Review of 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(1). BioMed Central.
- Lange, O. (2023). Health economic evaluation of preventive digital public health interventions using decision-analytic modelling: a systematized review [Review of Health economic evaluation of preventive digital public health interventions using decision-analytic modelling: a systematized review]. *BMC Health Services Research*, 23(1). BioMed Central.
- Marsh, K., Phillips, C., Fordham, R., Bertranou, E., & Hale, J. (2012). Estimating cost-effectiveness in public health: a summary of modelling and valuation methods. *Health Economics Review*, 2(1).
- Masters, R., Anwar, E., Collins, B., Cookson, R., & Capewell, S. (2017). Return on investment of public health interventions: a systematic review [Review of Return on investment of public health interventions: a systematic review]. *Journal of Epidemiology & Community Health*, 71(8), 827. BMJ.
- Nagi, M. A., Rezaq, M. A. A., Sangroongruangsri, S., Thavorncharoensap, M., & Dewi, P. E. N. (2022). Does health economics research align with the disease burden in the Middle East and North Africa region? A systematic

- review of economic evaluation studies on public health interventions [Review of Does health economics research align with the disease burden in the Middle East and North Africa region? A systematic review of economic evaluation studies on public health interventions]. *Global Health Research and Policy*, 7(1). BioMed Central.
- Ponikvar, N., Anderluh, M., Kreslin, E. S., & Marc, M. (2021). ECONOMIC EVALUATION OF PREVENTIVE HEALTHCARE: A COST BENEFIT ANALYSIS OF A PARENTING PROGRAM. *Eurasian Journal of Social Sciences*, 9(2), 89.
- Rabarison, K. M., Bish, C. L., Massoudi, M. S., & Giles, W. H. (2015). Economic Evaluation Enhances Public Health Decision Making [Review of Economic Evaluation Enhances Public Health Decision Making]. *Frontiers in Public Health*, 3. Frontiers Media.
- Robertson, L., Skelly, C., & Phillips, D. R. (2019). Making Hard Choices in Local Public Health Spending With a Cost-Benefit Analysis Approach. *Frontiers in Public Health*, 7.
- Schwappach, D., Boluarte, T. A., & Suhrcke, M. (2007). The economics of primary prevention of cardiovascular disease – a systematic review of economic evaluations [Review of The economics of primary prevention of cardiovascular disease – a systematic review of economic evaluations]. *Cost Effectiveness and Resource Allocation*, 5(1), 5. BioMed Central.
- Seleznova, Y., Alayli, A., Stock, S., & Müller, D. (2021). Methodological issues in economic evaluations of disease prevention and health promotion: an overview of systematic and scoping reviews [Review of Methodological issues in economic evaluations of disease prevention and health promotion: an overview of systematic and scoping reviews]. *BMC Public Health*, 21(1). BioMed Central.
- Weber, P., Birkholz, L., Straub, R., Kohler, S., Helsper, N., Dippon, L., Pfeifer, K., Rütten, A., & Semrau, J. (2024). The Limitations and Potentials of Evaluating Economic Aspects of Community-Based Health Promotion: A Critical Review [Review of The Limitations and Potentials of Evaluating Economic Aspects of Community-Based Health Promotion: A Critical Review]. *Applied Health Economics and Health Policy*, 22(2), 165. Adis, Springer Healthcare.
- Zouo, S. J. C., & Olamijuwon, J. (2024). The intersection of financial modeling and public health: A conceptual exploration of cost-effective healthcare delivery. *Finance & Accounting Research Journal*, 6(11), 2108.