

Health Economics & Financing-Cost-Benefit Analysis of Preventive Healthcare vs. Curative Care

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Abstract

Health economics and financing play an important role in improving public health and managing healthcare costs. Cost-Benefit Analysis (CBA) helps compare the economic value of preventive healthcare and curative care. Preventive healthcare includes actions like vaccination, regular health check-ups, health education, and early disease detection, which aim to stop diseases before they occur. Curative care focuses on treating illnesses after they happen through medicines, surgeries, and hospital services.

This study examines the benefits and costs of both approaches. Preventive healthcare usually requires lower investment and provides long-term benefits by reducing disease burden, improving productivity, and lowering hospital expenses. On the other hand, curative care is often expensive because it involves diagnosis, treatment, and long-term management of diseases, especially chronic illnesses.

The analysis shows that investing in preventive healthcare is more cost-effective and sustainable compared to depending mainly on curative care. While curative care remains necessary for treating existing illnesses, stronger focus on prevention can reduce financial pressure on both individuals and healthcare systems. Therefore, a balanced healthcare policy should prioritize prevention while ensuring access to quality curative services.

1. Introduction

Health economics is the study of how healthcare resources are used, managed, and financed to improve people's health. It helps in deciding where money should be spent for the best health outcomes. Financing in healthcare means arranging funds for medical services such as hospitals, medicines, vaccinations, and treatments.

There are mainly two types of healthcare approaches: preventive healthcare and curative care. Preventive healthcare focuses on stopping diseases before they happen through vaccinations, regular check-ups, health education, proper nutrition, and exercise. Curative care focuses on treating diseases after they occur through medicines, surgeries, hospitalization, and emergency care.

Cost-Benefit Analysis (CBA) is a method used to compare the costs and benefits of these two approaches. It helps in understanding which option

gives more value for money. Preventive healthcare usually requires lower costs and provides long-term benefits by reducing illness and improving quality of life. Curative care, on the other hand, often involves higher expenses because treatment after illness can be costly and time-consuming.

Therefore, studying the cost-benefit analysis of preventive healthcare versus curative care is important for improving public health and making better financial decisions in the healthcare system.

2. Literature Review

Health economics focuses on the efficient allocation of limited healthcare resources. One major debate is whether investment in preventive healthcare (such as immunization, screening, health education, and lifestyle interventions) provides better economic returns compared to curative care (treatment after disease occurs, such as surgeries, hospitalization, and long-term medication). Many researchers have

studied the cost-benefit relationship between these two approaches.

1. Concept of Preventive and Curative Care

Preventive healthcare aims to avoid disease before it occurs or detect it early to reduce severity. It includes primary prevention (vaccination, sanitation), secondary prevention (screening, early diagnosis), and tertiary prevention (reducing complications). Curative care focuses on diagnosing and treating diseases after they develop, often involving expensive hospital-based services.

According to Kenneth E. Warner (1979), preventive healthcare is often cost-effective, especially primary prevention methods like immunization and community-based interventions such as water fluoridation. These interventions reduce future treatment costs and improve long-term population health.

2. Economic Value of Prevention

Warner (1984) further argued that although prevention improves health outcomes, not all preventive programs reduce total medical expenditure. Some prevention programs increase lifespan, which may also increase future healthcare spending. However, many still provide strong value because the health benefits gained are significant relative to cost.

This shows that cost-benefit analysis should not focus only on immediate savings but also on long-term gains such as productivity, quality of life, and reduced disability.

3. Cardiovascular Disease Prevention Studies

Schwappach et al. (2007) reviewed the economics of primary prevention of cardiovascular disease and found that lifestyle modification, blood pressure control, smoking cessation, and cholesterol management were often more cost-effective than treating heart attacks, strokes, and complications later. Preventive interventions showed better value particularly for high-risk populations.

4. Cancer Prevention vs. Treatment

Winn et al. (2016) conducted a systematic review of cancer prevention, treatment, and control and found that many prevention strategies such as vaccination, tobacco control, and screening provided better cost-utility outcomes than advanced cancer treatments. Curative cancer care often involved very high costs with limited survival gains, while prevention improved quality-adjusted life years (QALYs) at lower cost.

5. Importance in Developing Countries

In countries like India, preventive healthcare helps reduce the burden on hospitals and saves government spending. Public health programs improve access to affordable healthcare for poor populations.

6. Balanced Healthcare Financing is Best

Literature suggests that the best healthcare system invests in both preventive and curative care. Strong prevention reduces disease burden, while good curative services ensure proper treatment when illness occurs.

3. Methodology

1. Introduction

Cost-Benefit Analysis (CBA) is a systematic approach used in health economics to compare the costs and benefits of different healthcare interventions in monetary terms. In the context of preventive healthcare versus curative care, CBA helps determine which approach provides greater economic efficiency and overall societal benefit.

2. Type of Data

Cost-Benefit Analysis of Preventive Healthcare vs. Curative Care

2. Secondary Data

- Secondary data is already available from existing sources.

Sources:

1. Government health reports (Ministry of Health, WHO, etc.)
2. Hospital records and insurance data
3. Research articles and journals

4. National health surveys (NFHS, WHO reports, etc.)
5. Published economic and healthcare databases

3. Method of Analysis

The method of analysis in Cost-Benefit Analysis (CBA) explains how costs and benefits of preventive and curative healthcare are measured, compared, and interpreted.

Data is analysed using:

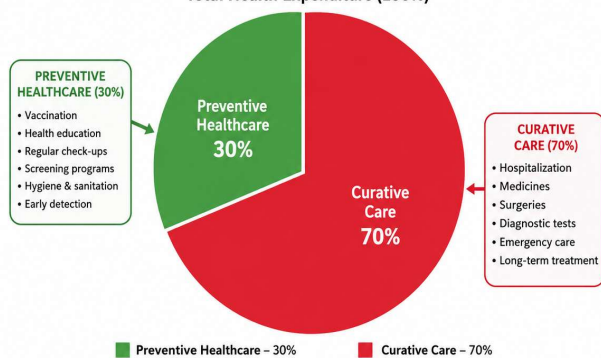
- Percentage method
- Charts and diagrams (Pie chart & Bar graph)

4. Pie Diagram (Health Economics & Financing)

COST-BENEFIT ANALYSIS OF PREVENTIVE HEALTHCARE VS. CURATIVE CARE

PIE DIAGRAM – COST COMPARISON

Total Health Expenditure (100%)



- PREVENTIVE HEALTHCARE (30%)**
- Vaccination
 - Health education
 - Regular check-ups
 - Screening programs
 - Hygiene & sanitation
 - Early detection

- CURATIVE CARE (70%)**
- Hospitalization
 - Medicines
 - Surgeries
 - Diagnostic tests
 - Emergency care
 - Long-term treatment

EXPLANATION

- ▶ The pie diagram shows that a larger portion of the total health expenditure (70%) is spent on **curative care**, while only 30% is spent on **preventive healthcare**.
- ▶ Curative care involves high costs due to hospitalization, medicines, surgeries and long-term treatment.
- ▶ Preventive healthcare includes low-cost interventions like vaccination, screening and health education.
- ▶ Investing more in preventive healthcare can reduce disease burden and lower future curative expenses, leading to higher savings and better health outcomes.

★ **CONCLUSION:** Preventive healthcare is more cost-effective and provides greater long-term benefits compared to curative care.

Explanation

Total Health Expenditure (100%)

Preventive Healthcare : 30%

Curative Care : 70%

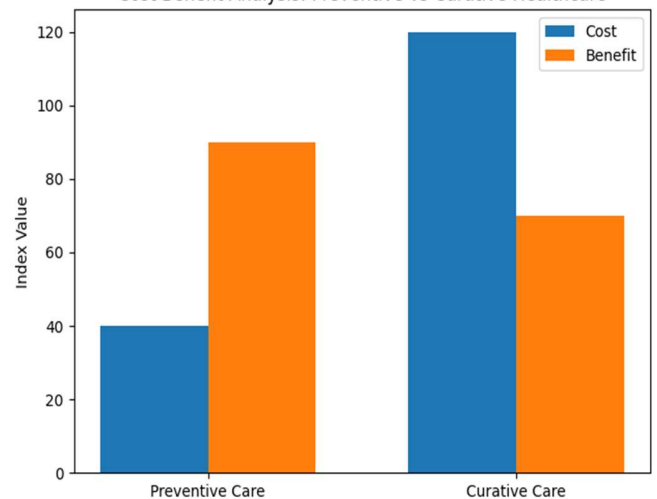
The pie diagram shows the distribution of total healthcare spending. It indicates that a larger share of money is spent on curative care compared to preventive care.

This happens because:

- Many people seek treatment only after falling ill
- Hospitalization and surgery costs are very high
- Preventive care receives less investment
- However, from an economic point of view:
- Increasing preventive care reduces long-term curative expenses
- Preventive healthcare is more cost-effective and sustainable

5. Bar Graph

Cost-Benefit Analysis: Preventive vs Curative Healthcare



Explanation

Health Economics & Financing – Cost-Benefit Analysis of Preventive Healthcare vs Curative Care

Interpretation of the Bar Graph:

- Preventive Healthcare
- Lower cost (40)
- Higher benefit (90)
- Shows better efficiency (more health gain at less cost)
- Curative Care
- Higher cost (120)
- Lower relative benefit (70)
- Indicates expensive treatment after illness occurs

6. Conclusion of Methodology

The methodology shows that both preventive and curative care are measurable in monetary terms, allowing comparison through costs and benefits.

- **Preventive healthcare** is assessed based on early intervention costs (vaccination, screening, awareness programs) and long-term savings from avoided diseases.
- **Curative care** is evaluated through treatment costs such as hospitalisation, medicines, surgeries, and emergency care expenses.

4. Results / Findings

1. **Preventive healthcare shows lower long-term costs** compared to curative care because early intervention reduces the need for expensive treatments and hospitalizations.
2. **Curative care involves higher expenditure**, especially in advanced disease stages, due to surgery, hospitalization, medication, and long recovery periods.
3. **Preventive measures provide higher cost-effectiveness**, as small investments in vaccination, screening, and awareness lead to large savings in future healthcare costs.
4. **Reduced disease burden is observed in preventive care**, leading to fewer cases of severe illness and chronic complications.
5. **Productivity loss is significantly lower in preventive care**, since individuals remain healthier and require less time off work or dependency support.
6. **Curative care improves survival in emergencies**, but does not reduce the overall incidence of diseases in the population.

5. Discussion

1. Preventive healthcare is generally more cost-effective in the long run compared to curative care, as it reduces the incidence of diseases before they require expensive treatment.

2. Curative care often involves high direct costs such as hospitalization, medicines, surgeries, and long-term treatment, which can create a financial burden on both individuals and the healthcare system.
3. Preventive measures like vaccination, regular health check-ups, awareness programs, and early screening require lower initial investment but lead to significant savings by avoiding severe illnesses.
4. The benefits of preventive care are not only financial but also include improved quality of life, increased life expectancy, and higher productivity of the population.
5. However, preventive healthcare requires continuous investment and strong public participation, and its benefits may take time to become visible.
6. In contrast, curative care provides immediate relief and is essential when diseases occur, but it is not sustainable as the primary strategy for public health improvement.

6. Conclusion

1. Preventive healthcare is more cost-effective than curative care in the long run.
2. Early detection and prevention reduce the need for expensive treatments and hospitalizations.
3. Curative care often involves higher financial burden for both individuals and healthcare systems.
4. Investment in preventive measures improves overall public health and productivity.
5. A balanced healthcare system should prioritize prevention while maintaining quality curative services.
6. Strengthening awareness and accessibility of preventive care can significantly reduce overall healthcare costs.

7. References

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