

Assessing Treatment Costs and Economic Burden of Major Cardiovascular Conditions in Türkiye

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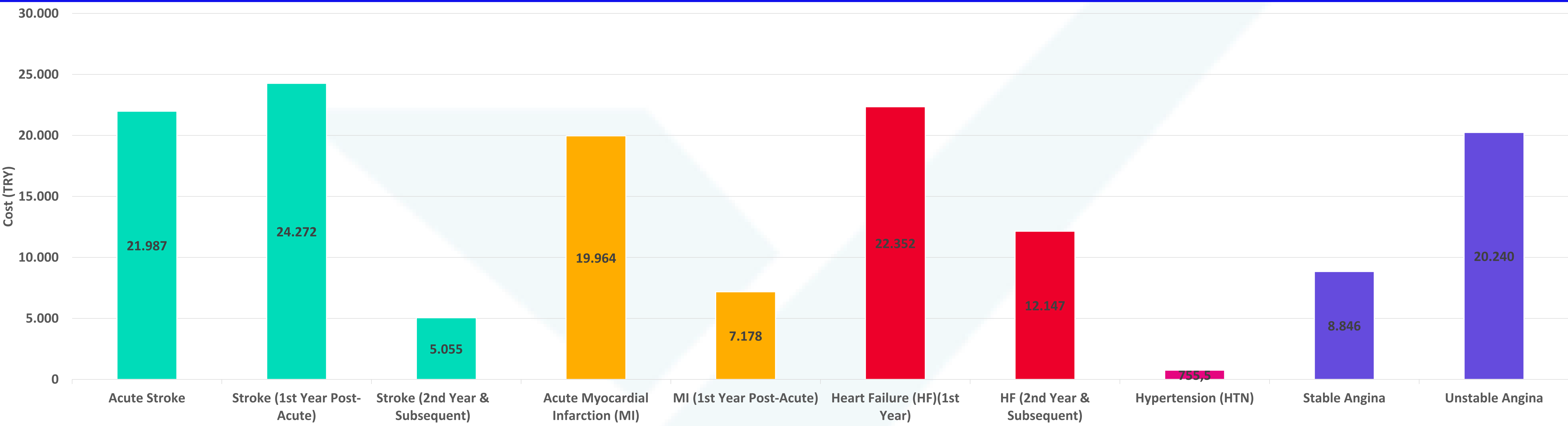
INTRODUCTION

- Cardiovascular disorders remain a primary health concern on a global scale, often leading to significant economic burden for national healthcare systems. This concern seems also evident in the 2022 data for Türkiye. When analyzing the causes of mortality, cardiovascular diseases ranked first, accounting for 35.4% of all deaths in 2022. A more granular investigation into the underlying causes of these cardiovascular-related deaths revealed that 42.3% were due to ischemic heart diseases, and 23.5% were attributed to other heart diseases.¹
- Particularly in Türkiye, with its unique blend of European and Asian healthcare practices, understanding the economic ramifications of these conditions is paramount. In this research, we aim to comprehensively assess the direct treatment costs related to cardiovascular disorders in Türkiye. By examining various cost components, our objective is to reveal the economic consequences of this medical condition within the context of the Turkish healthcare landscape.

METHOD

- We focused on prominent cardiovascular conditions, specifically hypertension (HTN), stroke, myocardial infarction (MI), angina, and heart failure (HF). Our research offers a comprehensive cost analysis for the year 2023, encompassing both acute and chronic phases of treatment for these conditions.
- The estimations of resource utilization and associated costs were derived from a synthesis of published academic literature concerning the relevant conditions in Türkiye. In case of multiple studies for a single condition, average of these costs was calculated. Furthermore, these cost figures were normalized and adjusted to reflect the inflation rate of 2023.

RESULTS



- Upon rigorous analysis, the economic implications of the addressed cardiovascular conditions are as follows: The treatment cost for an acute stroke episode stands at TRY21,987^{2,3,4}. Subsequently, the financial burden for the first-year post-acute stroke is TRY24,272^{4,5}, and for the second and ensuing years, it amounts to TRY5,055^{2,3}.
- Addressing an acute MI necessitates an expenditure of TRY19,964^{2,3,5,7} with the subsequent year's treatment for post-acute MI costing at TRY7,178^{2,3,6}. The financial outlay for managing HF during its first year is TRY22,352^{2,5,7,8}, while the cost for the second year and thereafter is TRY12,147^{2,9} HTN management incurs an annual expense of TRY755.50^{6,10}.
- The yearly treatment expenditure for stable angina is reported at TRY8,846^{2,6}, whereas the annual cost for managing unstable angina escalates to TRY20,240^{6,7}.

CONCLUSIONS

- The data underscores the profound economic burden of cardiovascular diseases on the Turkish healthcare system. Notably, HF and stroke stand out as the most economically demanding conditions, necessitating comprehensive medical interventions and sustained care. A precise comprehension of these expenditures lays the groundwork for devising strategies to mitigate the financial repercussions of these widespread medical conditions. It is imperative to comprehensively understand the economic consequences of these conditions on society; subsequent research efforts should also consider costs beyond the healthcare system, such as the costs of caring for disability resulting from stroke, considering emerging therapeutic approaches and evolving economic parameters.
- In summary, the economic consequences ramifications of managing cardiovascular disorders in Türkiye are considerable, diverging based on the specific malady in question. Acute manifestations of diseases, such as stroke and myocardial infarction, entail substantial upfront costs. Conversely, chronic diseases like heart failure and hypertension pose recurring annual financial challenges. The substantial expenses involved in the subsequent stages following acute episodes of stroke and myocardial infarction further highlight the enduring financial implications of these conditions. This underscores the critical need for robust preventive interventions and streamlined healthcare frameworks to alleviate the economic challenges posed by these pervasive cardiovascular conditions in Türkiye's healthcare settings.

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Abbreviations: HTN:hypertension, MI:stroke, myocardial infarction, HF:angina, and heart failure

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