

The Impact of Healthcare on Cardiovascular Disease
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ABSTRACT:

Background: In 2005, cardiovascular disease was the leading cause of death around the world, causing over 17.5 million deaths worldwide. Not only harming people, CVD has affected economies. In the UK, CVD cost the government 29.1 billion dollars. The major cost for this was utilization of healthcare services, which was 60% of the cost.

Methods: Google Scholar and PubMed were searched in this scoping literature review using the key search terms Healthcare, Impact, Cardiovascular, Disease.

Results: The more vascular beds (or, areas of blood vessels providing blood flow to a region) affected, the higher the healthcare cost. Cardiovascular disease and stroke cost the UK economy £29.1 billion in 2004. The two diseases accounted for more than half of the total cost, with heart disease costing £8.5 billion and stroke costing £8.0 billion. Healthcare made up 60% of the total cost, while productivity losses due to death and illness accounted for 23% of the cost, and informal care-related costs made up the remaining 17%.

Discussion: Regular check-ups can help catch heart problems early and reduce the risk of death or heart problems. This means that going for check-ups can save money in the long run and keep people healthier. Our findings match what others have said: it's important to find heart issues early to save money and keep people healthier. We need to make check-ups easier to get, especially for those at higher risk. This study tells us we can save money and lives by making sure more people get checked regularly. In the UK, heart disease and strokes incur significant healthcare expenses.

INTRODUCTION:

Significance of the Problem

According to Rohina et al., in 2005 cardiovascular disease was the leading cause of death around the world, causing over 17.5 million deaths worldwide and 80% of these deaths occurred in low-income countries [1]. People who receive health screenings have significantly lower risks of getting affected by cardiovascular diseases (CVD). Not only harming people, CVD has affected economies. For instance, according to Luengo-Fernández, in the UK, CVD cost the government 29.1 billion dollars [2]. The major cost for this was utilization of healthcare services, which was 60% of the cost [2].

Objectives

The aim of this paper is to investigate how much cardiovascular disease contributes to healthcare spending and how screening can prevent cardiovascular disease and decrease healthcare spending.

METHODS:

Search Strategy

I used Google Scholar and Pubmed to conduct a scoping literature review. The key searched terms used were Healthcare, Impact, Cardiovascular, Disease.

Inclusion and Exclusion Criteria

Studies that included patients over the age of 50 and studies that included healthcare utilization as a variable were included. Systematic reviews and meta-analyses were excluded.

RESULTS:

According to Weng et al., 47.0% of 539,089 individuals with type 2 diabetes mellitus (DM) and atherosclerotic cardiovascular disease (ASCVD) had ASCVD affecting more than one region of blood vessels, also known as vascular beds [3]. The most common ASCVD diagnoses were acute coronary syndrome (26.6%), peripheral arterial disease (24.5%), and stroke (18.6%) [3]. The mean annual total healthcare costs per person increased with the number of affected vascular beds, from \$17,741 for one bed to \$25,877 for two beds to \$33,412 for three beds [3]. A similar pattern of increased healthcare utilization was observed with an increasing number of vascular beds. Among individuals with one affected vascular bed, mean total healthcare costs per person were comparable across age subgroups [3]. However, if more than one vascular bed was affected, the mean total healthcare costs were highest in the youngest age cohort [3].

According to Luengo-Fernández et al., a study by the University of Oxford found that heart disease and stroke cost the UK economy £29.1 billion in 2004 [2]. The two diseases accounted for more than half of the total cost, with heart disease costing £8.5 billion and stroke costing £8.0

billion [2]. The biggest part of the cost was healthcare, which made up 60% of the total cost [2]. Productivity losses due to death and illness accounted for 23% of the cost, while informal care-related costs made up the remaining 17% [2].

According to Lee et al., out of 443,337 people, 160,607 people (that's 36.2% of the total) underwent a health screening in 2003-2004, and 110,278 people underwent another screening in 2005-2006 [1]. The study found that people who went for a health screening in 2003-2004 had a lower risk of dying from any cause and developing cardiovascular diseases between 2005-2010 compared to those who didn't go for a screening [1]. The incidence rate per 1000 people was also lower for those who went for a screening [1].

DISCUSSION:

Our study showed that heart problems cost a lot for healthcare and hurt people's health. People with diabetes and heart issues had higher healthcare costs, especially if they had problems in more than one area. In the UK, heart disease and strokes incur significant healthcare expenses.

Getting regular check-ups made a big difference. People who got checked had lower risks of dying or getting heart problems. This means going for check-ups helps catch problems early and saves money in the long run.

Our findings match what others have said: it's important to find heart issues early to save money and keep people healthier. We need to make check-ups easier to get, especially for those at higher risk. This study tells us we can save money and lives by making sure more people get checked regularly. Overall, I was not surprised with my findings. I expected these results, since I understand just how important healthcare is for the health and wellbeing of people. So, difficult access to good healthcare can prevent good health and wellbeing. In the future, we can use this data to try and increase the amount of healthcare access in other areas, especially in underprivileged areas. This way, more people can gain access to healthcare all around the world.

REFERENCES:

1. Rohina, J. (n.d.). Global Inequalities in Access to Cardiovascular Health Care: Our Greatest Challenge. *JACC Journals*. 2008: 52(23), 1817–1825.
<https://www.jacc.org/doi/full/10.1016/j.jacc.2008.08.049>

2. Luengo-Fernández, R. (n.d.). Cost of cardiovascular diseases in the United Kingdom. *BMJ Journal*. 2006: 92(10). <https://heart.bmj.com/content/92/10>
3. Weng, W., Kong, S. X., Ganguly, R., Hersloev, M., Brett, J., Hobbs, T., & Baeres, F. M. (2020). The prevalence of cardiovascular disease by vascular bed and impact on healthcare costs in a large, real-world population with type 2 diabetes. *Endocrinology, diabetes & metabolism*, 3(2), e00106. <https://doi.org/10.1002/edm2.106>