

Briefing paper

Comparing UK and 20 Western countries' efficiency in reducing adult (55–74) cancer and total mortality rates 1989–2010: Cause for cautious celebration? A population-based study

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Cancer in the UK has been associated with a low survival rate, compared to 20 other Western nations. Governments across the world dedicate a certain percentage of their spending on health in an attempt to reduce mortality rates, among other issues. This study presents findings showing the efficiency of economic spending to reduce cancer and total deaths in the UK and other 20 Western countries.

Outline of research

Using the percentage of national income spent on health obtained from US Bureau of Statistics and the World Bank, researchers calculated the efficiency of government spending in reducing cancer and total deaths in the 21 western countries including the UK. Total deaths and cancer-related deaths for each country were obtained from World Health Organization data, the baseline three years average for 1989-1991 and 2008-2010 for both sexes. Efficiency in reducing cancer and total mortalities was calculated and any significant differences between the UK and other countries determined. Efficiency ratios were calculated by dividing reduced mortality over the period by the average percentage of national income spent on healthcare.

Key findings and impact

- Generally, all the 21 Western countries increased government expenditure on health from 1980 to 2010. The average UK spending on health was 6.2% from 1980-1997 and ranked 20th out of the 21 countries while Europe average was 7.7%, this gave a ratio of 1: 1.24 of UK spending to Europe. The UK spent an average of 7.9% from 1998-2010 ranking 17th, Europe spent approximately 18% more than the UK over the same period.
- The output of government expenditure on health is the reduction in cancer and total deaths in each country. Over the period of 1989 to 1991 and 2008 to 2010, UK cancer deaths rate fell in relation to European average representing 1:0.83 to 1:0.88 respectively. The UK had been second highest but had dropped to sixth with 28% reduction in cancer deaths. This is the sixth-biggest reduction in cancer deaths among 21 Western countries over the same period. In total deaths, the UK has been third-highest but has now dropped to fifth at 11,570 deaths per million, this is the second-biggest reduction with over 44% drop.
- The UK has significantly reduced death due to cancer and had bigger fall than 14 other countries. For total deaths, it had a significantly better reduction than 17 other nations including the USA. The UK was most efficient in cancer death reductions with a ratio of 1: 301 with Europe average cancer efficiency reduction recorded at 1:176, resulting in UK to Europe ratio of 1:1.71. The UK was second most efficient in total deaths reduced using government percentage spending on health at 1:1341.

Conclusion

This result challenges the cancer survival rate of patients used in measuring clinical success where all Western countries have improved its survival rates and the UK appeared less successful. However, the UK has achieved highest efficiency of using less spending to achieve more reduction in cancer and total deaths than other European countries and Western countries in general. In summary, the NHS achieves more with proportionally less.

