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Review

Cancer economics, policy and politics: What informs the debate? Perspectives from the EU, Canada and US☆

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ABSTRACT

In high-income countries the public policy consensus is that costs of delivering high-quality equitable cancer care present an increasing challenge to national budgets. In the U.S. alone it is estimated cancer care expenditures in 2020 will be 157 billion dollars. The increase is being driven by a number of factors including technological innovation, rising costs of medical and hospital care, expensive therapeutics and an increase in the proportion of individuals susceptible to malignancy as the population ages. In this article we review what factors are informing and influencing the political debate on cancer economics across Europe and North America.

We have undertaken a comprehensive analysis of the literature and supplemented this with key informant interviews within each region. An important theme is the increasing role of individual patients, organisations and physicians in advocating for greater access to and fairer prices for cancer therapies. Whilst health technology assessments (HTAs) are increasingly prevalent their role in informing reimbursement policy is influenced by public and political scrutiny, which impacts their ability to ensure access to high value cost effective care. Austerity measures following the global recession have created inequities in access to drugs with concern about the impact on subsequent outcomes. The cancer economics debate has largely centred on the provision of drugs, with access to radiotherapy and over-penetration of high cost radiation technologies under-represented in media outputs and political discussion.

Future work should enhance collaborative efforts to assess relative effectiveness and to provide real-world data. These debates are becoming increasingly complex, even as we face stagnating health budgets. We must also be aware of the key factors that play a significant role in cancer policy aside from economics including socio-cultural values, advocacy and political influence at the country and regional level.

Contents

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The case of Europe

Background

With respect to cancer care the US is estimated to spend approximately 100€ more per citizen compared to Europe as a whole where it is estimated that per person cancer expenditure is 196€ [1]. However there remains significant debate as to whether this has translated into improved patient outcomes [2,3]. Furthermore several EU-28 countries, despite less investment, are achieving comparable or superior outcomes by considering best practices, and assessing cost effectiveness [4].

However, within EU-28 countries the landscape is heterogeneous, with on-going debate as to the optimum strategy to achieve value in the provision of cancer care [5]. The report by the Lancet Oncology Commission on the affordability of cancer in high-income countries has conceptualised the debate and we have set out in this section to review the changes and ethos of EU-28 countries towards cancer economics [6].

Breadth of the problem and the range of expenditures

Across Europe there remain significant inequities in the incidence of specific tumour types and outcomes of care. The overall risk of dying is decreasing, in line with improvements in screening, diagnosis and treatment, however variation in the magnitude of change exists according to disease site and country [7]. The CONCORD study demonstrated that five-year relative survival for breast cancer in Europe ranged from 57.9% and 62.9% in Slovakia and Poland respectively to 75.5%, 79.8%, and 82% in Germany, France, and Sweden with regional variation evident [8]. Such trends have been established in other studies, notably the Eurocare 5 report and The International Cancer Benchmarking Partnership Study [9]. Factors implicated include late diagnosis associated with advanced stage at presentation [10].

These findings were widely reported in the media [11] and stimulated public debate and political action with the creation of new policies designed to ameliorate regional and international disparities. Early diagnosis was considered a key policy goal to improve cancer survival in the UK. Prevention, increasing awareness of cancer symptoms and dissemination of best practice were all identified as key goals in the government's white paper "Improving outcomes a strategy for cancer" [12]. Comparative data from observational studies on cancer outcomes has the ability to influence the debate and result in positive policy changes.

Although absolute cancer expenditures alone are not indicative of outcomes, significant differences are likely to reflect potential issues in access to essential screening, diagnostic and treatment services as well as the political priority afforded to cancer care. A recent study [1] demonstrated that per capita cancer care expenditure varies considerably across the EU, even for countries with the same level of national income. The UK, Italy, Sweden and France when adjusting for price differentials spend 92€, 96€, 92€ and 97€, respectively, per person on cancer specific health care. By comparison Germany spends 171€ per person and The Netherlands 123€. However across Eastern Europe the differences are marked, with adjusted costs per person per annum for Bulgaria, Romania and Poland of 52€, 54€ and 78€, respectively.

The effects of variation in expenditure and the comparative effectiveness of health care interventions across Europe remain difficult to discern due to inconsistent poor quality data, and challenges of adjusting for case mix when interpreting observational studies[13]. Additionally factors other than wealth are important, and unwarranted variation can result from limitations in health insurance coverage, disparities in access, (e.g. radiotherapy), as well as differences in country-specific cancer epidemiology [14–17].

The global recession: end of an era in cancer investment?

A major factor influencing the current cancer economics debate has been the austerity measures rolled out across Europe in the face of the recession. Greece cut its health budget by 23.7% between 2009 and 2011, Spain by 14% in 2012 and Portugal cut its health spending for the first time in 2011 [18]. In the UK, additional pressure on NHS (National Health Service) budgets has been placed by the "Nicholson challenge" which is seeking efficiency savings of more than 20£ billion by 2015 in order to meet projected patient demand [19]. In Italy, poor control of regional health care expenditures had resulted in a cumulative deficit of over 38€ billion [20].

Countries have attempted to reduce expenditures by encouraging efficiency savings through the use of generic drugs. Spain has gone further with cuts to professional training (75%) as well as public health and quality programmes (45%). There have been cost shifts from the state to patients; with previously exempt groups (e.g. pensioners) now required to make co-payments [21]. Rationing of health services have led to lengthening of waiting lists for hospital procedures and tests and reduced availability of cancer drugs across several countries in Europe.

In Romania there has been a chronic shortage of basic cancer drugs over the last 2 years. Whilst under-investment in pharmaceuticals is a factor, it is the complex and fragmented procurement and distribution pathway for drugs that has resulted in inconsistent supply stimulating the black market and Internet sales. Furthermore, the costs of drugs in Romania are the lowest in the EU, resulting in parallel exports whereby drugs are sold to other European states where the same drugs are usually more expensive [22].

Drug companies have reacted by tightening their conditions for trading with European countries such as Greece [23,24]. However the overriding concern is the impact that inequities in drug availability could have on cancer outcomes particularly for those unable to pay privately. Exacerbating the situation is the fact that the costs of cancer care in EU-28 countries are increasing at an unprecedented rate, driven by demographic changes, innovation and consumerism within health care [6]. Fiscal sustainability of health care financing therefore remains a key public policy concern. Calls have been made to the European Commission to intervene on this issue given concerns regarding patient welfare.