Reframing healthcare and pharmaceutical spending: A framework for resource allocation

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Introduction & objectives

What policy objectives can be met through healthcare and pharmaceutical spending?

How can countries reframe their spending given these objectives?

Healthcare systems in middle- and high-income countries face growing, interrelated pressures. Rising demand, driven by ageing populations and increased burden of disease, comes with increased expectations of timely access to effective, innovative treatments.[1] Longer term, governments must sustain incentives for medical innovation so that new treatments are available to patients, and to realize the productivity benefits and economic growth that come from a healthy population.[2]

Debates on healthcare and pharmaceutical spending increasingly center on spending targets, such as allocating 0.8% of GDP to innovative medicines, but with limited economic justification.[3] This research develops an evidence-based framework that can be used to assess a country's spending on healthcare and pharmaceuticals and how this relates to key policy objectives.

Methodology

This paper provides a structured framework to evaluate national healthcare and pharmaceutical spending and its alignment with broader policy goals via the following steps:

1. Conduct a review of academic papers in economics, public health and public policy, government reports, and other grey literature to identify the policy objectives that can be met via pharmaceutical and healthcare spending.
2. Validate and refine insights from the literature review via semi-structured interviews with five economists and policymakers.
3. Develop a conceptual framework that maps how healthcare and pharmaceutical spending levels contribute to the policy objectives, including the capture of indirect benefits.
4. Illustrate the application of the framework with a stylized case study, focusing on the UK.
5. Offer targeted, evidence-based policy recommendations to support more effective, sustainable spending.

Policy objectives for healthcare and pharmaceutical spending

The literature shows a robust link between spending on healthcare and pharmaceuticals and two primary policy objectives. Spending toward each can lead to additional indirect benefits.

Addressing health needs

Is a country spending enough on healthcare and pharmaceuticals, given its burden of disease and demography, and is it able to incorporate new technologies?

Objective: Optimize a country's health outcomes

Indirect benefits: Productivity and economic growth that stem from a healthy population

Key insights

1. Increased spending is needed to meet growing healthcare demand across countries[4,5]
2. There is ample room for efficiencies and reduction in waste across healthcare systems[6]
3. Healthcare and pharmaceuticals can be complementary, with improvements in the provision of healthcare through access to innovative medicines[7]

Creating an environment to deliver innovation

Given country-specific factors such as wealth, is a country spending enough on healthcare and pharmaceuticals to support pharmaceutical innovation?

Objective: Optimize global innovation

Indirect benefits: Scientific spillovers, crowding in additional investments, and driving economic growth

Key insights

1. There is a positive relationship between global pharmaceutical spending and R&D[8]
2. R&D can be framed as a global public good, requiring coordination and "fair share" spending by countries[9]
3. Although causal evidence is limited, anecdotal evidence suggests that a country's pharmaceutical and healthcare spending may contribute to local R&D[10]

Framework for healthcare and pharmaceutical resource allocation

1 Objective preference — To what extent do countries prioritize the **policy objectives of meeting health needs and supporting innovation**? What is the healthcare and pharmaceutical spending status quo?

2 Health needs — According to rigorous demographic, epidemiologic, and economic models, **how much should be spent to meet the health needs** of the population?

3 Supporting innovation — To what extent is a **country's spending meeting its "fair share" in support of global R&D efforts**, given assumptions on optimal levels of R&D and allocations across countries?

Quantification of spending for health needs and innovation objectives
Health needs spending + Incremental pharmaceutical spending for "fair share" of innovation – Cost offsets to health needs spending from the incremental pharmaceutical spending

4 Indirect effects — What additional **indirect spillover benefits**, such as increased growth, could be generated? How much incremental spending would this entail, and over what timeframe?

5 Final quantification — How does the spending resulting from steps two and three (and step four, if capturing indirect benefits) **compare to the spending in the status quo**?

The five-step framework to the left relies on robustly-established links between health and pharmaceutical spending and policy outcomes.

The status quo refers to a country's current spending level and the trajectory that would exist absent an intervention to further improve health needs or move towards a "fair share" contribution to innovation.

The framework emphasizes how the health needs and innovation policy objectives are **not** in direct tension, with spending on one contributing to the other in either the short or long terms. The spending that the framework sets out for each objective is not purely additive, but instead comes together incrementally, while also capturing "offsets" to spending. These offsets are the savings to healthcare spending that accrue due to additional spending on pharmaceuticals to meet the innovation objective.

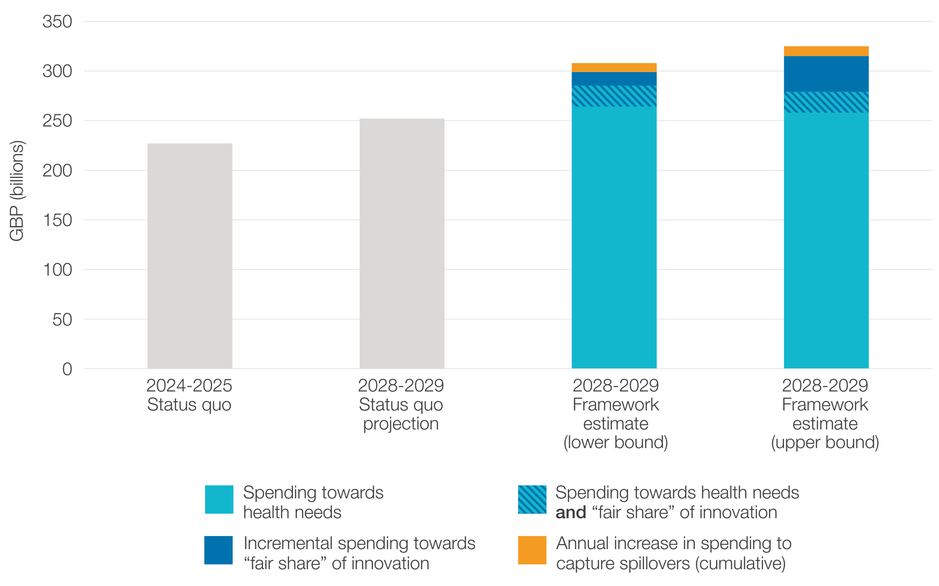
Finally, the framework illustrates the additional resources that could be spent to better capture indirect benefits, and provides an assessment of spending gaps relative to the status quo.

Illustrative application of the framework to the UK

We apply the framework to the UK as a case study. Rather than offering specific spending amounts, it illustrates the considerations around resource allocation and the objectives that can be met with healthcare and pharmaceutical spending.

1. Assume the UK prioritizes both policy objectives of meeting health needs and supporting innovation, and use actual spending and current projections to estimate the status quo spending in 2028-2029[11-15]
2. Leverage a robust model of the healthcare system to identify the spending needed to meet health needs in 2028-2029[16]
3. Drawing on global GDP data and data on global innovative pharmaceutical spending, identify the incremental spending on innovative pharmaceuticals, beyond what is spent for health needs, that is needed for the UK to meet its "fair share"[17,18]
4. Aggregate across steps two and three, subtracting offsets to healthcare spending from increased pharmaceutical spending[19]
5. Using parameters from the macroeconomic literature, consider additional spending that could lead to optimization of spillovers; this may be disbursed gradually.[20] We model this disbursement as additional cumulative spending over ten years.
6. The framework illustrates the gap between the status quo and spending to meet both policy objectives, as shown to the right.

We define a lower "fair share" bound that considers the UK's GDP as a percent of global GDP, and an upper bound with the UK's GDP as a percent of OECD GDP. The former assumes that innovation is produced and consumed within a global system, with all countries responsible for their "fair share," whereas the latter assigns a "fair share" to high-income countries, which account for most innovative activity. Both approaches assume that current levels of R&D are optimal.



Policy recommendations and conclusions

The framework highlights the importance of: (1) linking healthcare and pharmaceutical spending with health needs; (2) ensuring conditions that stimulate innovation; and (3) capturing broader economic and scientific spillovers that arise from this spending. This report provides a foundation on how to align spending targets with policy objectives and how countries can identify opportunities to allocate scarce financial resources more effectively. Six policy recommendations follow from the research:

1. Healthcare and pharmaceutical spending should be considered jointly, applying a unified approach to assess total expenditure and the extent to which it supports policy objectives
2. Healthcare and pharmaceutical spending should be framed as an investment, given the benefits that accrue over time
3. Health needs approaches to determine and forecast long term health expenditure should incorporate the expected value and costs of future medical technologies, ensuring resources to efficiently adopt them to meet the evolving needs of a population
4. Health spending determinations should consider the efficient long term use of resources, to allow for increased investment in high value innovation
5. Countries should calibrate relative pharmaceutical spending to ensure a fair contribution to sustaining global innovation efforts
6. Countries should invest in healthcare infrastructure and capabilities as this may unlock scientific and economic spillovers

Abbreviations: GDP – Gross Domestic Product; UK – United Kingdom; R&D – Research and Development; GBP – Pound Sterling; OECD – The Organisation for Economic Co-operation and Development.

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