Do countries with similar GDPs and health expenditures reimburse the same cancer drugs?

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Background and objectives

In today’s economically constrained environment, payers have responded to the potentially high cost of new oncology medicines by conducting value-for-money assessments through national or regional pricing and reimbursement (P&R) and health technology assessment (HTA) agencies.

Assessments may introduce the potential for discrepancies between the clinically eligible population (under the license) and the population that is eligible for treatment through public reimbursement.

This study analyzed whether gross domestic product (GDP) per capita (GDPPC) and health expenditure as a proportion of GDP are associated with the national access restrictions imposed in various markets.

Methods

• Common cancers were identified: breast, kidney, lung, melanoma, multiple myeloma, and prostate.
• New oncology therapies granted a first license by the European Medicines Agency (EMA), Health Canada (HC) or the Australian Therapeutic Goods Administration (TGA) between January 2006 and June 2016 were identified along with any relevant follow-on indications.
• For each first regulatory approval, HTA/reimbursement decisions by national agencies were identified for the initial and follow-on indications.
• Decisions were classified according to the level of access restriction in relation to the clinically eligible population (Figure 1): No restriction (unrestricted access to all patients) Partial restriction (restricted to subpopulations) Complete restriction (restricted – no patient access)

Data on patients, YLL, and the population that is eligible for treatment through public reimbursement (per country) was then identified.

Results

Reimbursement decisions

• Of the 892 possible reimbursement decisions (Figure 2), 316 (35%) resulted in a complete or partial restriction (Table 2).
• Although the rank correlation between the proportion of assessments with restrictions in each country and GDPPC was −0.71, the relationship was not linear (R² = 0.51, Table 3); however, there was a stronger linear relationship between health expenditure as a proportion of GDP and the proportion of reimbursement restrictions in each country (R² = 0.70, Table 3).

Discussion and conclusions

• Access to cancer therapies via public reimbursement varies between countries, and the nature of the restrictions and their impact on patients is heterogeneous.
• Patterns of restrictions do not correlate with GDP; however, healthcare expenditure as a proportion of GDP was moderately predictive of the extent of restriction.
• Analysis of reimbursement outcomes (i.e., patients affected and YLL) with GDPPC and healthcare expenditure as a proportion of GDP indicated that these correlated in terms of ranking, but the relationship could not easily be explained uniformly. The findings suggest that, in the countries included in this study, inequitable access to cancer treatments resulting from discrepancies between the licensed and reimbursed populations cannot be explained by GDPPC.

References


Footnotes

1 SE regulatory approvals in Canada and Australia
2 regulatory decisions, which each led to 2 reimbursement decisions

Figure 2: Reimbursement decisions and their impact

Table 2: Methods for assessing relationship between reimbursement restrictions and financial metrics

Table 3: Results of regression analyses

Figure 3: Degree of restriction and (A) GDPPC, (B) health expenditure as a % of GDP

Figure 4: Total number of patients without access and total YLL vs (A) GDPPC and (B) health expenditure as a % of GDP

Figure 5: Indicative graphic representation; the population sizes may vary substantially depending on the cancer type and intervention.

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