Differences in HTA Coverage Recommendations: Comparing Ophthalmology Drug Reimbursement Decisions in Four European Countries

Giovanni Tramonti (1), Laura Smith (2), Craig Bennison (2)
(1) University of Edinburgh, (2) Pharmerit International

Introduction

Health Technology Assessment (HTA) agencies across Europe can take different reimbursement decisions for the same drug, despite using the same clinical trial evidence and a similar assessment methodology. This study applied a mixed method framework, developed by Nicod and Kanavos (2015), and examined ophthalmology technology appraisals across four European countries to systematically investigate the factors driving HTA reimbursement decisions and identify cross-country differences.

Even though the eye-related conditions associated with the treatments are usually not life-threatening or particularly rare, visual impairments impose heavy disabilities and reduced quality of life on the patients. That is why it is crucial to gain more insight on the recommendation process for ophthalmic drugs: to understand the drivers of the decisions and thus improving the access to new medicines for visually impaired patients.

Results

The study included five ophthalmic drug-indication pairs across four European HTA agencies displaying differences in recommendation. The level of overall agreement was low, as it can be seen in Table 1, where a Cohen’s Kappa score of 0 signals that the agreements was less that what can be expected by chance.

Table 1: Cohen’s Kappa coefficients for each HTA agency pair

<table>
<thead>
<tr>
<th>HTA agencies pair</th>
<th>Drug-indication pairs commonly appraised</th>
<th>Agreements</th>
<th>Cohen’s Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMC – HAS</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>SMC – TLV</td>
<td>4</td>
<td>2</td>
<td>0.273</td>
</tr>
<tr>
<td>SMC – NICE</td>
<td>9</td>
<td>4</td>
<td>0.063</td>
</tr>
<tr>
<td>NICE – HAS</td>
<td>9</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>NICE – TLV</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>HAS – TLV</td>
<td>4</td>
<td>4</td>
<td>0.111</td>
</tr>
</tbody>
</table>

Thematic analysis of the reports across agencies highlighted a difference of preferences in terms of: type of evidence, source of evidence and type of concerns raised about the ophthalmic technology and its use.

These differences are presented in the correspondence analysis biplots in Figure 1 and 2: each agency is more strongly associated with different Uncertainties and Other Considerations than others. For example, TLV might be more interested in the unmet need and negative impact of a medical condition, while HAS could be more concerned in assessing the curative effect of the drug. When looking at the same clinical evidence, each agencies will look at different aspects of the trial results: SMC is proportionally more interested in the drug’s safety, HAS in the clinical benefit, TLV in the targeted population, and NICE in the health related quality of life data.

Conclusions

While the generalizability of the results is limited by the small sample, this study successfully tested the flexibility of the method developed by Nicod and Kanavos (2015) on a different class of drugs; the results provide useful insights into the process of ophthalmology technology appraisals.

The interpretation of the evidence seems to be driven by unique characteristics of each HTA body: the way each agency gathers information, additional evidence and manifest concerns is consistent with their own mandate and mission. The divergence in the recommendation decisions and cross-country differences could be partially explained by the importance each agency assigns to concerns and uncertainties found in the appraisals. While each drug submission already has tailored elements for each HTA body, this framework could provide additional information for targeting the specific concerns and provide faster access for ophthalmic drugs.

Methods

After sampling the ophthalmic technology appraisals published between Jan-2006 and Jun-2017, the HTA decision process of each agency (England NICE, Scotland SMC, France HAS, Sweden TLV) was broken down in three stages:

I. Comparison of clinical & cost-effectiveness evidence for the same drug

II. Thematic analysis of the interpretation of the evidence for each agency

III. Measurements of agreement & correspondence analysis, based on previous stages

References


Drug-Indication pairs considered, and by which agency:

- Pegaptanib (Age-related Macular Degeneration): NICE, SMC, HAS
- Ranibizumab (Diabetic Macular Oedema): All agencies
- Dexamethasone (Diabetic Macular Oedema): NICE, SMC, HAS
- Desametasone (Macular Oedema, Retinal Ven Occlusion): All agencies
- Tekfuroxone (Juster’s Hereditary Optic Neuropathy): SMC, TLV, HAS

giovanni.tramonti@ed.ac.uk