Background and aims

Health technology assessment (HTA) plays an increasingly important role in price negotiations for medicines in China. Nonetheless, past HTA appraisals have exposed a lack of national consensus on three key issues for economic evaluations:

1) Willingness-to-pay (WTP) threshold for an additional quality-adjusted life year
2) Pricing model for multi-indication medicines
3) Principles for selecting comparator(s).

This study aims to collect insights from a diverse group of HTA experts nationwide on the three key issues mentioned.

Methods

A nationwide anonymous web-based survey was conducted. Between March and July 2023, a generic invitation containing a web link to the questionnaire was disseminated using the snowball method via WeChat. Invitations were sent to experts with knowledge of HTA in China, including individuals from academia, HTA, consultancy/contract research organizations (CROs/industry), service providers, and payers. Respondents who agreed to participate were asked to answer a set of 20 questions related to the three key issues and provide nonidentifying demographic details.

Agreement rates for views related to the key issues of interest were analyzed using descriptive statistics. The relationship between participants’ responses and demographics was examined among appropriate logistic models. Views from the questionnaire that garnered agreement rates over 50% were summarized.

Results

303 responses were received from experts in 34 cities. Key expert views include:

- A suggested base WTP threshold ranging from 0.5 to 1.5 times GDP (52.1% agreement);
- Elevated thresholds for childhood diseases, rare diseases, end-of-life diseases, and first-in-class medicines (FICs) (>78% agreement);
- A single pricing model for multi-indication medicines (60.4% agreement); consideration of multiple medicines as comparators (79.9% agreement);
- Avoiding the use of centrally procured medicines as comparators for medicines with a time-to-market under three years (71.0% agreement).

Table 1 summarizes questionnaire views with agreement rates exceeding 50%.

<table>
<thead>
<tr>
<th>Element</th>
<th>Questionnaire views with agreement rates over 50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 1 – WTP threshold for one additional unit of QALY</td>
<td>The base threshold should range from 0.5 to 1.5 times GDP</td>
</tr>
</tbody>
</table>
| Special circumstances which require a higher threshold | The following diseases/medicines warrant a higher WTP threshold (weighted percentage increase suggested by the participants *):
- Childhood diseases (34%)
- Rare diseases (32%)
- End-of-life diseases (23%)
- Domestic FIC medicines with a TTM less than three years (24%)
- International FIC medicines with a TTM less than three years (22%)
| Costing perspective | Adopt a societal perspective for HTA. |
| Topic 2 – Price model for multi-indication medicines | The single pricing model is most suitable for multi-indication medicines. |
| Choice of price model | Utilize a weighted average price (based on each indication’s price and prescription volume) to determine the single pricing. |
| Recalculation of price | Recalculate the medicine’s price upon adding a new indication during contract renewal. |
| Future research | Consider exploring differential pricing by indication. |
| Topic 3 – Principles of choosing comparator(s) for economic evaluation | 1) Medicines with the same indication but different mechanisms of action can serve as comparators. For example, chemical medicine and biological product can be used as comparator to traditional Chinese medicine.
2) For medicines with a TTM less than three years, avoid using medicines which have been centrally procured as comparators.
3) Multiple medicines can be considered as comparators, including:
- Medicines with the best clinical effectiveness outcomes.
- Medicines recommended by the expert group of the HTA appraisal.
- Medicines most commonly used in clinical practice.
- Medicines recommended by national clinical guidelines. |
| Establishment of a comparator advisory body | Establish a national standing committee to provide guidance on selecting comparator medicines within the HTA process. |

Discussion & Conclusion

Expert views drawn from this survey necessitate substantive changes to China’s current HTA methods and processes. A substantial government investment in HTA processes and expertise cultivation is required to facilitate effective implementation of these expert views. While most expert views align with international practice, those associated with new medicine, especially FICs, diverge from international practices, reflecting Chinese experts’ strong inclination towards supporting innovative medicine. To our knowledge, this study is pioneering in China and ranks among the earliest global initiatives to employ survey methods for systematically gathering stakeholders’ perspectives on economic evaluations for HTA.