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Introduction

How Health Economic Analyses (HEAs) are conducted directly impacts the results obtained and policies in resource allocation. Therefore, it is essential to consider their quality during decision-making. Our aim was to develop a domain-based tool for the critical assessment of cost-effectiveness and cost-utility studies.

Methods

Through discussions of the working group, we established the domains for inclusion in the new tool. Then, we conducted a scoping review (doi: 10.17605/OSF.IO/6R3CG) to identify tools available for the critical assessment of HEAs. We extracted the questions/recommendations provided and classified them into the pre-established domains, allowing us to identify complementary aspects to incorporate and improve the first version of the new tool. The first version was presented and piloted with a group of researchers involved in the conduction or evaluation of HEAs.

Results

Four quality domains to structure the new tool were established (**Figure**). Domain's adequacy is assessed by its alignment to essential items and is guided by signaling questions; final judgement on overall methodological quality is provided at the end. Quality of reporting was not included, as it is already tackled by existing tools, such as CHEERS.

Figure: Preliminary design of the proposed tool.

<p>Domain 1: Applicability Is the research question of the study under evaluation applicable to the target research question?</p> <p><input type="radio"/> Yes <input type="radio"/> Partially <input type="radio"/> No <input type="radio"/> Unclear</p>	<p>Domain 2: Modelling - Structure Does the model adequately represent the clinical condition under study, including issues of effectiveness and costs?</p> <p><input type="radio"/> Yes <input type="radio"/> Partially <input type="radio"/> No <input type="radio"/> Unclear</p>
<p>Domain 3: Modelling - Parameters Are the parameters originated from high-quality evidence and are they appropriately adjusted for use in the model?</p> <p><input type="radio"/> Yes <input type="radio"/> Partially <input type="radio"/> No <input type="radio"/> Unclear</p>	<p>Domain 4: ICER precision Does the credibility interval of the ICER indicate precision of the result (considering the user-defined willingness-to-pay threshold)?</p> <p><input type="radio"/> Yes <input type="radio"/> Partially <input type="radio"/> No <input type="radio"/> Unclear</p>

Description of domains:

- 1) Applicability: judges the applicability of the research question in light of the assessor's question of interest;
- 2) Modelling - Structure: evaluates the model representativeness of the clinical condition and the adequacy of its assumptions;
- 3) Modelling - Parameters: assesses the quality (accuracy, transformation into inputs, and certainty) of the key parameters used in the model;
- 4) ICER precision: evaluates the certainty of the incremental cost-effectiveness/utility ratio.

Conclusions

The tool was developed to integrate often missed critical aspects that impact the methodological quality of HEAs. A multidisciplinary panel with different key stakeholders is being organized to review and enhance this first version of the tool.