

A multi-criteria decision analysis (MCDA) tool for purchasing off-patent oncology medicines in Egypt

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Abstract

Background: Multi- criteria decision analysis (MCDA) can assist policymakers in objectively choosing between alternative therapeutic options based on multiple value attributes. Our aim was to create an MCDA tool for the national tenders of off-patent oncology medicines in Egypt.

Methods: An initial list of criteria was developed through a literature review complemented by local expert interviews. Price or cost-related criteria were excluded to abide by the national regulations of the tender process. Next, a workshop hosting diversified stakeholders representing different governmental bodies was held. Anonymous voting was used to rank and weigh the criteria as well as assigning scores. Price was added as a separate step to identify best option based on price per point. The tool was then tested on a national tender sample of off-patent oncology medicines to assess its performance, and it was readjusted accordingly in a second workshop.

Results: Seven non-price criteria were selected, including use in reference countries (23.49% weight), equivalence with the reference product (18.79%), manufacturing quality (15.53%), provision of pharmacovigilance services (12.94%), supply reliability (10.78%), previous use in local settings (9.8%) and macroeconomic benefit (8.67%). A medicine receives a score ranging from 0 to 100% of each criterion's weight. The aggregated score is calculated on a hundred-point scale. Based on participants' consensus, an overall score of 65 was set as a cut-off for passing the technical eligibility phase of the tendering process. Any product receiving a lower score would be disqualified from the tender. For qualified products, the lower price per point represents preferential option for the national tender.

Conclusions: The created MCDA tool is capable of objectively comparing similar off-patent oncology medicines by considering multiple value attributes and providing reliable scoring functions for each.