

Title: Stakeholder Perception of Pharmaceutical Value: A Multicriteria Decision Analysis Educational Case Study for Value Assessment in the United States

Objectives: Multi-criteria decision analysis (MCDA) has potential as a supplemental tool to traditional value assessment. However, education and training on MCDA in the United States is lacking. The objective of this work was to educate various stakeholders on MCDA approaches, in value assessment, and assess perceptions of value using hypothetical case examples. **Methods:** We conducted a pre-post educational session in Washington, D.C. to assess perceptions of value with and without the use of additional value elements, weighted by the use of an MCDA tool. Participants voted on their perceptions of value before and after the use of an MCDA tool, for two hypothetical treatments with similar cost-effectiveness evidence. Perceptions of value both within and between treatments before, and separately, after the use of an MCDA tool were analyzed using a Wilcoxon signed rank test. Changes in perceptions of value between treatments before and after the use of an MCDA tool were assessed using logistic regression. **Results:** The session included 25 participants including patient advocacy groups (44%), industry (24%), research (16%), and payer entities (8%). Perceptions of value within each treatment before and after consideration of MCDA scores was insignificant for Treatment A ($p=0.3984$) and Treatment B ($p>0.999$). Treatment A had a significantly higher perception of value versus Treatment B both before ($p=0.0352$) and after ($p=0.0164$) the consideration of MCDA scores. We did not observe a change in perception of value between Treatment A and Treatment B ($p=0.267$) after the consideration of MCDA scores. **Conclusions:** Despite similar cost-effectiveness evidence, Treatment A and Treatment B had significantly different perceptions of value suggesting nuances in other clinical evidence may have played a part in these value judgements.