



Evaluating the Economic Impact of Real-world Costs in nAMD Treatment Using Neutral Theory: A UK Perspective

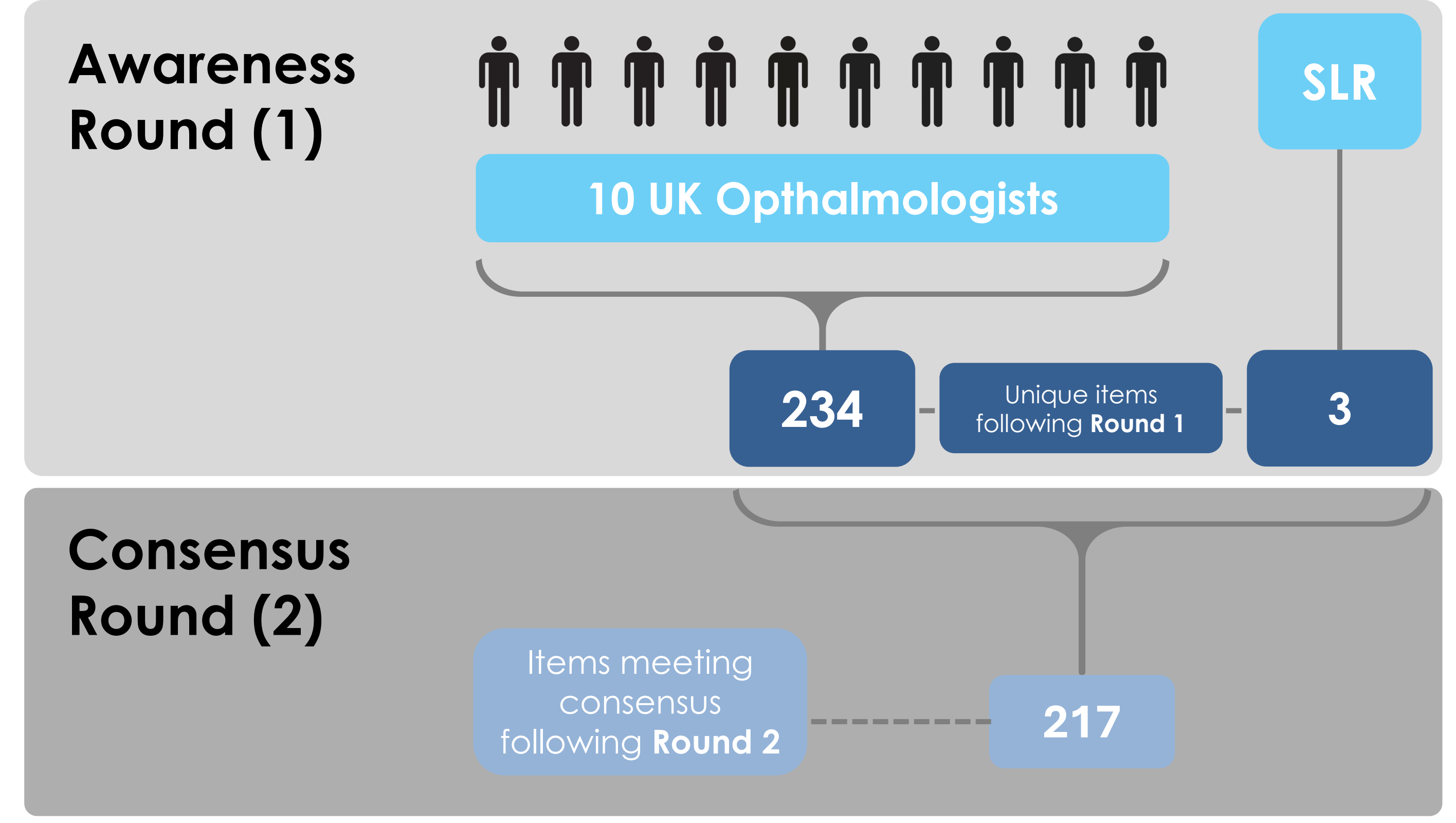
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1. Objectives

The NICE Health Technology Assessment (HTA) found aflibercept to be cost-effective for the treatment of neovascular age-related macular degeneration (nAMD) in the UK, largely due to reduced monitoring visits. This study aimed to compare the costs used in the HTA with a comprehensive real-world cost list (Neutral list) to highlight the importance of including detailed cost assessments in evaluating the cost-effectiveness of competing treatments.

2. Methods

This mixed-methods study used the Jandhyala Method, combining a structured literature review, expert consultations, and consensus exercises to identify real-world cost items in NHS nAMD treatment.



3. Results

The nAS instrument included 217 consensus items on the neutral list of costs. Significant differences were found between TA800 estimates and real-world costs captured by the nAS instrument. TA800 missed substantial costs, especially related to clinic strain and increased workload. Drug costs were found to be just a small proportion of the overall cost of the nAMD service.

3.1. Neutrality analysis for HTAmin and HTAmax

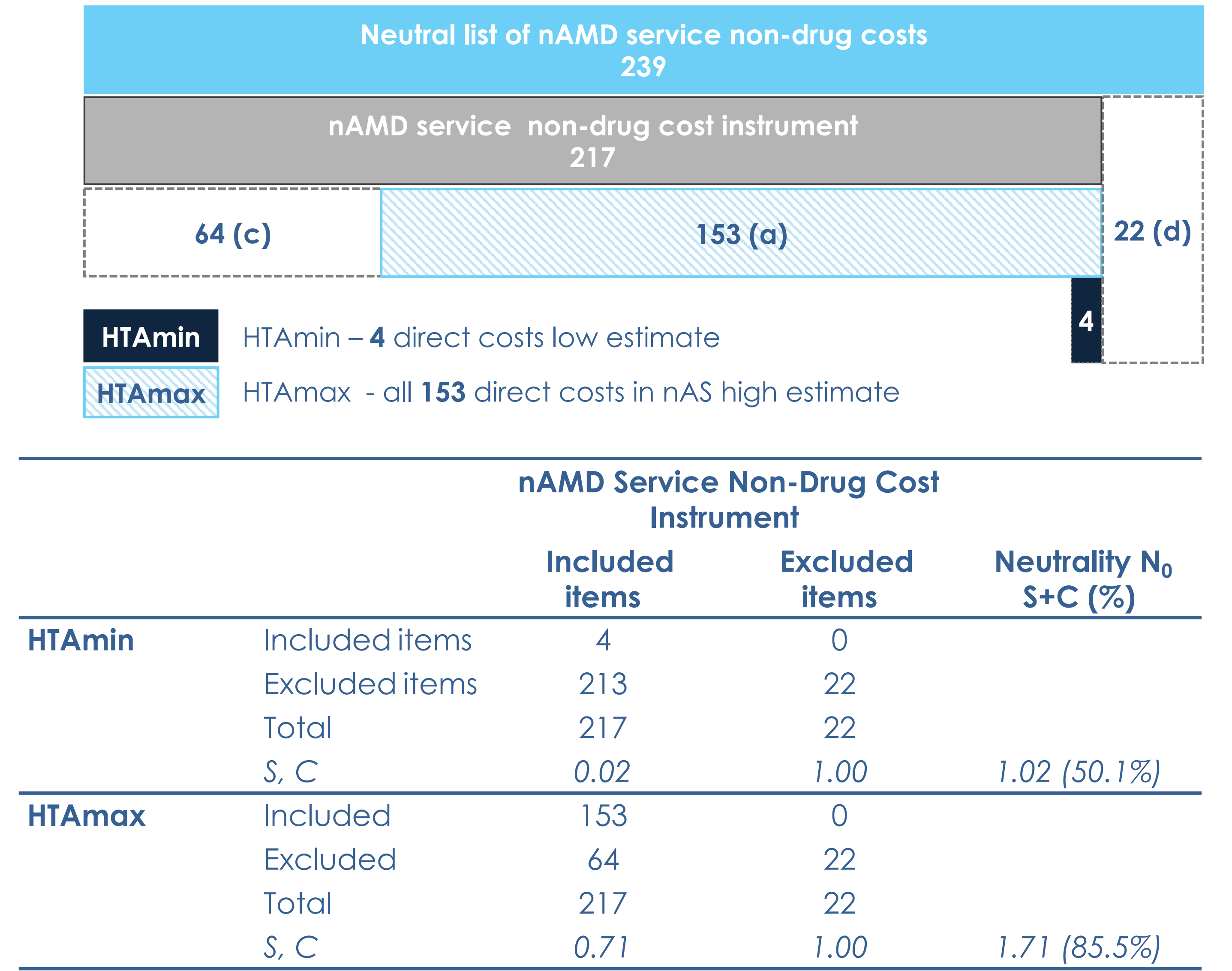


Figure 1. Neutrality analysis for HTAmin and HTAmax. Abbreviations: S – Sensitivity, C – Specificity, Neutrality – S+C (% accuracy)

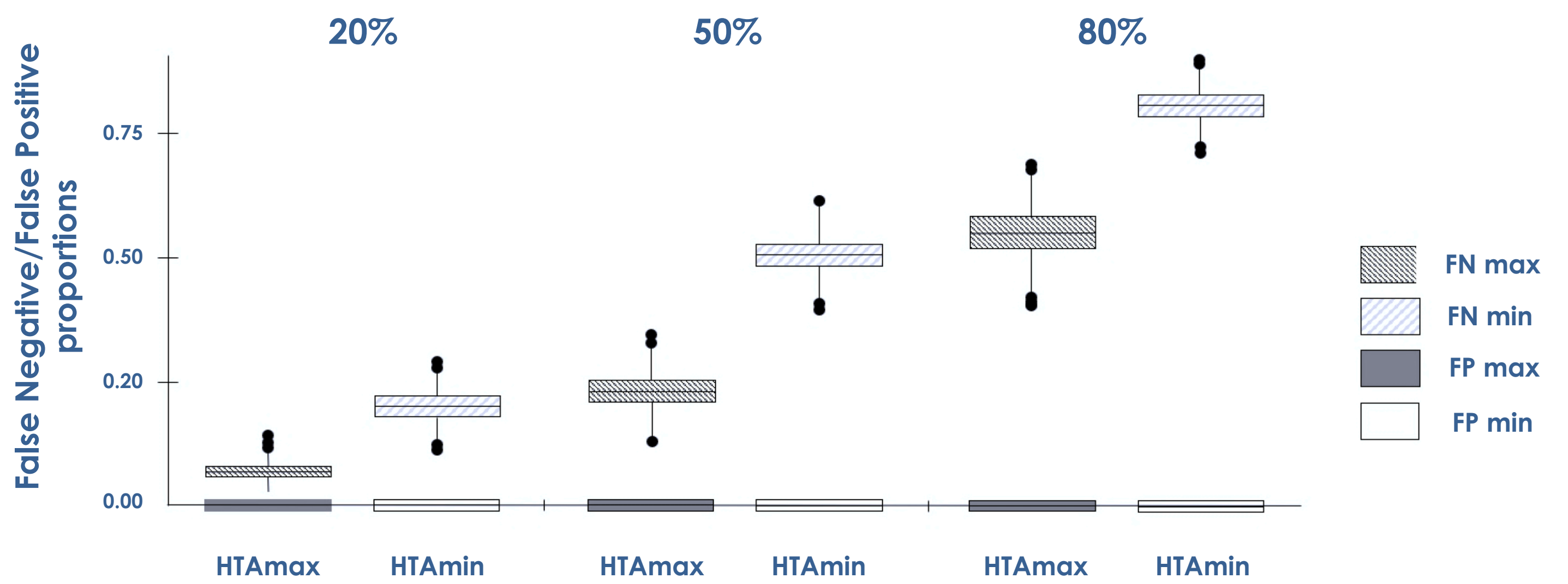
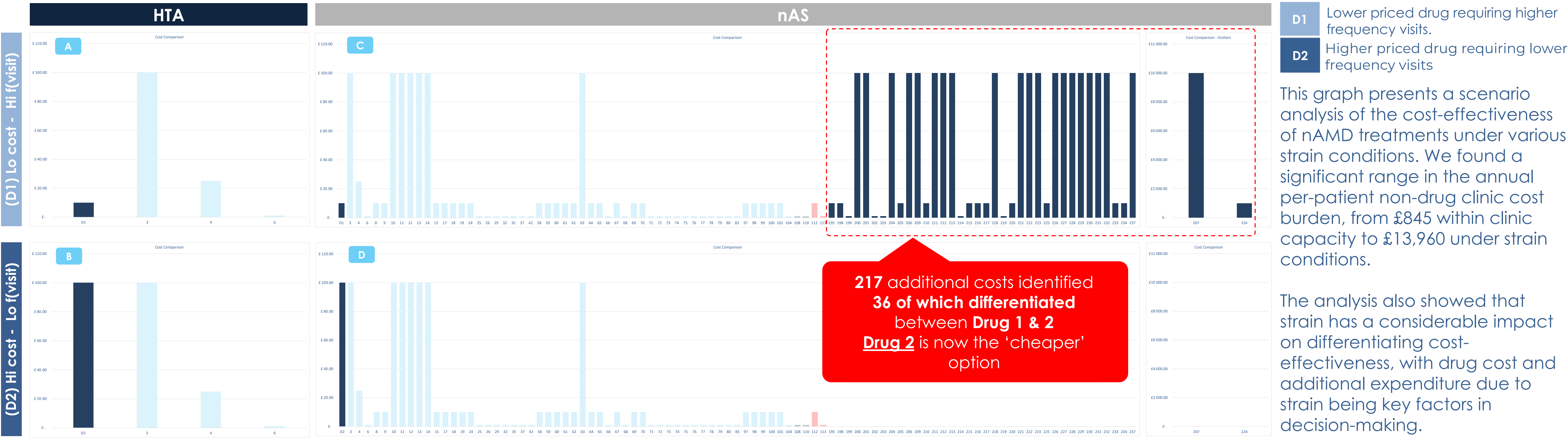


Figure 2. Clinic cost misclassification plot showing false negative and false positive rates for HTAmin and HTAmax at 20%, 50% and 80% prevalence.

Our analysis revealed a low sensitivity and neutrality for HTAmin, while HTAmax showed increased sensitivity and accuracy. The analysis also shows the median false negative rates for HTAmin, which were higher than those for HTAmax, indicating a higher risk of underestimating clinic cost burden.

Figure 3. Cost-effectiveness scenario analysis



4. Conclusion

Current economic evaluations, including those by NICE, may underestimate real-world costs by overlooking non-drug expenses and clinic strain impacts. This case study illustrates that non-drug costs can significantly outweigh drug costs, and excluding these costs may result in different cost-effectiveness outcomes. Comprehensive cost assessments using the Neutral list are crucial for more accurate economic evaluations, leading to better-informed decision-making in treatment planning and resource allocation for nAMD and similar conditions.