An Analysis of the Plastic Surgery Cost-Utility Literature Using a Novel Scoring Tool

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Objectives

- Review cost-utility methodology literature
- Design methodology scoring tool
- Score plastic surgery cost-utility studies on selected criteria
- Identify criteria with opportunities for improvement
- Facilitate further use of cost-utility

Methods

- Literature searched for cost-utility methodology literature
- Methodology scoring tool created from compilation of guidelines
- Literature searched for English-language plastic surgery utility studies
- Identified articles evaluated using the scoring tool

Results

- 4 categories of criteria identified: *utility measurements*, *cost measurements*, *sensitivity analyses*, and *best practices*
- 16 criteria selected (1 point each)
- 37 plastic surgery manuscripts scored
- Average article score: 5.5 of 16 points
- Lowest score: 3 points (10 studies)
- Highest score: 10 points (1 study)

Percent of Studies Meeting Criteria

Utility Measurements:	***%***
Direct utility measures	81%
Population preferences	81%
Patient preferences	43%
Indirect utility measures	38%
Prospective utility measurement	19%

Percent of Studies Meeting Criteria

Cost Measurements:	***%***
Costs calculations	41%
Inflation adjustment	32%
Discount rate adjustment	14%
Societal costs calculations	11%

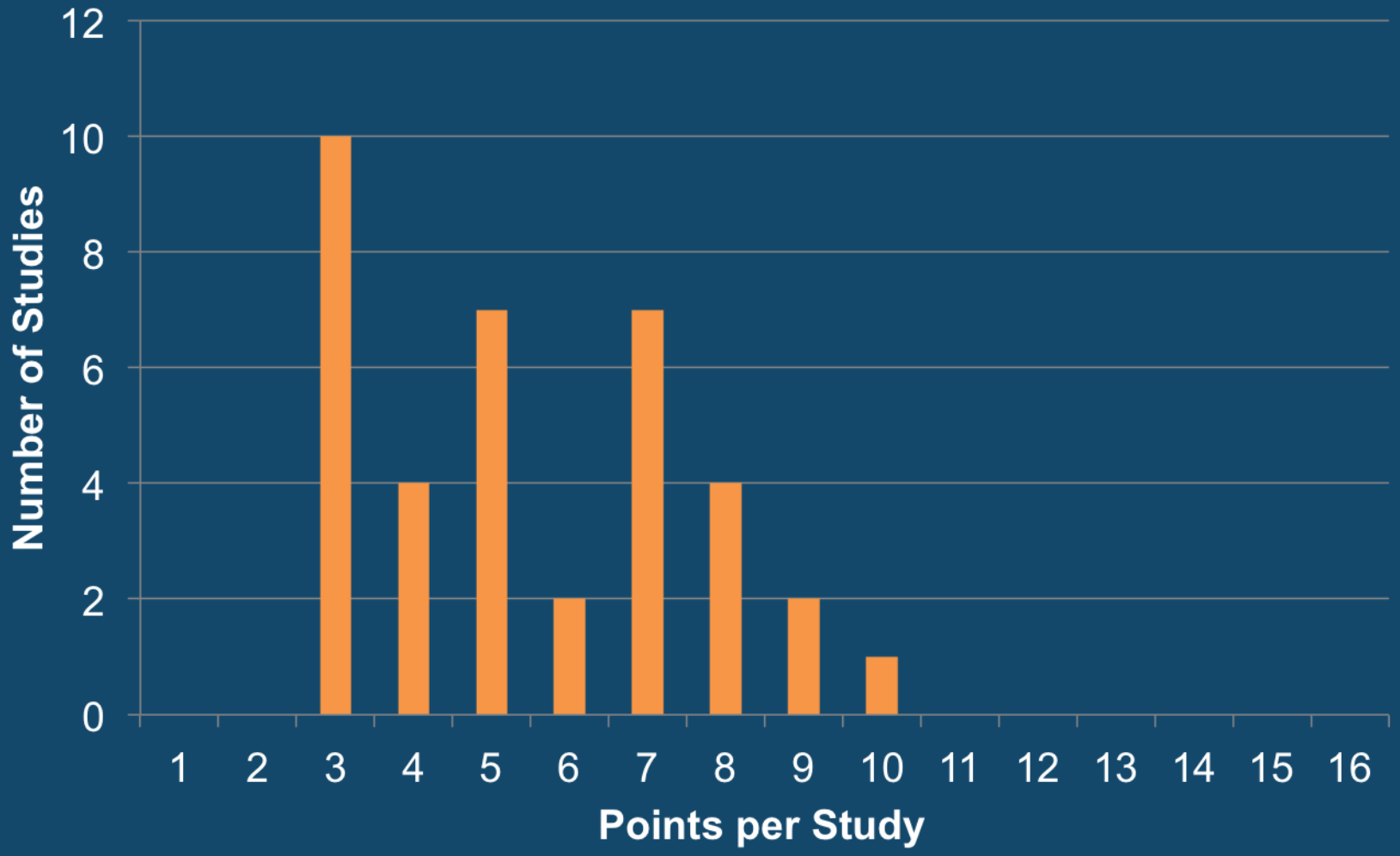
Percent of Studies Meeting Criteria

Sensitivity Analyses:	***%***
QALY sensitivity analysis	49%
Cost sensitivity analysis	30%
Discount rate sensitivity analysis	0%

Percent of Studies Meeting Criteria

Best Practices:	***%***
Procedure outcomes modeling	43%
Consistent measurement	32%
Clinical marker states validation	27%
Interviewer use	5%

Distribution of points per study



Conclusions

- Cost-utility studies are still rare within plastic surgery
- Identified studies provide early perspective of potential uses
- Guidelines are inconsistently applied
- All 4 criteria categories need improvement

Significance

- More awareness is necessary of plastic surgery cost-utility applications
- The scoring tool created can enhance studies' validity and comparability
- Rigorous studies are necessary to objectively compare alternative treatments and maximize value

References

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