HTA16

Strategic Comparison of Center for Pharmacoeconomics and Institute for Clinical and Economic Review Economic Evaluations

Lukasek K,[1] Anderson N,[1] Wu B,[1] Davies C[1]

[1]Costello Medical, Boston, MA, US

Objective

To characterize and compare paired economic evaluations of the same intervention conducted by the Center for Pharmacoeconomics (CPE) and Institute for Clinical and Economic Review (ICER), focusing on model inputs and cost-effectiveness.

Background

- In the United States (US), the absence of a centralized health technology assessment authority has led stakeholders to rely on decentralized value assessments, with payers using such analyses to inform pricing benchmarks and coverage decisions.[1–3]
- ICER is the most visible public-facing assessor, with reports referenced by payers and policymakers to anchor pricing discussions, despite lacking formal regulatory authority.[4]
- CPE has introduced commercially-focused assessments translating health economic evidence into insights on pricing potential and market dynamics, emphasizing holistic health considerations.[5]
- Because cost-effectiveness results are sensitive to modeling assumptions, differences in analytic objectives and approaches may meaningfully shape conclusions.

Methods

- CPE and ICER assessments of the same interventions were considered.[6–13]
  - Four intervention pairs were analyzed: acoramidis, xanomeline/trospium chloride, sacubitril/valsartan, and dimethyl fumarate. Reports were reviewed and data extracted, capturing model structure, input parameters, and cost-effectiveness results.
- For each pair, all unique input parameters were compared using a categorical concordance framework (1 = included in both assessments; 0 otherwise), calculated as the proportion of concordant inputs across both assessments.
  - Categorically concordant parameters were subsequently evaluated for numerical concordance when quantitative values were reported in both assessments.
  - A weighted concordance score was calculated by multiplying each input's categorical concordance by weights reflecting expected domain impact on cost-effectiveness (high [weight: 3]: comparators, time horizon, efficacy, cost; medium [2]: health states, utility, mortality; low [1]: adverse events [AEs])[14–16] and dividing by the sum all weights.
- Conventional cost-effectiveness results were compared relative to ICER's published cost/equal-value life-year gained (evLYG) threshold of $84,000.[17]

Results

- Categorical concordance varied substantially, ranging from 23% (xanomeline/trospium chloride) to 55% (sacubitril/valsartan) (**Table 1**).
  - By input domain, concordance was higher for comparators and cost inputs, and lower for utilities and AEs (**Figure 2**).
- Quantitative concordance generally exceeded categorical concordance though patterns differed by intervention (**Table 1**).
  - For xanomeline/trospium chloride, quantitative concordance reached 89% despite limited categorical overlap, whereas for sacubitril/valsartan it was lower (40%) despite higher categorical alignment.
  - High quantitative concordance reflected agreement on a limited subset of inputs rather than consistent model alignment.
- Weighted concordance was broadly similar to unweighted concordance, reflecting heterogenity across key high-impact inputs (**Table 2**).
- CPE and ICER produced similar conventional cost-effectiveness estimates relative to ICER's $84,000 threshold (**Figure 2**), and weighted concordance and percent differences in cost/evLYG estimates showed no consistent association (**Figure 3**).

Conclusion

CPE and ICER assessments yielded broadly consistent conclusions across interventions under a conventional cost-effectiveness framework. While model parameters varied substantially, cost/ evLYG results consistently fell on the same side of ICER's published threshold, indicating agreement in cost-effectiveness interpretation and suggesting that comparable conclusions may be reached despite divergent modeling approaches. Greater transparency in reporting would further support cross-assessment comparability. Further research could evaluate assessments when incorporating non-conventional value elements.

TABLE 1

Overall concordance between CPE and ICER model inputs

Assessment Pair	ICER: Number of Model Inputs	CPE: Number of Model Inputs	Categorical Concordance (Shared Inputs/ Total Unique Inputs)	Quantitative Concordance (Quantitatively Equivalent Inputs/ Shared Quantitative Inputs)
Dimethyl fumarate	84	45	29% (25/85)	50% (1/2)
Sacubitril/valsartan	14	17	55% (11/20)	40% (2/5)
Acoramidis	40	31	54% (25/46)	76% (13/17)
Xanomeline/trospium chloride	43	22	23% (12/53)	89% (8/9)

Due to variations in overlap, the number of total unique inputs may be greater than the max number of inputs in either individual assessment. Shared inputs included those reported by both assessments; shared inputs were considered categorically concordant if reported the same in both ICER assessments for comparators, time horizons, and health states and if the input title was the same for efficacy inputs, AEs, utility, mortality, and cost inputs. Shared quantitative inputs included inputs for efficacy, AEs, utility, mortality, and cost that were categorically concordant and then compared for quantitative equivalence.

FIGURE 1

Categorical concordance by domain

	Comparators	Time Horizon	Health States	Efficacy	AEs	Utility	Mortality	Cost
Dimethyl fumarate	100%	100%	100%	50%	0%	0%	0%	0%
Sacubitril/valsartan	100%	100%	100%	25%	NR	33%	0%	0%
Acoramidis	100%	50%	100%	25%	100%	33%	NR	57%
Xanomeline/trospium chloride	100%	50%	8%	0%	29%	0%	100%	33%

AEs and mortality inputs were not explicitly reported in assessments for sacubitril/valsartan and acoramidis, respectively.

TABLE 2

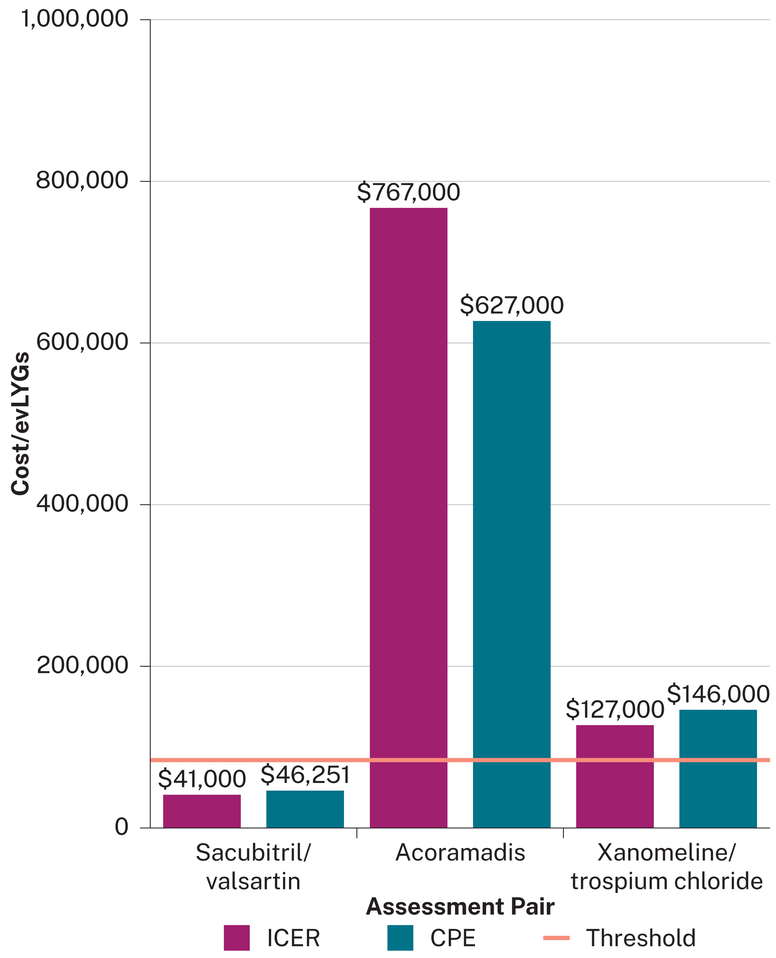
Weighted categorical concordance and concordance by weight

Assessment Pair	Weighted Concordance	Change from Unweighted	Unweighted Concordance by Weight		
			High	Medium	Low
Dimethyl fumarate	28%	-2%	19%	37%	0%
Sacubitril/valsartan	56%	+1%	58%	50%	NR
Acoramidis	54%	-1%	54%	53%	100%
Xanomeline/trospium chloride	24%	+1%	30%	15%	29%

Domains that were NR were not included in the weighted calculation. Concordance values shown for high, medium, and low importance inputs represent unweighted concordance within each category, calculated using the same underlying inputs included in the weighted analysis and are presented for descriptive context only.

FIGURE 2

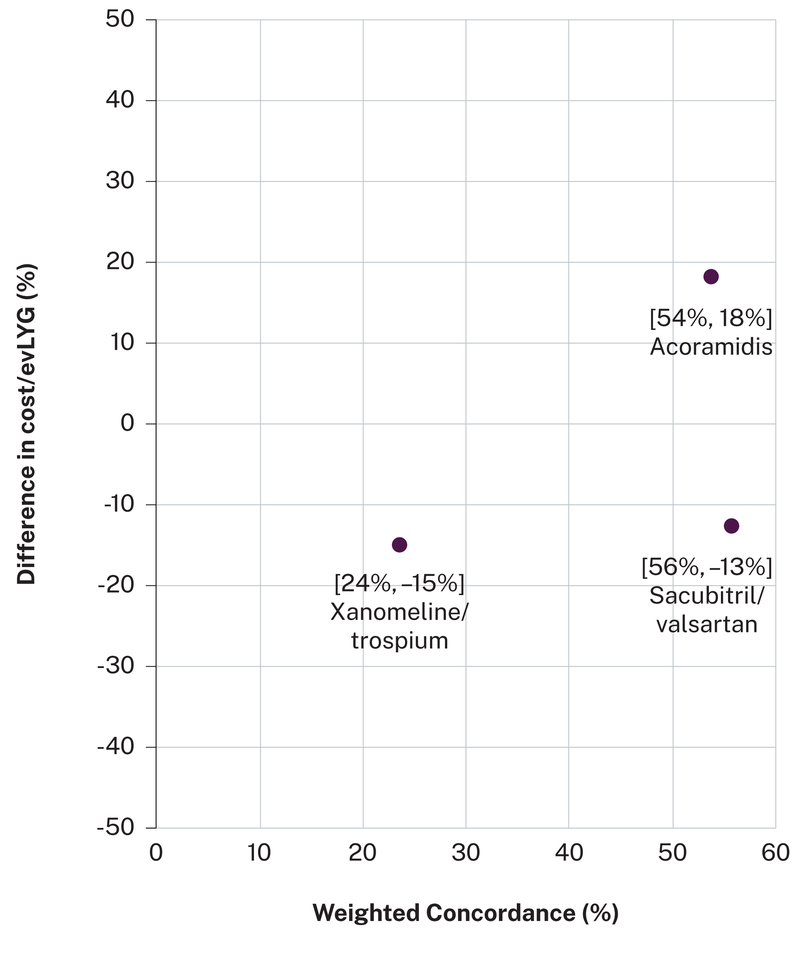
ICER and CPE cost-effectiveness findings



Direct comparison of cost per evLYG was not possible for dimethyl fumarate because the ICER assessment did not report cost per evLYG.

FIGURE 3

Weighted concordance versus differences in evLYG findings



Direct comparison of cost per evLYG was not possible for dimethyl fumarate because the ICER assessment did not report cost per evLYG.

Abbreviations: AE: adverse event; **CPE:** Center for Pharmacoeconomics; **evLYG:** equal value of life-year gained; **ICER:** Institute for Clinical and Economic Review; **US:** United States.

References: [1]Value in Health. "Payer Use of Value Assessment Frameworks in the United States." Available at: https://www.valueinhealthjournal.com/article/S1098-3015%2822%2901366-3/fulltext; [2]ISPOR. "Payer Perspectives on Value Assessment Frameworks." Available at: https://www.ispor.org/heor-resources/presentations-database/presentation/intl2023-3665/125693; [3]AmerisourceBergen. "Payer Perceptions of Value Assessment Frameworks." Available at: https://www.amerisourcebergen.com/-/media/2024-ispor-vaf-payer-perceptions-2308xf.pdf; [4]AJMC. "Challenges With Judging and Interpreting a Drug's Launch Price." Available at: https://www.ajmc.com/view/challenges-with-judging-and-interpreting-a-drug-s-launch-price; [5]Leerink Center for Pharmacoeconomics. Available at: https://leerink.com/cpe/; [6]Institute for Clinical and Economic Review (2024). Final Evidence Report: Treatments for Transthyretin Amyloid Cardiomyopathy. Available at: https://icer.org/assessment/transthyretin-amyloid-cardiomyopathy-2024/; [7]Center for Pharmacoeconomics (2024). Attruby™ for Transthyretin Amyloid Cardiomyopathy. Available at: https://www.leerink.com/article/a-cpe-exclusive-attruby/; [8]Institute for Clinical and Economic Review (2024). Final Evidence Report: Xanomeline tartrate/trospium chloride for schizophrenia. Available at: https://icer.org/assessment/schizophrenia-2024/; [9]Center for Pharmacoeconomics (2024). Cobenfy™ for Adults Living with Schizophrenia. Available at: https://www.leerink.com/article/a-cpe-exclusive-cobenfy-for-adults-living-with-schizophrenia/; [10]Institute for Clinical and Economic Review (2015). Sacubitril/valsartan (Entresto™) and CardioMEMS™ for congestive heart failure: effectiveness and value. Available at: https://icer.org/news-insights/press-releases/chf-revised-draft-released/; [11]Center for Pharmacoeconomics (2025). The US Gets Entresto® for a Steal. Available at: https://leerink.com/article/a-cpe-exclusive-entresto/; [12]Institute for Clinical and Economic Review (2023). Final Evidence Report: Disease modifying therapies for relapsing remitting multiple sclerosis. Available at: https://icer.org; [13]Center for Pharmacoeconomics (2025). Tecfidera® Was a Bargain, Price Increases and All. Available at: https://leerink.com/article/a-cpe-exclusive-tecfidera/; [14]ICER. "An Alternative Measure of Health for Value Assessment: The Equal Value Life Year." Available at: https://icer.org/news-insights/journal-articles/an-alternative-measure-of-health-for-value-assessment-the-equal-value-life-year/; [15]Haacker M., Hallett T.B., Atun R. On time horizons in health economic evaluations. Health Policy and Planning 2020;35:1237–1243; [16]International Society for Pharmacoeconomics and Outcomes Research (2016). Appropriate model time horizons: Empirical results. Available at: https://www.ispor.org/docs/default-source/presentations/858.pdf?sfvrsn=5d091cf3_1; [17]Institute for Clinical and Economic Review (2025). ICER's Reference Case for Economic Evaluations: Elements and Rationale. Available at: https://icer.org/wp-content/uploads/2024/02/ICER_Reference-Case_For-Publication_102325.pdf.

Acknowledgements: The authors thank Jon Green, Costello Medical, for graphic design assistance.

Presented at ISPOR International 2026 | Philadelphia, PA, US | 17–20 May