

# Economic Evaluation in the MENA Region (2015-2025): A Targeted Review of Methodological Rigor and Policy Relevance

EE371

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## BACKGROUND

Health technology assessment (HTA) and cost-effectiveness evidence are increasingly critical to inform healthcare decision-making across the Middle East and North Africa (MENA)<sup>1</sup>. MENA remains underrepresented in global health economic literature<sup>2</sup>.



## METHODOLOGY

A systematic PubMed search was conducted to identify economic evaluations (cost-effectiveness analysis [CEA] and/or cost-utility) published between January 2015 and June 2025 in MENA countries. Extracted data included country, year, disease area, population, intervention type, model type, perspective, and time horizon. Outcomes (e.g.; quality-adjusted life years [QALYs], incremental cost-effectiveness ratios [ICERs], disability-adjusted life years [DALYs]), utility sources, willingness-to-pay (WTP) thresholds, discount rates, and type of sensitivity analyses were collected to highlight regional trends. Of 270 screened records, 68 studies met eligibility criteria<sup>3-70</sup>.



## RESULTS

- Publication volume increased sharply from 2024 to 2025 (n = 23)<sup>3-25</sup> and 2021-2023 (n = 25)<sup>26-50</sup>, compared with earlier periods: 2018-2020 (n = 13)<sup>51-63</sup> and 2015-2017 (n = 7)<sup>64-70</sup>, highlighting increased regional engagement.

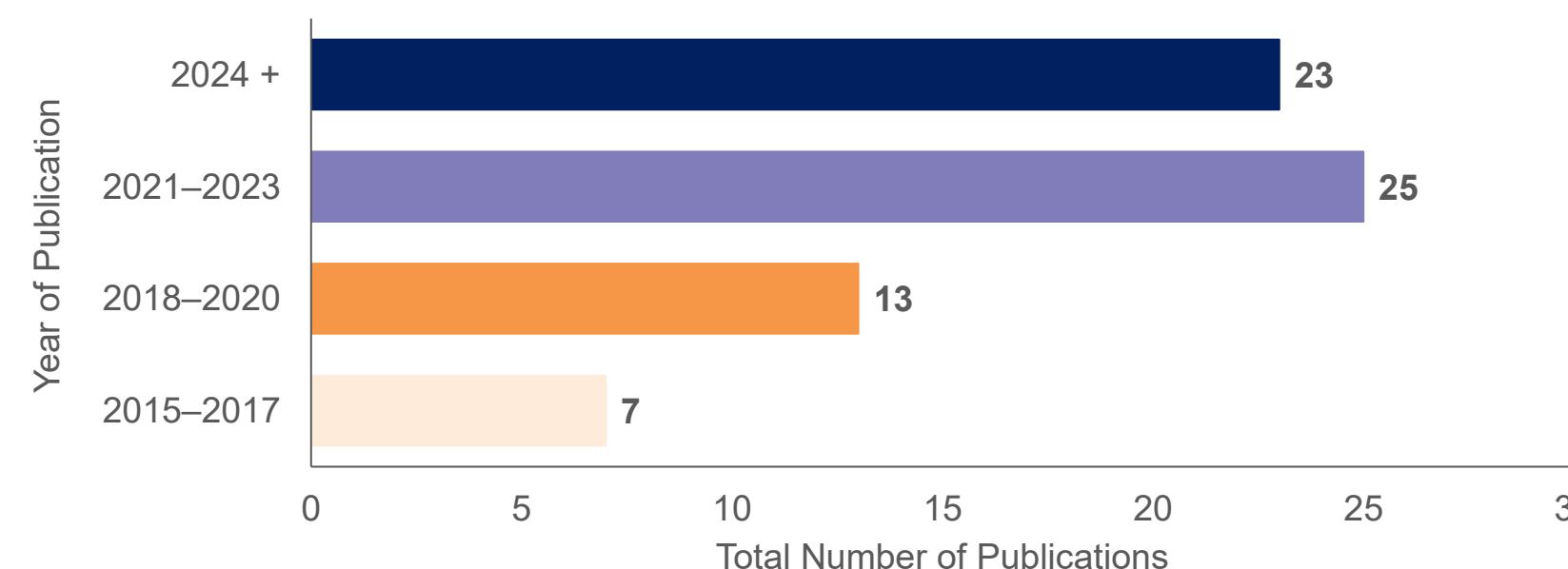


Figure 2. Total Number of Publications per Year (2015-2024+)

- Commonly studied conditions: hepatitis C, cardiovascular disease, and breast cancer. Infectious diseases (notably hepatitis C) and chronic conditions (oncology, cardiovascular, diabetes and chronic kidney disease) represent more than two-thirds of all cost-effectiveness analyses<sup>3-70</sup>.

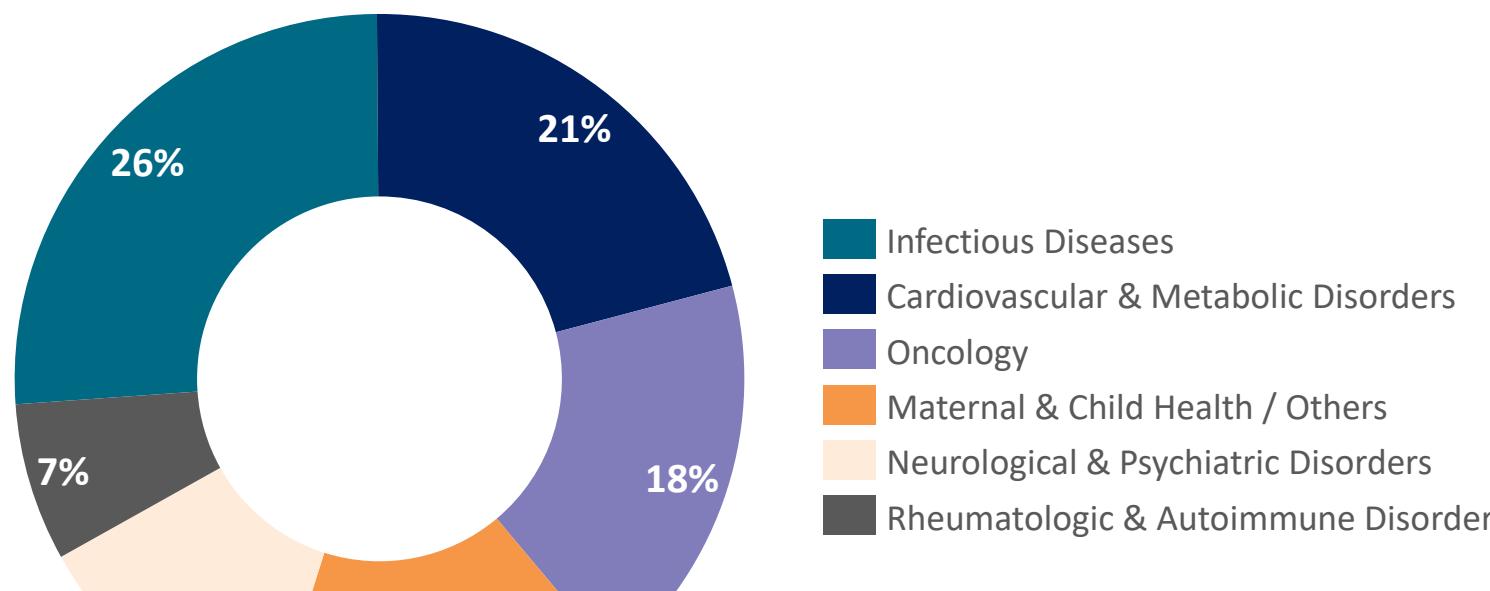


Figure 4. Disease Areas



- Most evaluations used a healthcare system perspective, applied a 3% discount rate, and produced QALYs and ICERs as key outcomes<sup>3-70</sup>.
- Sensitivity analyses were commonly conducted, with probabilistic approaches increasingly reported after 2021<sup>3-70</sup>.
- Most studies relied on internationally derived utility values (e.g., United Kingdom [UK] EuroQol five-dimension questionnaire [EQ-5D]), and WTP thresholds were inconsistently applied, typically based on gross domestic product (GDP) multiples (1-3x)<sup>3-70</sup>.



## POLICY IMPLICATION

- Strengthening local data generation, standardizing methods, and aligning WTP thresholds with regional priorities can enhance relevance and policy impact.
- Building capacity and fostering regional collaboration can support sustainable HTA, improve transparency, and promote equitable resource allocation in MENA.



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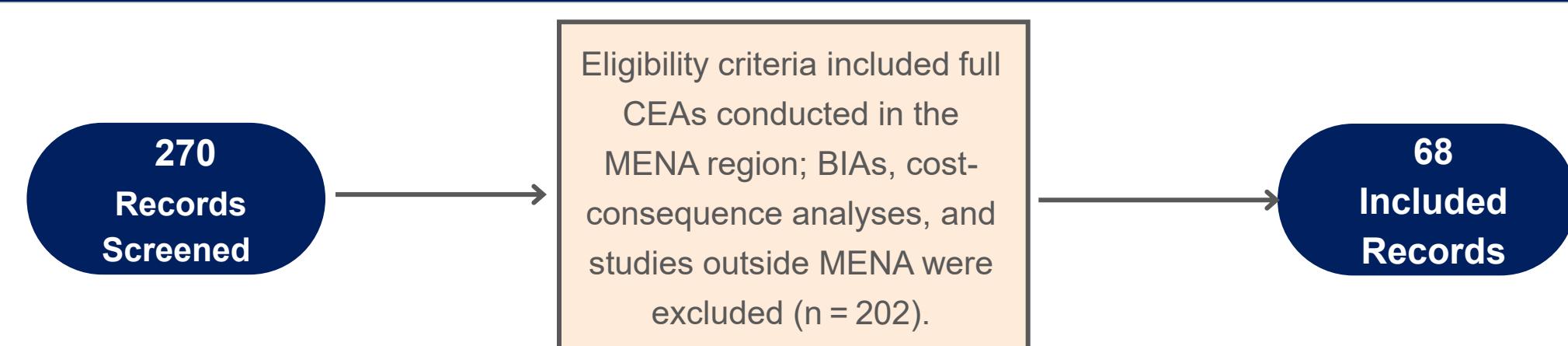
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## OBJECTIVE

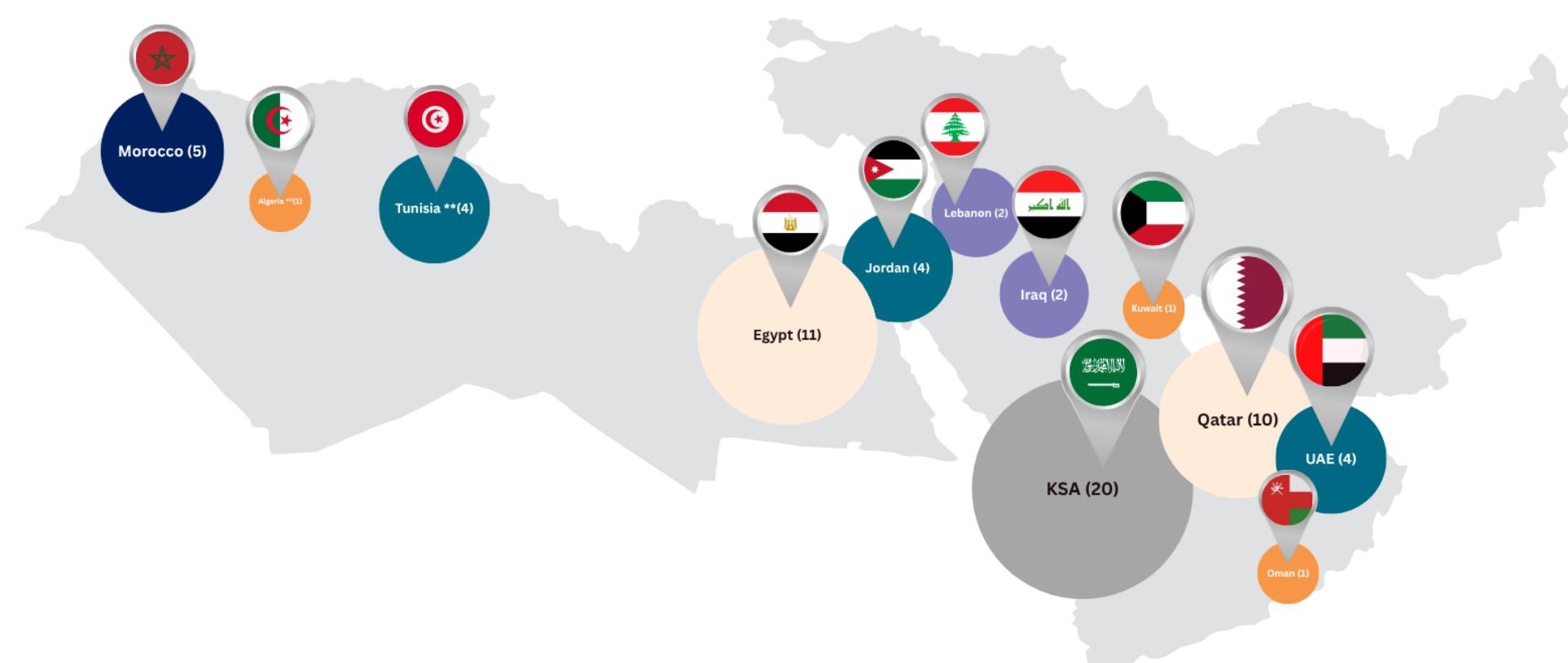
To assess the volume, methodological characteristics, disease focus, and policy relevance of full economic evaluations published between 2015-2025 in the MENA region and to identify key trends and evidence gaps.



Abbreviations: CEA, cost-effectiveness analysis; BIA, budget impact analysis; MENA, Middle East and North Africa.

Figure 1. Flow diagram of study selection: total records screened, excluded, and included

- Top contributing countries: Saudi Arabia (n = 20), Egypt (n = 11), and Qatar (n = 10).



\*\*One additional study included both Algeria and Tunisia, and two studies covered the entire MENA region.

Figure 3. Regional Distribution of Publications Across MENA Countries

- Markov models dominated (50%), followed by decision-analytic models (21%). Patient-level simulation and dynamic models were less common, indicating an evolving but still maturing modeling landscape<sup>3-70</sup>.

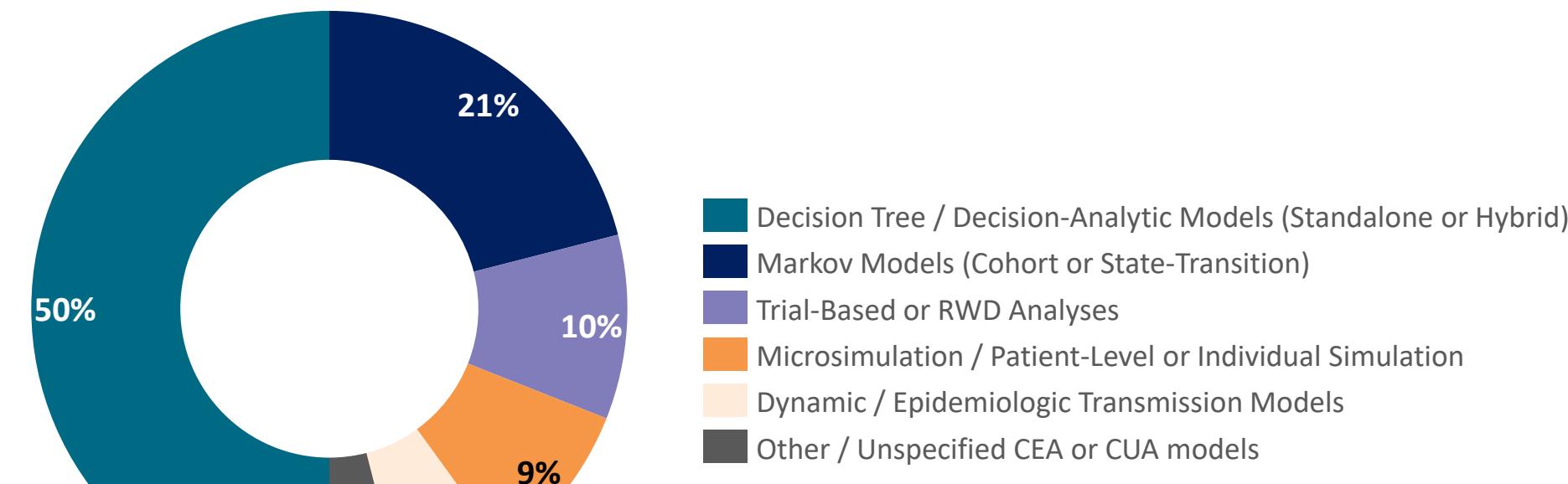


Figure 5. Model Types



## CONCLUSION

Economic evaluations in the MENA region have increased in both volume and methodological rigor, particularly since 2022. However, geographic coverage and contextual relevance remain limited. To enhance the impact on regional decision-making, efforts should focus on:

- Adopting locally derived utility values and population norms.
- Establishing standardized, transparent WTP thresholds aligned with regional health priorities.
- Promoting capacity building in health economics and model-based evaluation methods.



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