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What Tips the Scale Toward Reimbursement? A Dutch-Led Comparison of Pharmacoeconomic Evaluations Across the Netherlands, Sweden, and the United Kingdom

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What did we want to find out?

Pharmacoeconomic evaluations are a crucial part of reimbursement submissions for new drugs. They inform whether treatments offer sufficient value for money for the healthcare budget and society. However, the quality and consistency of these evaluations can vary across countries, disease area and dossiers.

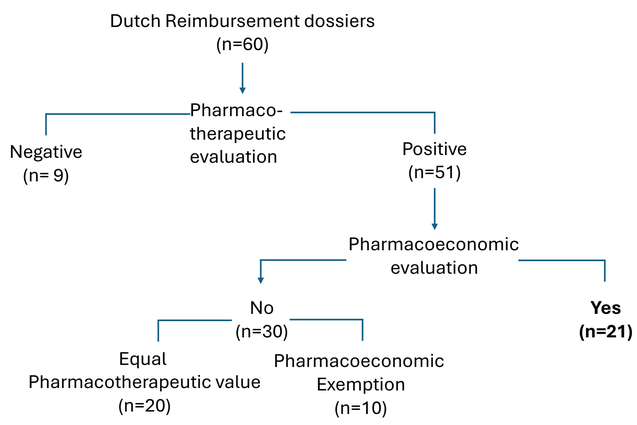
In practice, methodological limitations and inconsistent assumptions can undermine the credibility of pharmacoeconomic evaluations. Pitfalls may arise in data selection, economic model structure, survival data extrapolation methods, or handling of uncertainty, that can influence the interpretation of cost-effectiveness outcomes.

This study identifies common pitfalls in dossiers submitted in the Netherlands and compares their frequency and impact with evaluations in the UK and Sweden to explore how these issues may influence reimbursement outcomes.

How did we approach this?

This study reviewed pharmacoeconomic evaluations of drugs assessed by the Dutch Scientific Advisory Board (WAR, ZIN) in the Netherlands between January 2023 and June 2025. Dutch reimbursement evaluations and accompanying WAR minutes were analyzed. Of these, those with a full pharmacoeconomic evaluation were further categorized into themes and subthemes. Comparative analyses included evaluations from the UK (NICE) and Sweden (TLV) to triangulate findings and explore cross-country patterns in methodological issues. Additionally, dossiers not achieving reimbursement were reviewed to understand how limitations in cost-effectiveness analysis may relate to less favourable outcomes.

Figure 1. Flow diagram of Dutch reimbursement evaluations



Netherlands, UK, and Sweden

These countries were selected for their rigour on pharmacoeconomic evaluations.

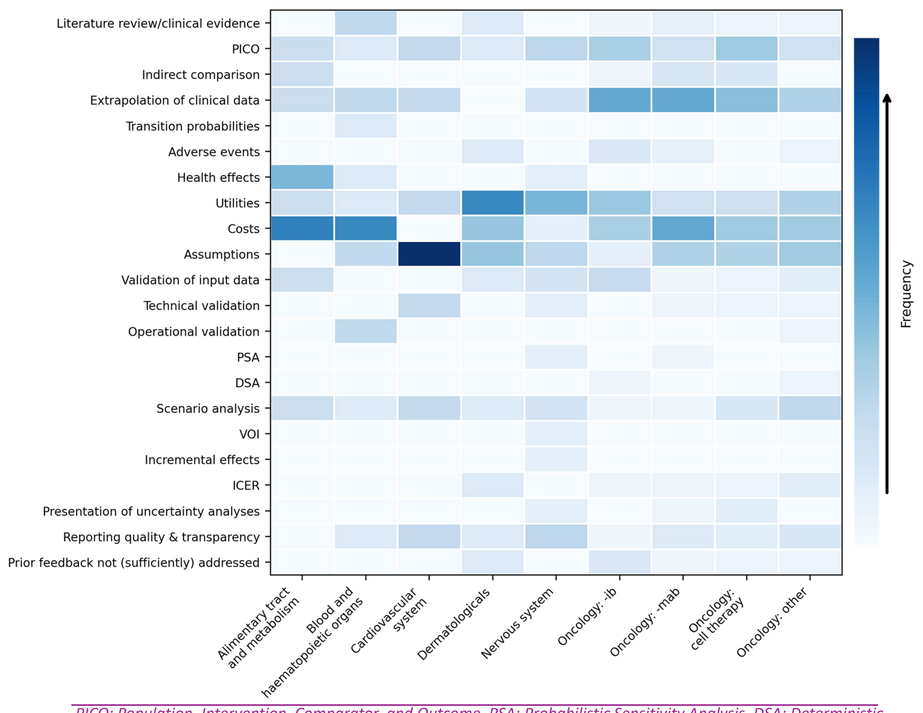
n = number of reimbursement dossiers

What did we find out?

Variation in methodological critique across disease areas

Across pharmacoeconomic evaluations from the Netherlands, the UK, and Sweden methodological critiques varied substantially by disease area. Oncology and neurology dossiers attracted the highest frequency of comments. Across all areas, most frequent subthemes related to uncertainty, input data assumptions, and extrapolation methods (Figure 2). Cost-related aspects were also frequently criticised, often reflecting inappropriate modelling of relevant cost components. Variation was particularly pronounced for themes related to effectiveness and clinical data.

Figure 2. Heatmap depicting the relative frequency of subthemes within disease areas and INN groups



PICO: Population, Intervention, Comparator, and Outcome, PSA: Probabilistic Sensitivity Analysis, DSA: Deterministic Sensitivity Analysis, VOI: Value of Information, ICER: Incremental Cost-Effectiveness Ratio

Overlap in subthemes between countries

Across all three HTA bodies, ZIN (Netherlands), NICE (UK), and TLV (Sweden), eight subthemes were consistently identified, primarily related to clinical effectiveness and key methodological inputs such as costs, utilities, and modelling assumptions (Figure 4). The Netherlands uniquely addressed additional methodological dimensions, including validation, detailed sensitivity analyses (PSA, DSA, VOI), and interpretation of ICERs, reflecting a more granular review approach. In contrast, NICE focused mainly on clinical evidence and the definition of PICO, while TLV placed emphasis on assumptions, adverse events, and reporting transparency. These findings indicate a shared methodological foundation across agencies, accompanied by country-specific emphases reflecting differences in national HTA frameworks and evidentiary standards.

Figure 4. Common and country-specific methodological critique patterns across The Netherlands, the UK and Sweden

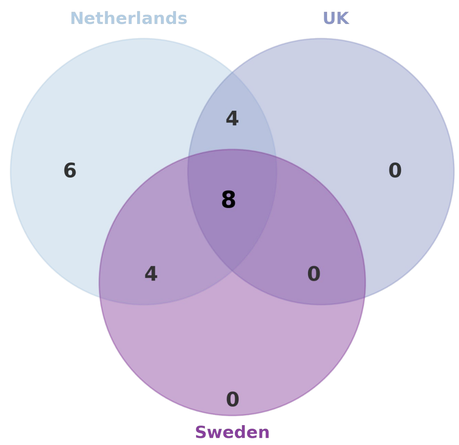
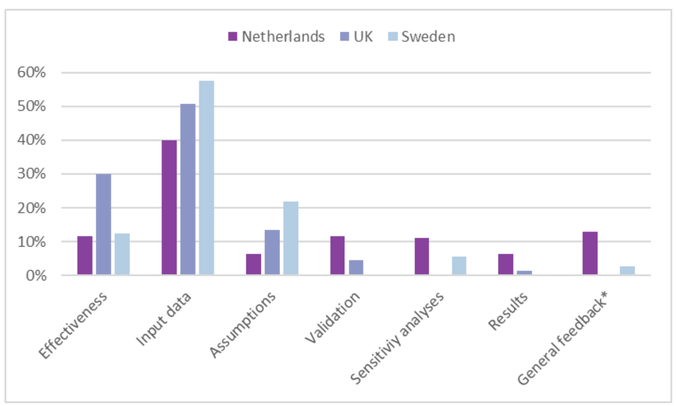


Figure 3. Relative frequency of themes and subthemes in the Netherlands, the UK and Sweden



** General feedback entails the overall reporting quality and transparency, prior feedback that is not (sufficiently) addressed and inconsistency with HTA body guidelines*

Slight variation in methodological critique across (sub) themes and HTA agencies

Input data issues were the most frequently reported concern across all three countries (Netherlands 40%, UK 51%, Sweden 57%) (Figure 3). Beyond this commonality, country-specific patterns emerged: the Netherlands most often highlighted lack of model validation and insufficient sensitivity analyses, along with general feedback; NICE (UK) emphasized clinical effectiveness, capturing the importance of a well-defined PICO; while TLV (Sweden) predominantly focused on assumptions and model input data such as costs and utilities.

Factors impacting reimbursement decisions

From the frequency analyses, the subthemes extrapolation, utilities and costs dominated. Closer inspection of key decisions in the Netherlands revealed impact by:

- (Uncertainty) regarding long-term survival
- Quality of the Pharmacoeconomic model and transparency
- Drug prices and appropriate care agreements

What can we take away?

- Cross-country comparison showed overlapping critique patterns across ZIN, NICE, and TLV, reflecting shared concerns about methodological robustness
  - Most frequent critiques concerned extrapolation methods, utilities, and cost inputs
  - Uncertainty in long-term survival, model assumptions, and limited scenario analyses were the most pervasive overarching issues
- Determinants of reimbursement outcomes in the Netherlands were:
  1. Uncertainty in long-term survival projections 2. Model quality and transparency 3. Drug pricing and care agreements
- Future submissions should strengthen methodological rigour, conduct extensive scenario analyses, and ensure credible indirect comparisons aligned with national standards of care

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