

Background

Introduction

- Access to reimbursement in France requires manufacturers to submit a dossier to the National Authority for Health (HAS), responsible for health technology assessment (HTA). Since 2013, when manufacturers claim a major to moderate added clinical value and a significant impact on healthcare expenditure, they are required to submit an economic dossier to the economic body of the HAS (CEESP). Economic appraisals approved by CEESP can be used by the Health Ministry to support pricing negotiations.
- In health economics, indirect costs capture productivity losses related to illness or its treatment, including reduced work capacity, sick leave, premature death, and the burden on caregivers. They reflect the broader economic impact of disease beyond direct medical expenses.
- When submitting a dossier, manufacturers must follow French guidelines which recommends using a societal perspective<sup>1</sup>. Only direct costs are considered in the reference analysis; indirect cost analysis may be presented as a complementary analysis

- Objective
- This study aims to investigate how indirect costs are addressed by both manufacturers and CEESP in economic appraisals submitted for health technology assessment in France.
  - Specifically, it seeks to determine whether indirect costs are included, and, if so, to describe in detail how they are incorporated into the analyses and dossiers.

Methods

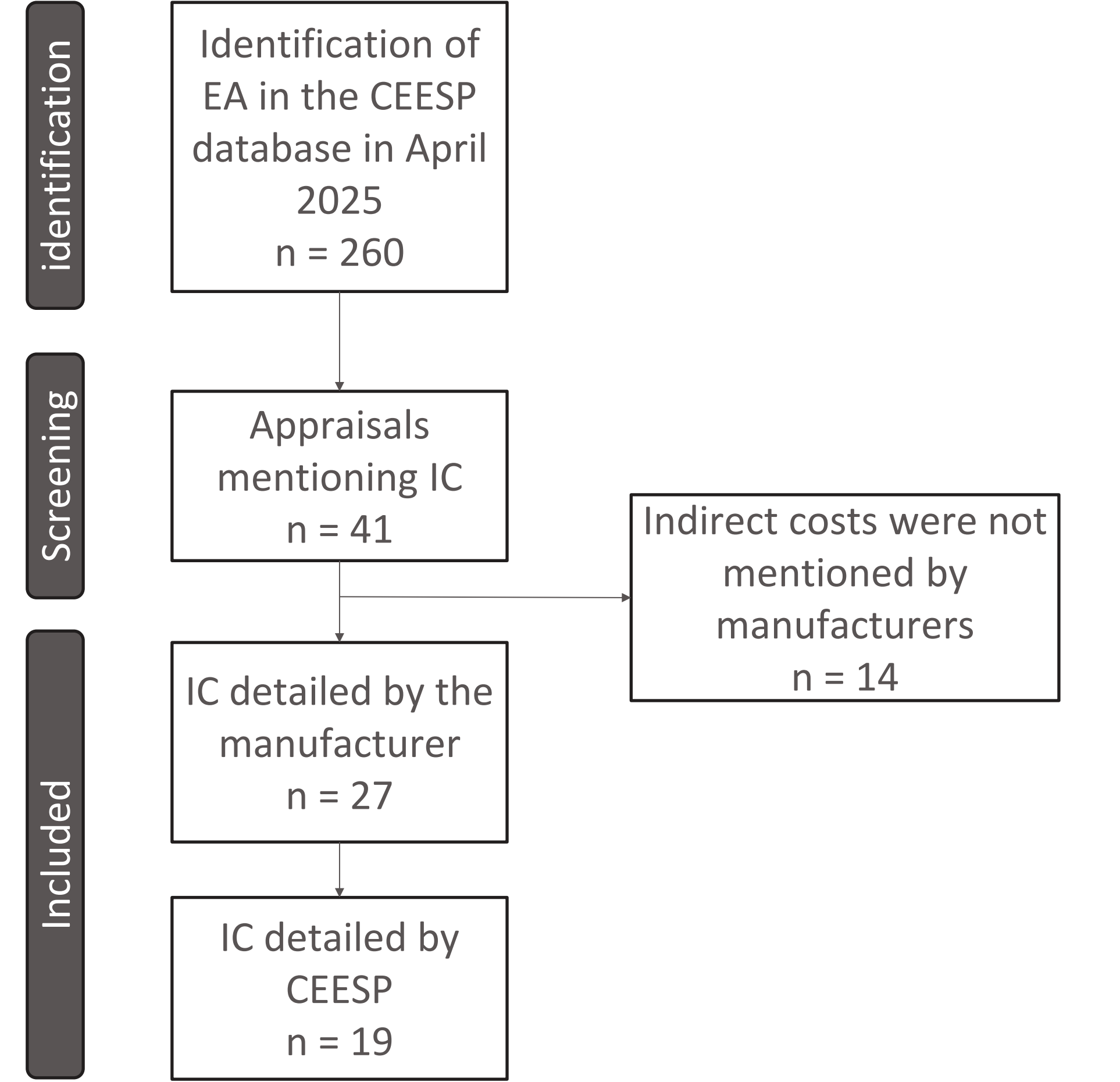
- Identification and selection of economic appraisals
- All EA published through April 2025 were screened for mention of :
    - Indirect costs
    - Productivity loss
    - Resource loss
    - Human capita
    - Per capita
    - Gross domestic product (GDP)
    - Invalidity
    - Sick leave

- Data extraction
- The following data was collected :
    - Year of economic appraisals publication
    - Drug information (indication, therapeutic area)
    - Structuring choices (comparator, time horizon, type of analysis)
    - Target population & mean age at baseline in the model
    - Incremental cost-utility results (ICUR) and its approval
    - Indirect costs verbatim in the reservation, technical discussion or conclusion section
    - Indirect costs’ impact on the result. If the impact was a range, the mean was calculated.
    - Valorization method, data source and unit and its value

Results

- Identification and selection of EA
- Overall, 260 economic appraisals were screened for indirect costs or productivity loss. While they were mentioned in 41 economic appraisals, they were only included in 27. In 14 economic appraisals it was mentioned by CEESP that “indirect costs were not mentioned by manufacturers”.
  - Out of these 27 EA, CEESP detailed in 19 public opinions how indirect costs or productivity loss was considered. Thus, the following analyses are either on those 27 or 19 economic appraisals. (Figure 1).

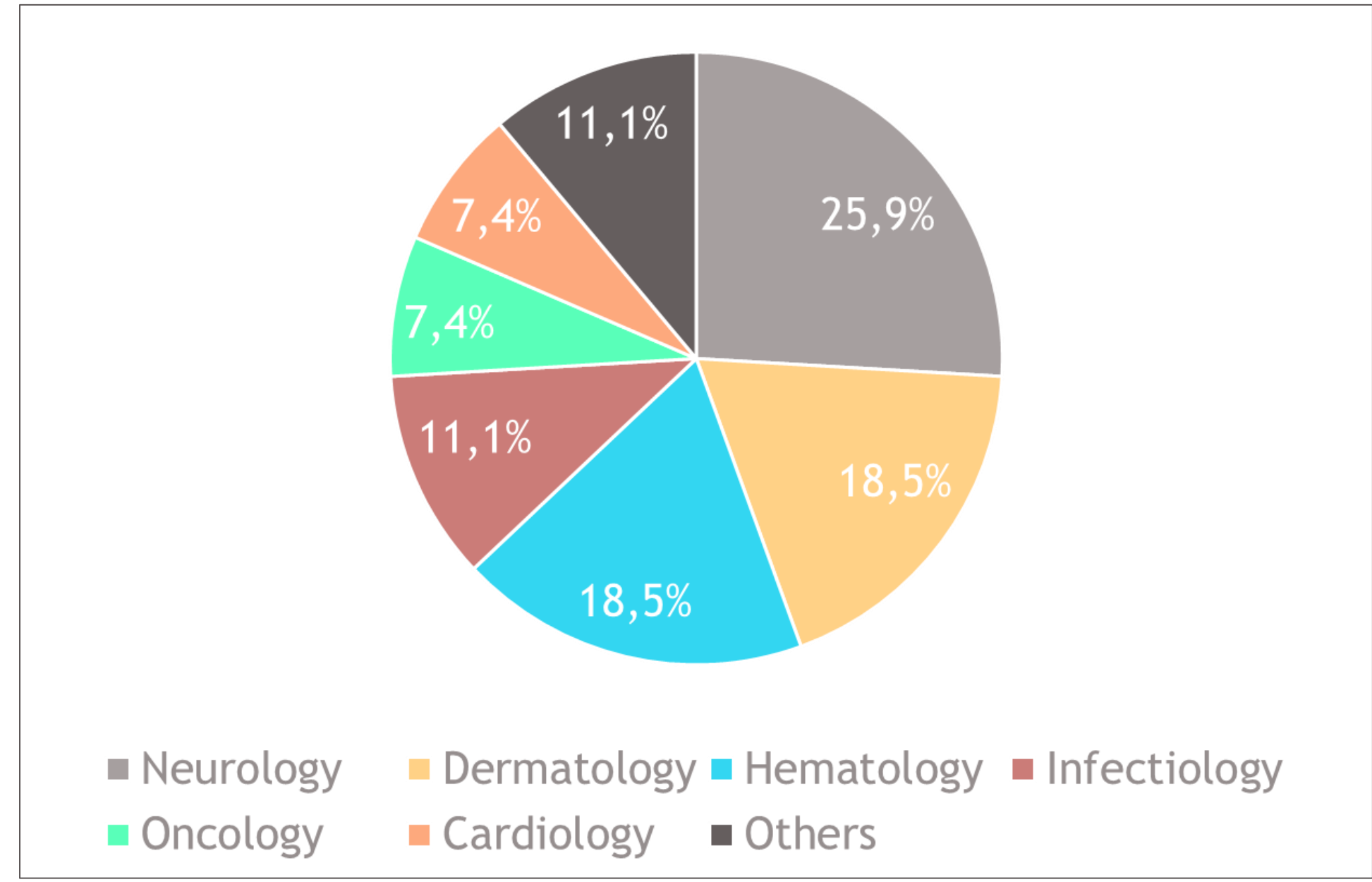
Figure 1. Selection of EA



Contextual data

- Out of 27 economic appraisals, most concerned pharmaceuticals (85.2%) while 7.4% concerned vaccines and 7.4% medical devices.
- Neurology is the most represented therapeutic area (25.9%) followed by dermatology (18.5%) and hematology (18.5%) (Figure 2).
- 6 out 7 neurology appraisals are about multiple sclerosis.

Figure 2. Economic assessment’s therapeutic area (n=27)



- Target population characteristics
- The median target population per indication was 6,300 patients, first quartile (Q1) was 498 and third quartile (Q3) 39,375.
  - Although the average starting age within the models was 35 years, three EA specifically addressed pediatric indications. Among these, only one economic appraisal acknowledged indirect costs related to caregivers, in addition to those affecting pediatric patients themselves.

Structuring choices

- The modeled time horizon ranged from 5 to 85 years, with a median of 20 years (Q1 = 17; Q3 = 54).
- While more than half (56%) of the economic assessments incorporated indirect costs into cost-effectiveness analyses, 7% considered indirect costs exclusively in budget-impact analyses, and 30% addressed them in both analyses types. In two economic appraisals, only the monetary value assigned to a single unit of productivity loss was reported, indicating that this figure was calculated by the manufacturer but not further detailed by CEESP (Figure 3a).
- Indirect costs appeared in undefined sensitivity (48%), scenario (30%) or complementary (7%) analyses. When it appeared in a base case analyses (7%), the economic appraisal was never accepted by CEESP (Figure 3b).

Figure 3a. Type of model including indirect costs (n=27)

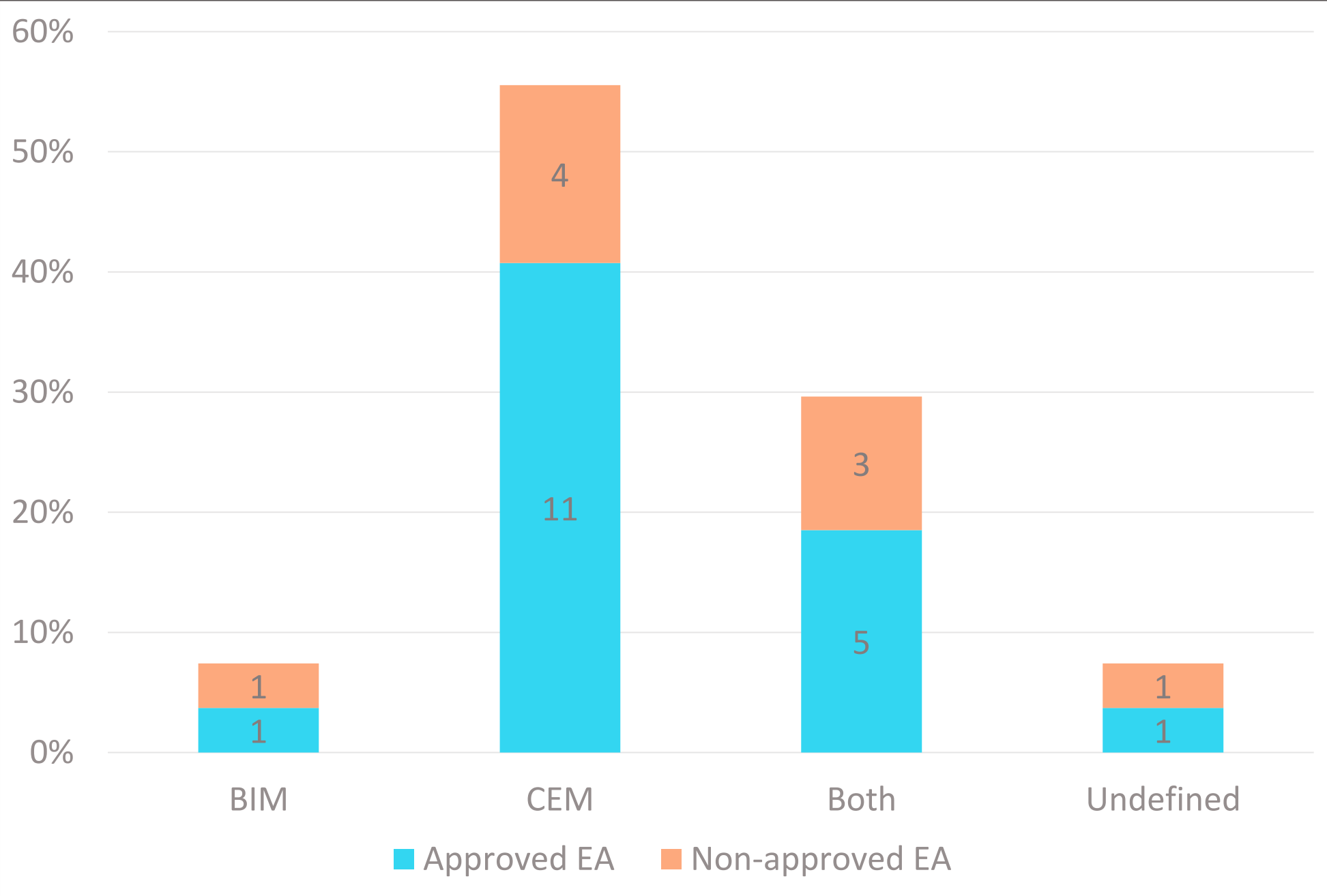
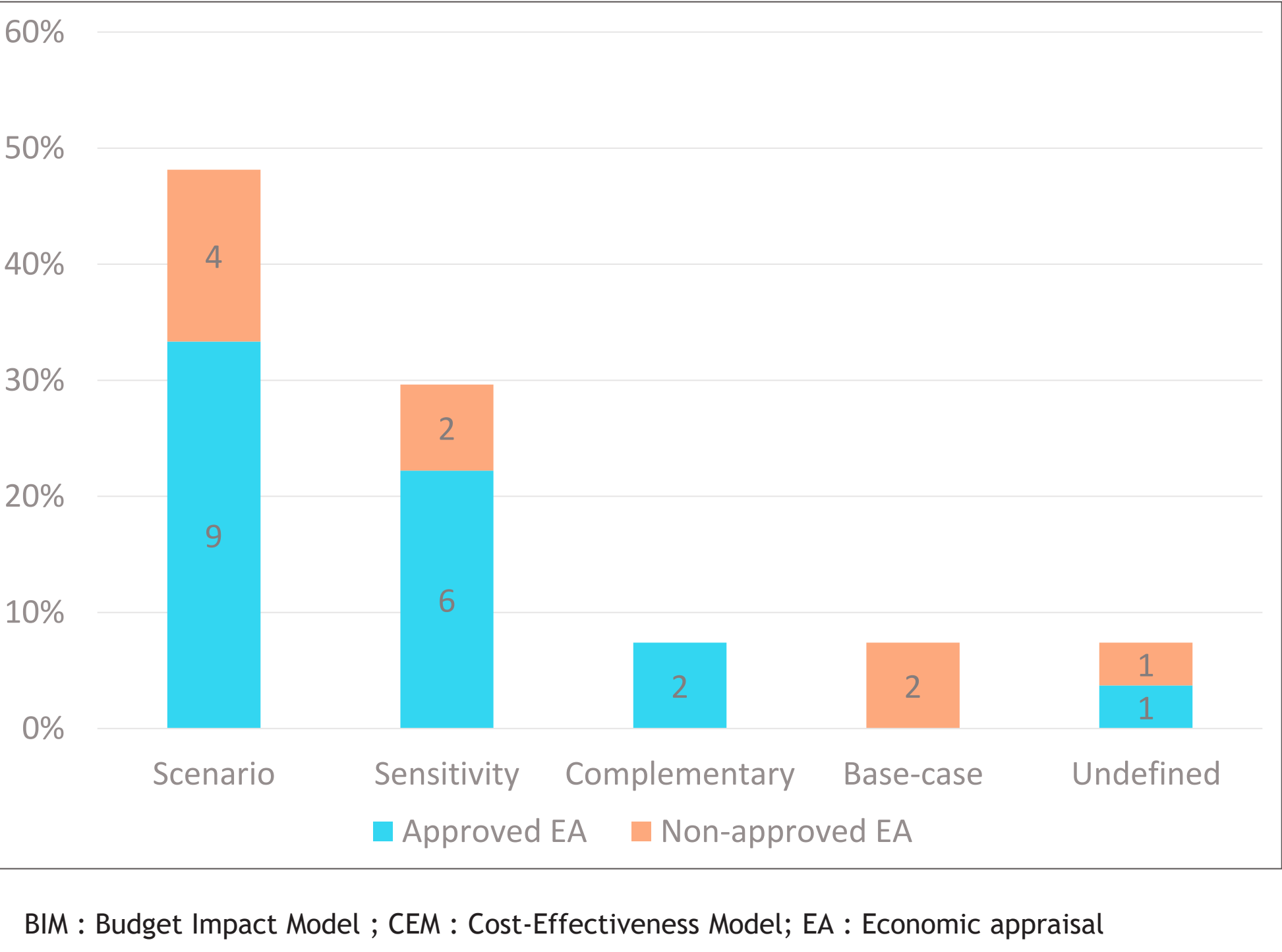


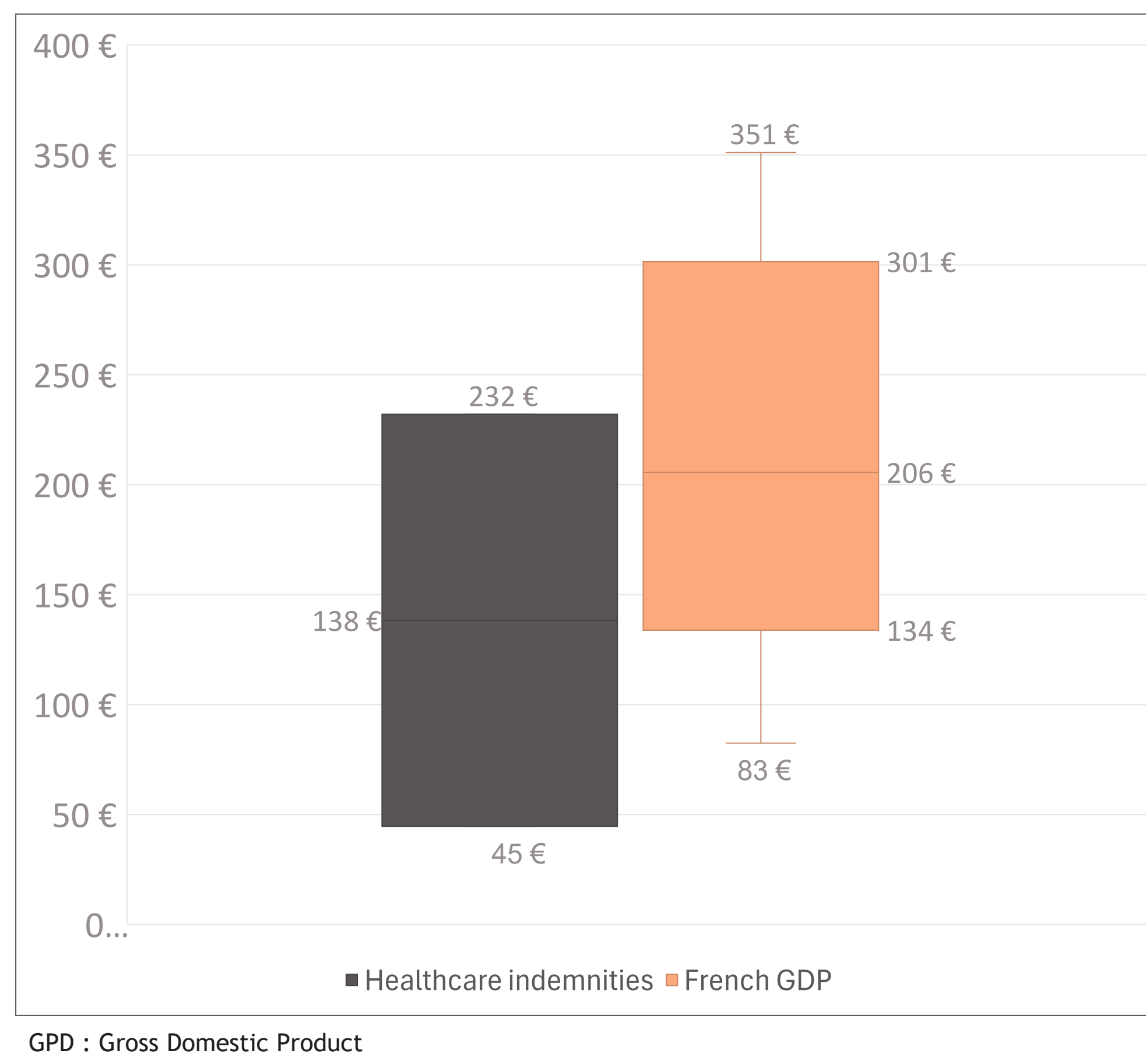
Figure 3b. Type of analysis including indirect costs (n=27)



Valuation method

- When explicitly described, the approach to data collection focused on quantifying the number of unit lost relied primarily on three sources: prospective clinical trial data (n=6), retrospective studies (n=2), and hypothesis based on published literature combined with hypotheses (n=3)
- When valuation was detailed (n=19), productivity loss was assessed using French GPD per worked day (79%) or average healthcare indemnities per sick leave day (21%).
- If the median cost assigned to one worked day was €204, it was relatively consistent between French GPD (€206) and healthcare indemnities (€138) valuation methods (Figure 4).
- One economic appraisal focusing on patients aged 12 or more included parent’s hotel stays as well as French GPD valuation.

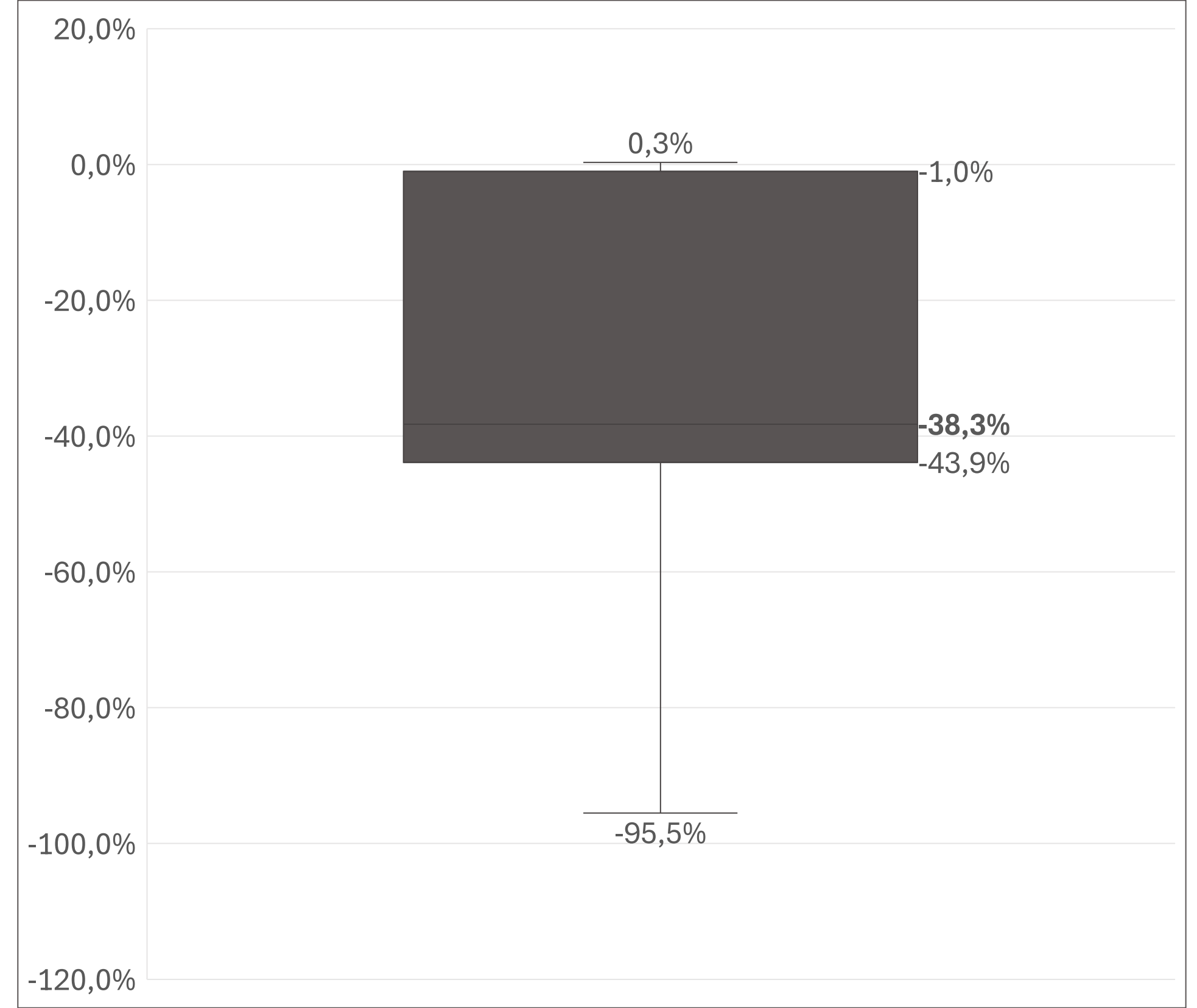
Figure 4. Lost workday valuation in France according to method (n=19)



Impact of indirect costs on ICUR

- When detailed (n=12), incorporating indirect costs improved the ICUR or budget impact result in 11 economic assessments, with changes ranging from +0.3% to -95.5% for a median of -38% (Figure 5).
- Within the neurology therapeutic area, the effect of including indirect costs on the ICUR seems relatively consistent. In fact, for two neurology strategies assessed, therapies shifted to a dominant position - not shown in figure 5 - reflecting the potential importance of accounting for productivity losses in conditions such as multiple sclerosis.
- When included in base case analyses, indirect costs reduced the ICUR by 95.5% as CEESP put it into perspective with a scenario analysis focusing on direct costs.
- In one instance, the result of the budget impact model was also reduced by 20%.

Figure 5. impact on the ICUR (n=12)



Mention of indirect costs by CEESP

- During the technical discussions, CEESP asked question about indirect costs and its method of valuation in 9 economic appraisals.
- Reservations about the inclusion or estimation of indirect costs were expressed in 5 economic appraisals, indicating that concerns remain about either applicability, robustness, or methodological consistency.
- In 2 economic appraisals, indirect costs were explicitly referenced in the final conclusions :
  - In one instance, CEESP recommended the implementation of a dedicated study aimed at quantifying the organizational impact of the intervention in the French context, with particular attention to indirect costs.
  - In the other, which focused on migraine, CEESP highlighted the importance of measuring indirect costs for decision-making purposes in this specific pathology.

Conclusion

- CEESP recommends considering a societal perspective, but indirect costs are not yet standard in base case health economic analyses despite continued interest in their integration.
- When included, indirect costs are typically estimated robustly, with a median value of €204 per lost workday, highlighting significant productivity impacts of chronic diseases which reduces the ICUR by a median of 38%.
- Systematic inclusion of indirect costs, especially in sensitivity analyses, can better capture holistic product value and sometimes make therapies appear dominant, underscoring the need for clearer and standardized evaluation guidance.

References

1.Haute autorité de santé. Doctrine de la commission d’évaluation économique et de santé publique (CEESP) [Doctrine of the Commission for Economic and Public Health Evaluation]. 2021