Assessing the economic case for Alzheimer's disease policy prioritisation

Tim Wilsdon, Hugh Nicholl,
Jade Si-Ahmed

September 2026

CRA Charles River Associates

Funded by Biogen

September 2026 | Biogen-295337

Contents

CRA Charles River Associates

Executive summary

Alzheimer's disease (AD) exerts a huge burden on patients, families, caregivers, and health and social care systems in Europe. Given recent scientific and therapeutic advances, there is a compelling case for policymakers to prioritise AD and invest in health system transformation

In a 2025 report, CRA assessed lessons for policy action in AD using oncology as a disease area where there has been sustained and impactful policy prioritisation.[1] The 2025 report set out recommendations to EU- and national-level policymakers for addressing the challenges faced by AD patients and European health and care systems (Figure 1).

Given the need for comprehensive AD policies and the expected investment this will require, it is important to understand how the total socioeconomic burden of AD could be impacted by AD policy prioritisation. The aim of this report was to assess the economic case for AD policy prioritisation by estimating how the socioeconomic burden of the disease would be impacted by a package of policy changes enabling access to new treatments. Specifically, the aim was to compare the socioeconomic burden of the disease in France, Germany, Italy, Spain, and the UK (EU4/UK) from 2026 to 2036 under two scenarios: a baseline scenario of no policy change and a scenario in which widespread, active, and effective AD policy prioritisation enables patients to benefit from timely diagnosis and treatment with novel disease-modifying therapy (DMT).

Figure 1: Summary of recommended actions for AD policy prioritisation

CRA Charles River Associates

The methodology draws on well-established modelling approaches and recent studies on the costs of disease and epidemiological forecasts

To assess the economic case for AD policy prioritisation, we built two scenarios for how the total socioeconomic burden of the disease could evolve from 2026 to 2036. We compared the future socioeconomic burden under a baseline scenario of no policy change to a scenario in which widespread, active, and effective AD policy prioritisation enables patients to benefit from timely diagnosis and treatment.

The methodology followed three steps:

1. **Estimate a baseline on the current socioeconomic burden due to AD in 2026.** This was based on the estimated per-person per stage costs reported in previous studies across four components (Figure 2).[2,3,4,5,6]
2. **Estimate the future socioeconomic burden through to 2036 under a baseline scenario of no policy prioritisation.** This was based on assumptions for the probability of patients transitioning between stages (Figure 3) and prevalence estimates from Alzheimer Europe.[7]
3. **Estimate the future socioeconomic burden under a scenario in which widespread, active, and effective AD policy prioritisation enables diagnosis and treatment.** Changes to the total socioeconomic burden under the policy scenario are driven by reduced costs from lower probabilities of progressing to more advanced stages for mild cognitive impairment (MCI) and mild AD patients, alongside associated increases in diagnosis and treatment costs.

Figure 2: Components of the socioeconomic burden of AD

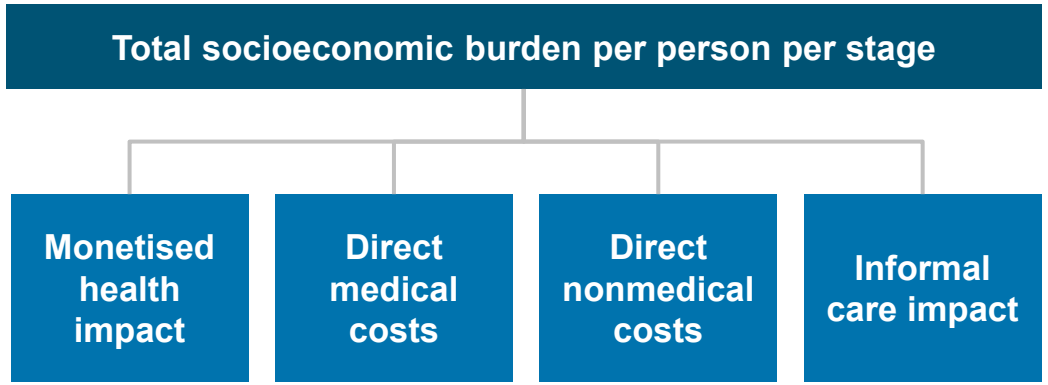
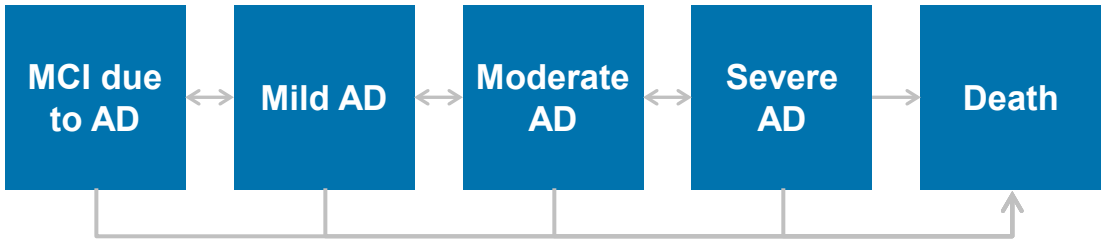


Figure 3: Conceptual framework for transitioning between stages

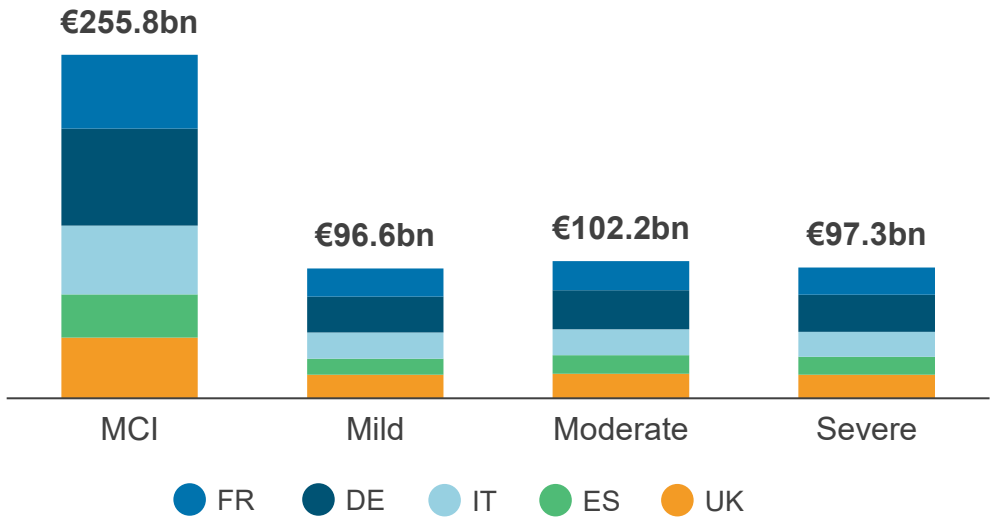


Without policy change, the total annual socioeconomic burden is projected to rise from €552 billion in 2026 to over €1 trillion in 2036

Total socioeconomic burden of AD today

The socioeconomic burden of AD increases substantially as patients progress to more advanced stages of the disease. The per-person socioeconomic burden is almost four times higher for severe AD compared to MCI on average, though MCI is the greatest proportion of the total burden due to higher prevalence (Figure 4). The total socioeconomic burden for EU4/UK is estimated as €552 billion in 2026.

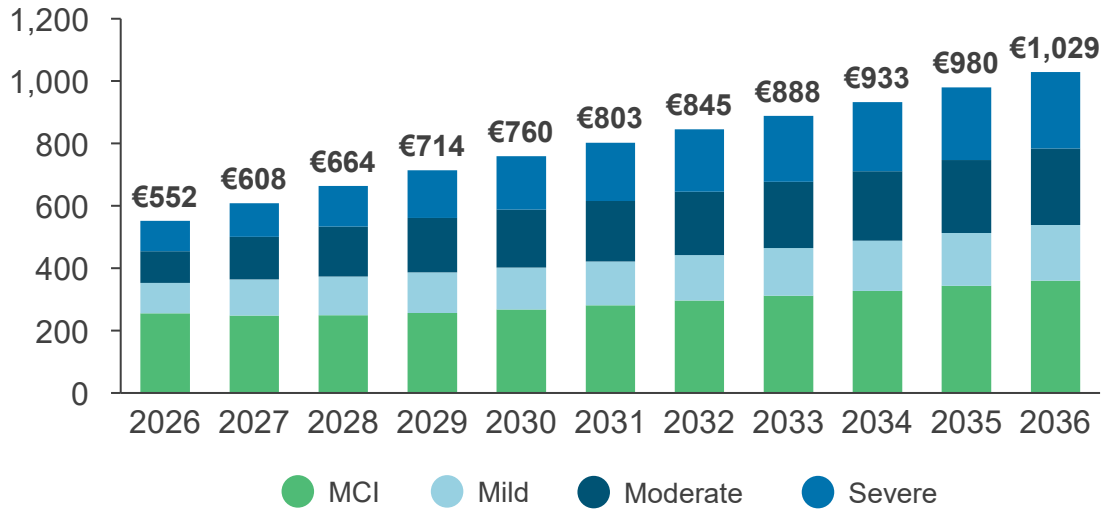
Figure 4: Estimated socioeconomic burden of AD in EU4/UK by stage, 2026 (€ bn)



Future socioeconomic burden without policy action

The total number of people in EU4/UK with AD is expected to increase from 14.8 to 18.3 million from 2026 to 2036. As a result, the total annual socioeconomic burden is projected to rise from €552 billion to over €1 trillion (Figure 5). In other words, the annual socioeconomic burden of AD could increase by nearly €500 billion in the absence of policy prioritisation.

Figure 5: Projected EU4/UK total socioeconomic burden due to AD per year without policy prioritisation (€ bn)



Potential socioeconomic benefits from comprehensive, active, and effective AD policy prioritisation could cumulatively reach €182 billion for 2026–2036

AD policy prioritisation would enable broad patient access to timely diagnosis and treatment, which reduces the risk of progression to more advanced stages. We found that in 2036 there could be 430,000 fewer people with severe AD and 1.4 million more people living with only MCI as a result of widespread, active, and effective AD policy prioritisation, compared to the baseline scenario of no policy change.

By reducing the number of patients in the costlier stages of the disease, AD policy prioritisation would generate substantial and accelerating socioeconomic benefits over time. As the share of patients benefiting from treatment with DMTs increases, annual socioeconomic benefits for EU4/UK would reach €60 billion in 2036 (Figure 6).

Cumulatively, the total socioeconomic benefits for EU4/UK over 2026–2036 reach €182 billion. The return on investment (ROI) to generate this saving is €1.82 for every €1 invested.

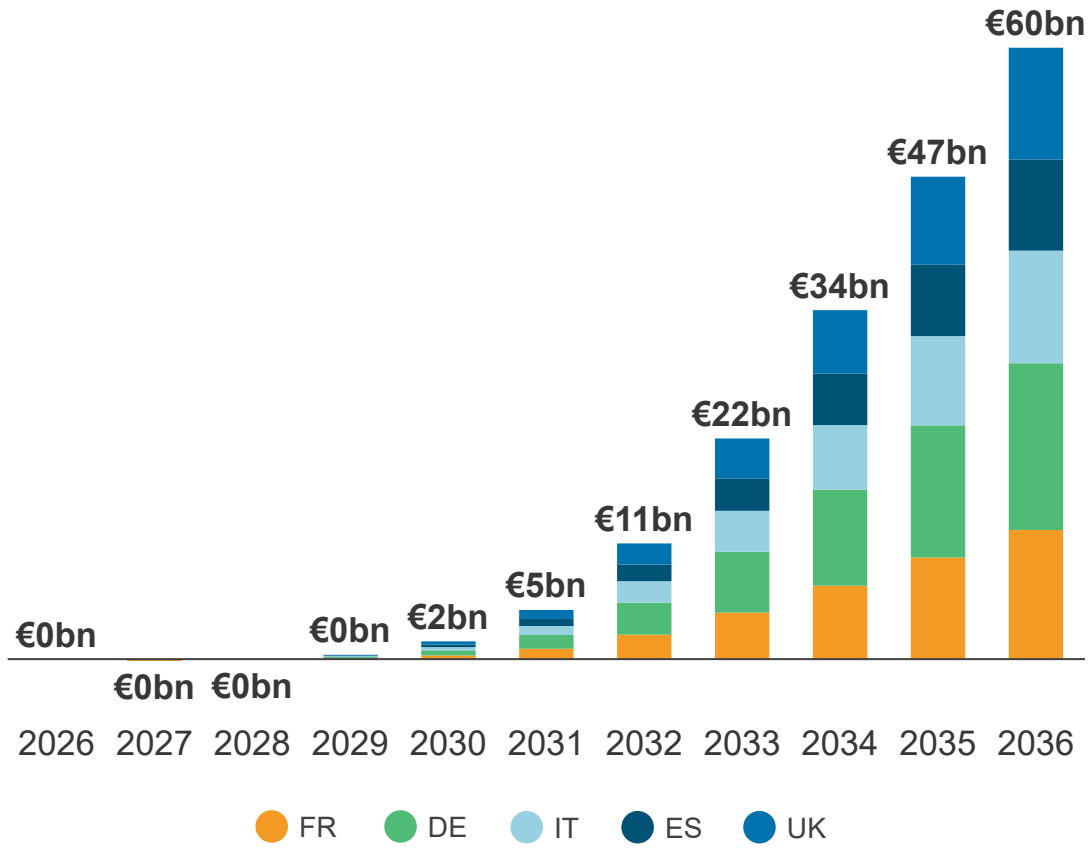
€182 bn

Cumulative socioeconomic benefit 2026–2036

€1.82

ROI for every €1 invested

Figure 6: Total annual socioeconomic benefit for EU4/UK under policy prioritisation scenario (€ bn)



CRA Charles River Associates

AD policy prioritisation with a focus on diagnosis, infrastructure, and reimbursement frameworks could generate significant socioeconomic benefits

Implications of the analysis for AD policy prioritisation

Socioeconomic benefit from policy prioritisation

DMT access with enabling policies could generate a socioeconomic benefit of €182 billion over the next 10 years – roughly equivalent to one full year of health care expenditure in Italy.

Reduced burden of advanced stages of AD

Socioeconomic benefits are driven by fewer patients progressing to advanced stages. Keeping patients in earlier stages could lead to 1.3 million fewer people with moderate and severe AD in 2036.

Coordinated action maximises ROI

A return of approximately €1.8 is generated for every €1 invested. This assumes that a package of policies is implemented, showing the need for coordinated action to realise the full potential benefits.

Cost of delayed or incomplete action

The magnitude of the socioeconomic benefit is highly dependent on the timing and extent of policy prioritisation. The cost of delayed or partial action could be over half of the total potential benefits.

The analysis has pointed to specific areas where more urgent action is needed:

Accelerate diagnosing patients at scale

The modelled socioeconomic benefits depend critically on patients being identified and treated while in the MCI or mild AD stages. For this to happen in practice, a significant expansion of diagnosis leveraging novel blood-based biomarker testing will be needed.

Support expansion of infrastructure and capacity over time

Many studies have shown that health systems have insufficient diagnostic and treatment capacity, such as AD specialists, memory assessment services, PET scanning, CSF analysis, and MRI scanning. Our analysis has reaffirmed the need for system investment to ensure readiness for treating AD at scale.

Establish necessary access and reimbursement frameworks

For patients to benefit from the development of novel AD treatments, reimbursement frameworks that reflect all relevant benefits, as well as funding approaches that can manage the immediate budgetary impact, will be needed.

1. Introduction

Background

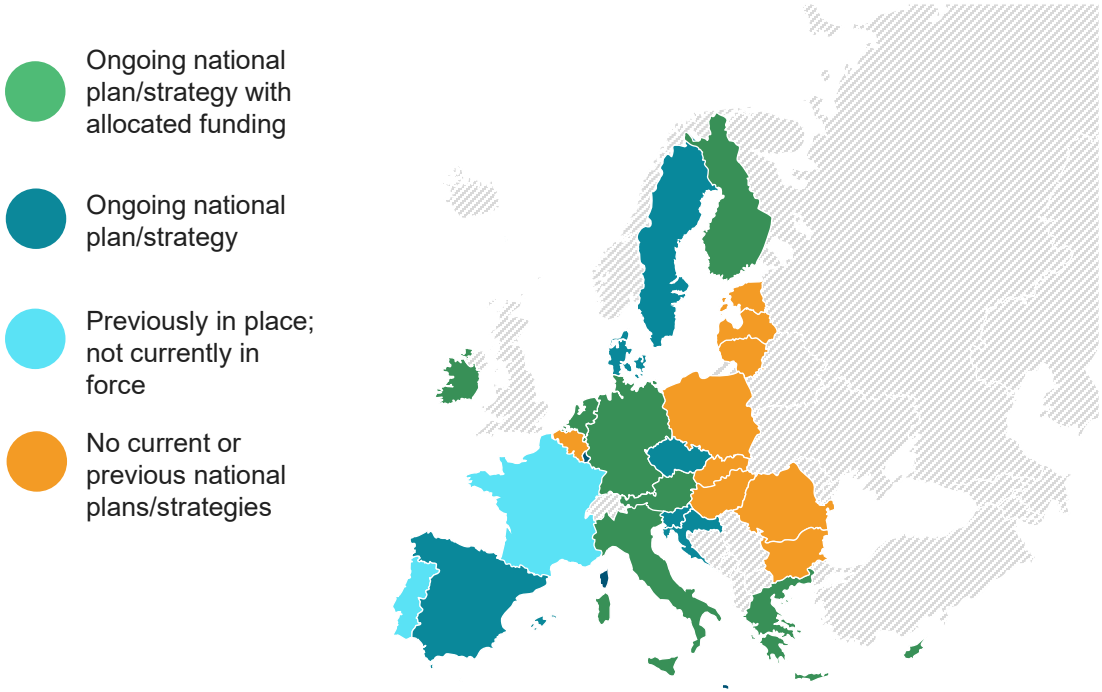
Alzheimer's disease (AD) is a progressive neurological disease that is the most common form of dementia, an umbrella term for conditions that result in declining brain function.[8] The disease exerts a huge burden on patients, families and caregivers, and health and social care systems in Europe and globally.

In Europe, the number of people with dementia is expected to increase by 64% by 2050.[7] AD and other dementias are prominent drivers of mortality and have been found to be the primary cause of death in several countries. For example, in England and Wales, dementia and AD have consistently been the leading cause of death (e.g., representing 12% of all deaths in 2024).[9] There is also a substantial socioeconomic burden due to AD: while approaches to estimating the costs of disease are highly varied, one study projected a global cost of dementia of US$2.8 trillion by 2030.[10]

Despite the magnitude of the societal impact of the disease, the degree of policy action in Europe is highly varied. Many EU Member States do not have updated AD or dementia policies in place, and there is concern that progress towards implementation has stalled (Figure 7). This picture is consistent with international assessments showing that only around a quarter of countries globally have an active national dementia plan and that several European plans have lapsed without renewal.[11]

The current level of policy development for AD therefore does not reflect the urgency of addressing its growing burden. Increases in the number of people with AD will place growing pressure on European health and care systems and detract from the 'silver economy' associated with older and ageing people. At the same time, there has been significant progress in understanding AD and developing different approaches to diagnosis and treatment. This has created a renewed focus on how European health systems should respond to the opportunity that now exists to alleviate the burden of the disease through sustained policy prioritisation.

Figure 7: Existence of national AD/dementia plans in EU Member States, as of 2023



Source: CRA analysis of European Dementia Monitor 2023[12]

AD policy development in France, Germany, Italy, Spain, and the UK (EU4/UK)

The degree of policy action is highly varied across EU4/UK. While some countries have made progress towards implementing funded strategies, others have plans that have not been updated for many years (see Table 1).

Table 1: Overview of AD/dementia policy development and implementation in EU4/UK

Level of policy development	Details
 **Several previous national plans, but no specific plan currently in place**	• France was the first European country to develop a national dementia strategy (2001), though the fourth strategy, for 2014–2019, was broadened to instead cover neurodegenerative diseases in general.[13,14] A new National Strategy for Neurodegenerative Diseases 2025–2030 has been launched to replace earlier plans. • While there is a national neurodegenerative diseases strategy, France does not currently have a standalone national dementia strategy.[15]
 **Extensive national strategy for 2020–2026, with implementation significantly underway**	• The National Dementia Strategy is to be implemented in 2020–2026 and includes more than 160 measures across 27 goals. An annual monitoring survey reports on the implementation of measures and has consistently reported that most of the strategy's implementation is on track; focus areas include supporting people with dementia and their families and developing medical and nursing care.[16] • The last measures are planned to be completed and implemented in 2026, though the report to the Steering Group in 2025 showed how the strategy could be continued into the following years.[17]
 **Funded national plan, but gaps in regional implementation**	• The Italian National Dementia Plan (PND) was approved in 2014 but had no dedicated funding until 2021, when the Italian Fund for Alzheimer's and Other Dementias allocated €15 million for 2021–2023, so early implementation was limited. The fund has since been renewed and increased to €34.9 million for 2024–2026 to strengthen the PND's national and regional implementation.[18] • Most regions have now implemented at least part of the PND, but implementation remains uneven; some regions still lack full adoption.[19] • As of early 2026, a draft updated version of the PND had been prepared and is expected to include clearer objectives and monitoring indicators.[20]
 **Minimal implementation of the 2019–2023 National Plan**	• Following a previous neurodegenerative diseases strategy, Spain had a national plan on AD and other dementias in place from 2019 to 2023. Key areas included research on AD determinants, improvement in services and diagnosis, and raising awareness and improving societal attitudes.[21] • However, in 2023 the strategy was criticised by the patient/professional community for lack of implementation and having no practical impact. Since the expiry of the plan in 2023, there has been advocacy for a new one.[22]
 **Minimal policies in England; funded plans in the UK's other nations**	• In England, a strategy was in place for 2015–2020; however, it has not been updated since 2015. The strategy set out the ambition to become the best country in the world for dementia care, such as by improving diagnosis by reducing time to assessment and improving continuity of care through a greater role for general practitioners.[23] • In 2025 the UK government published its 10 Year Health Plan for England, which included a commitment to developing a blueprint for improving dementia care.[24] • England is the only UK nation that does not have a specific dementia plan with dedicated funding.[25]

Objectives of this report

In a previous report, CRA assessed lessons for policy action in AD from oncology as a disease area where there has been sustained and impactful policy prioritisation.[1] The report found that the time is right for a renewed focus on AD and the need for policies that address its urgent and growing burden. The report set out recommended priority policy changes in AD, including scaling up diagnostic capacity through blood-based biomarkers, ensuring reimbursement frameworks can enable access to novel treatments, and supporting treatment centre capacity and specialist expertise (Figure 8).

One of the learnings from oncology for AD prioritisation was that evidence on the socioeconomic burden of cancer played an important part in sustaining focus on oncology policy, especially with the expansion of evidence on the return on investment (ROI) of different policy actions. However, in AD there is concern that the economic case for investing today has not been sufficiently assessed. The objective of this report was therefore to assess the economic case for prioritising AD policy in Europe. Specifically, the aim was to estimate the socioeconomic burden of the disease in the EU4 and UK today and in the future and how this would be impacted by widespread, active, and effective AD policy prioritisation.

Structure of the report

The remainder of this report is structured as follows:

- **Section 2** sets out the methodology used to estimate the socioeconomic burden of AD from 2026 to 2036 with and without policy prioritisation.
- **Section 3** provides the results for the impact of policy prioritisation for EU4/UK.
- **Section 4** sets out key implications for policymakers from the analysis.

Additional detail on the methodology and results is provided in the appendix.

Figure 8: Summary of recommended actions for AD policy prioritisation

2. Methodology

Overview of methodology

To assess the economic case for AD policy prioritisation, we built two scenarios for how the socioeconomic burden of the disease could evolve from 2026 to 2036. Specifically, we compared the future socioeconomic burden under a baseline scenario of no policy change to a scenario in which widespread, active, and effective AD policy prioritisation enables patients to benefit from timely diagnosis and treatment with novel disease-modifying therapy (DMT).

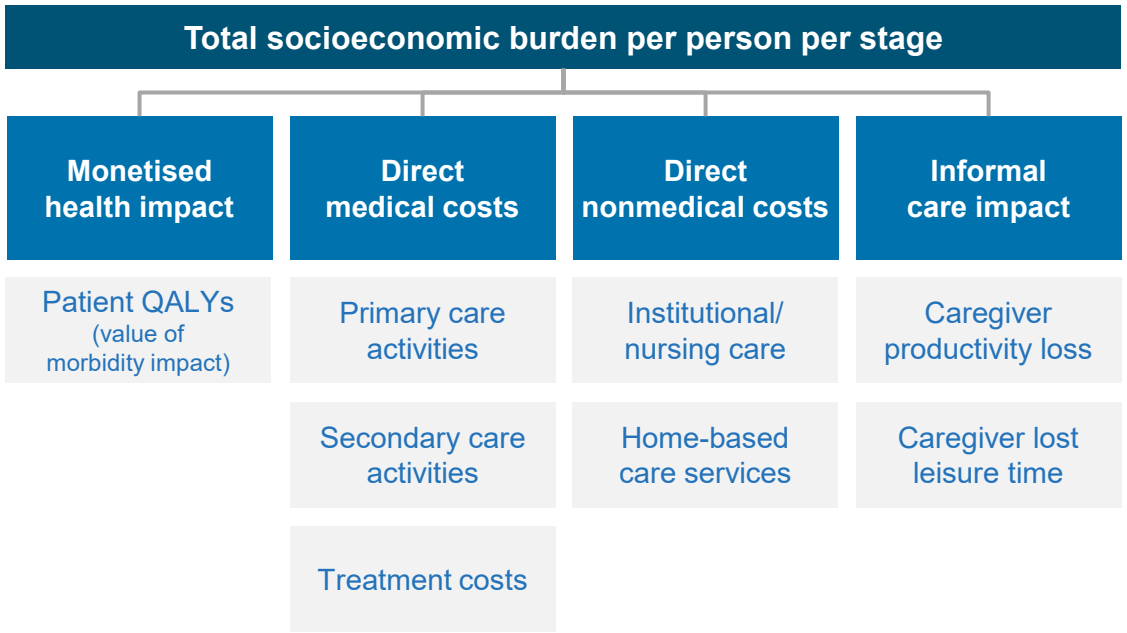
The analysis was conducted for EU4/UK, as these are the European countries with the highest total health expenditure and which prior studies on the societal costs of AD have focused on (therefore ensuring sufficient data availability).

The starting point of the model is the total socioeconomic burden per person for different stages of the disease. We considered four stages: mild cognitive impairment (MCI), mild AD, moderate AD, and severe AD. We estimated the socioeconomic burden of the disease per person for each stage, composed of four components (Figure 9):

1. **Monetised health impact to individuals**, which is an economic valuation of the impact of the disease on patients, based on the loss of quality-adjusted life years (QALYs).
2. **Direct medical costs**, which are the costs to the health system from treating and managing AD.
3. **Direct nonmedical costs**, which are the costs from caring for AD patients in the social care setting and at home.
4. **Informal care impact**, which is the indirect economic losses of caregiving from caregiver productivity loss and lost caregiver leisure time.

Although it is common to focus on these elements in studies on the socioeconomic burden of AD, together they likely underestimate the total economic losses due to the disease. This is because they exclude several other components, including patient productivity losses, lost economic consumption, the impact on pensions, and the cost of caregiver wellbeing. As such, the estimates in this report are likely underestimates of the total socioeconomic burden of the disease, as the model was informed by types of costs for which data are available across countries.

Figure 9: Components of the socioeconomic burden of AD



Methodology for estimating future socioeconomic burden under a baseline scenario of no policy change

We first estimated the total socioeconomic burden of AD today based on assumptions for the per-person per stage cost. Estimates were drawn from previous studies and inflated to 2025 values. The monetised health impact was based on health-related quality of life (HRQoL) utilities reported in Landeiro et al. (2020),[2] with a QALY value of €80,000 as per the HM Treasury Green Book.[26] Direct costs were primarily informed by the GERAS studies, a series of observational studies on AD health care resource use and economic costs.[3,4,5] The informal care impact was based on estimates for caregiver productivity loss and caregiver lost leisure time from Jönsson et al. (2023).[6] Additional detail on the inputs for each component of the socioeconomic burden are provided in the appendix.

For each year, per-person costs per stage were multiplied by the estimated number of people in each stage. For the first year, we assumed that the prevalence of MCI was double the prevalence of clinical AD (i.e., mild, moderate, and severe disease), as per Rajan et al. (2021)[27] and approximately validated by Gustavsson et al. (2023).[28] Within clinical AD, we assumed 50% were mild AD, 30% were moderate AD, and 20% were severe AD. This assumption was based on AD epidemiology studies (e.g., Yuan et al. 2021).[29] Based on Alzheimer Europe estimates for the total number of people with dementia,[7] we therefore estimated a starting point on the number of people with each stage of the disease in each country in 2026.

For each year, we applied Potashman et al. (2021) transition probabilities to determine the number of patients moving forward into the next stage,[30] following the typical disease stages used in AD economic modelling (Figure 10; Table 2). The prevalence in each country at the end of each year was based on Alzheimer Europe projections, with incident patients added to the MCI stage.* The estimated future number of people per stage was multiplied by per-person per-stage socioeconomic burden (inflated at the conventional 3% per year) to estimate total future socioeconomic burden of the disease in each year.

Figure 10: Conceptual approach to moving between stages

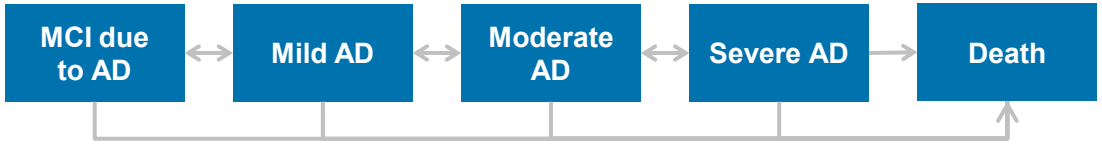


Table 2: Potashman et al. (2021) transition probabilities**

	To				
From	**MCI**	**Mild**	**Moderate**	**Severe**	**Death**
MCI	0.735	0.159	0.057	0.002	0.047
Mild	0.031	0.518	0.316	0.043	0.092
Moderate	0	0.018	0.384	0.286	0.312
Severe	0	0	0.013	0.52	0.467
Death	0	0	0	0	1

* Linear interpolation in total dementia prevalence estimates for 2025 and 2050, adjusted for ratio between MCI and clinical AD as a share of dementia.
** In our analysis the asymptomatic state was not modelled; therefore, the probability of transitioning from MCI to asymptomatic reported in Potashman et al. (2021) of 5.3% was integrated into the MCI-to-MCI probability.

Methodology for estimating future socioeconomic burden under a scenario of widespread, active, and effective AD policy prioritisation (1/2)

Changes to the socioeconomic burden under the policy scenario are driven by reduced probabilities of people with MCI and mild AD progressing to advanced stages. We assumed an impact only for these patients as current DMTs are indicated for this population.[31] We assumed no impact on moderate and severe AD and no impact on the probability of death for any stages.

The level of reduction for MCI and mild AD onward transition probabilities was based on assumptions for the treatment efficacy of DMTs (i.e., by how much treatment reduces the probability of progressing to more severe disease) and the treatment effect coverage rate (i.e., what percentage of people have a reduced probability of progressing).* The assumptions for these two variables for the main analysis are shown in Table 3.

Treatment efficacy of DMTs

Although the analysis was not intended to evaluate any specific therapy, efficacy was assumed to initially be within the range of treatment effects reported by the first approved AD treatments.[32] Therefore, the model assumed a 30% rate reduction in transition probabilities from MCI and mild AD to more advanced stages. This is also a similar magnitude to studies that have assessed the economic impact of hypothetical treatments.[33]

We assumed that the efficacy of DMTs would increase over time: AD has an active pipeline with over 130 drugs being assessed, and so the treatments available to patients are likely to improve.[34] As many treatments are in earlier stages of development, we assumed that the main improvements would be after 2030 and therefore that efficacy would remain 30% until 2030 and thereafter increase to 50% in 2036.

Treatment effect coverage of DMTs

The efficacy of DMTs was weighted by an assumed percentage of people with MCI and mild AD with a reduced probability of progressing. Different products have different approaches to treatment duration (e.g., fixed or continuous duration). Therefore, as the analysis was not intended to be linked to any specific treatments, we assumed a treatment effect coverage rate.

For each year, we inputted a percentage of the total MCI/mild AD population with reduced probability of progressing because they are on treatment or were previously on treatment (meaning that the number of people treated is lower than the number of people with a treatment effect). We assumed that the treatment effect coverage rate of DMTs would increase from 0.1% of MCI/mild AD patients in 2026 to 80% of patients in 2036 and would follow the typical S-shaped pattern of the diffusion of innovation.**[,35,36]

Table 3: Assumptions for treatment efficacy and treatment effect coverage

	Treatment efficacy of DMTs	Treatment effect coverage
2026	30%	0.1%
2027	30%	1.0%
2028	30%	3.4%
2029	30%	9.2%
2030	30%	21.3%
2031	33%	40.1%
2032	37%	58.8%
2033	40%	70.9%
2034	43%	76.7%
2035	47%	79.1%
2036	50%	80.0%

* MCI/mild transition probabilities are adjusted based on the treatment efficacy weighted by treatment effect coverage. Transitions from MCI and mild to more severe disease were converted to relative risks, adjusted based on the rate reduction, and then converted back to the probability.
**Logistic diffusion curve rescaled to 0.1% in 2026 and 80% in 2036.

Methodology for estimating future socioeconomic burden under a scenario of widespread, active, and effective AD policy prioritisation (2/2)

Modelling the cost of diagnosis and treatment

Under the policy change scenario, a package of policies is assumed to be implemented that would enable effective diagnosis and treatment. Firstly, the analysis assumed that it was possible to diagnose and identify MCI and mild AD patients to treat. Widespread biomarker testing would likely be needed for this to be possible at scale. We therefore assumed that all incident MCI patients would receive a blood-based biomarker test at a cost of €100.[37]

Regarding the cost of treatment, several studies have reported on the economic impact of hypothetical and actual AD therapies and sought to estimate the potential savings and cost-effectiveness of these treatments at different prices. Increasingly, these studies assess the impact of the cost of a specific treatment on its economic impact or cost-effectiveness.[38,39] However, our model is not focused on specific treatments. To avoid anchoring the analysis to the cost of any specific therapy, we modelled the cost of treatment using an approach drawn from previous studies which have observed the ratio between the value created by innovation and the associated costs of treatment. Specifically, the cost of treatment was modelled as a fixed share of the value of the monetised societal benefits between the two scenarios.

Determining the best estimate of this fixed share is not straightforward. In the largest study of this question, Hult and Philipson (2023) analyse the cost and value of over 9,000 interventions and find that the median share appropriated is 18% (though that this may be lower depending on QALY value).[40]

Chapman et al. (2021) model an approach to "sharing" the economic surplus by apportioning 50% of cost offsets to the value of the therapy.[41] Camejo et al. (2014) find that the average producer surplus was approximately 25% of total health-related social surplus in the lipid-lowering market between 1990 and 2010 and 37% for COPD between 2001 and 2010.[42]

Considering that 20%–50% can therefore be regarded as an appropriate share, we modelled the cost of treatment as 30% of the monetised societal benefits between the baseline and policy prioritisation scenarios for each year. We considered a share towards the lower end of this range as appropriate, as our model includes caregiver loss (which has not historically been incorporated into these analyses). Notably, this cost apportioned to the manufacturer is not "lost" to society but acts to incentivise investment in further innovation—an additional societal benefit not captured in our model.[43]

In addition to the direct cost of treatment, there will be additional indirect costs needed to deliver treatment to patients and support the readiness of the health system (e.g., infusion procedures, monitoring costs, neurologist appointments). We assumed that indirect costs were equivalent to 15% of the value of the direct costs, based on calculations from ICER in the US.[44] This may be a conservative assumption for future years as new treatments with less burdensome requirements (e.g., subcutaneous administration) become available.

3. Results

Socioeconomic burden of AD per person

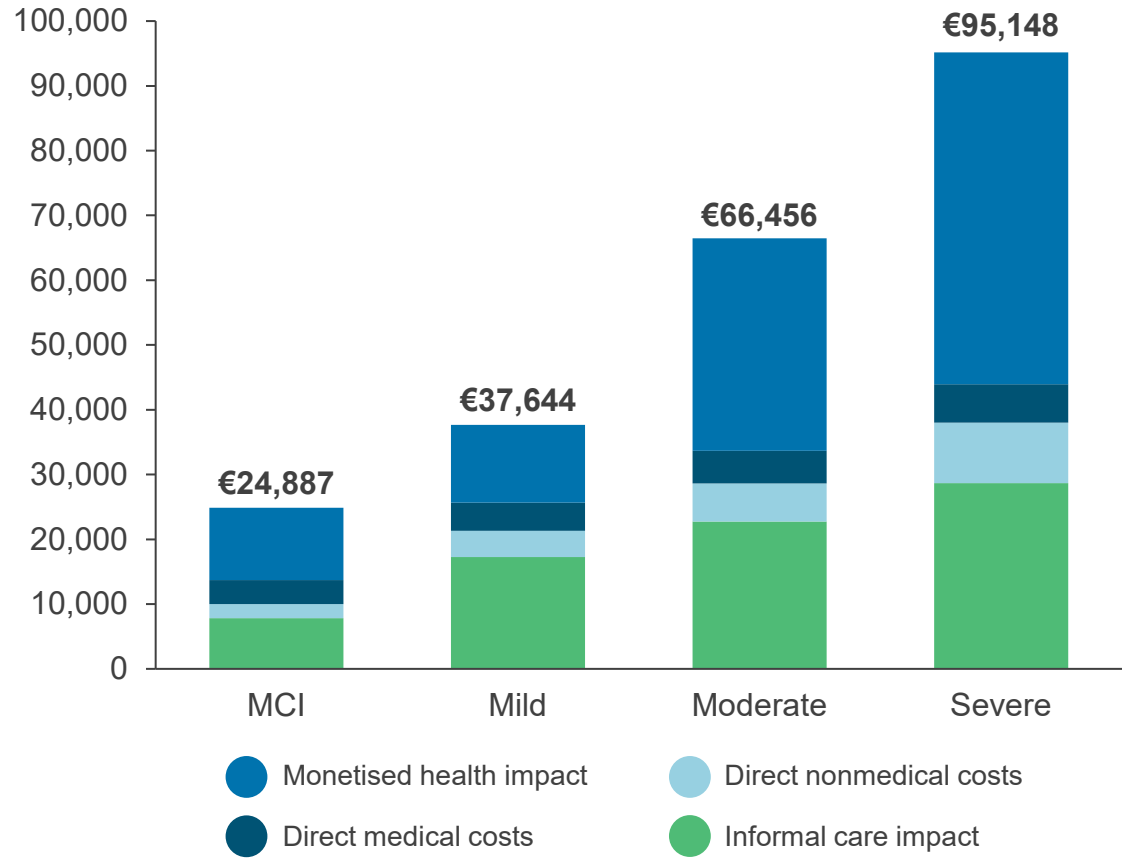
Our analysis shows that the per-person socioeconomic burden of AD increases substantially as patients progress to more advanced stages of the disease. On average, the socioeconomic burden per patient is almost four times higher for severe AD compared to MCI (Figure 11).

The socioeconomic burden of the disease increases between each stage for all four types of economic loss (individual, direct medical, direct nonmedical, and informal care), demonstrating how the burden of disease is exacerbated by patients progressing to more advanced stages. Across all stages, the primary drivers of the socioeconomic burden are the monetised health impact to individuals and informal care impact to caregivers.

Comparing MCI with severe disease, the largest proportional increases in the burden of disease are for the monetised impact to individuals and the direct nonmedical costs, driven by the significantly lower quality of life and need for social and community care services as patients progress. Specifically, from MCI to severe AD,

- the monetised health impact increases 4.6-fold (from €11,200 to €51,200 per person),
- the direct medical costs increase 1.6-fold (from €3,681 to €5,938 per person),
- the direct nonmedical costs increase 4.2-fold (from €2,196 to €9,322 per person), and
- the informal care impact increases 3.7-fold (from €7,809 to €28,687 per person).

Figure 11: Cost per person per stage in 2026 (average for EU4/UK, €)



Total socioeconomic burden of AD today

There is a significant socioeconomic burden due to the individual, direct, and indirect impact of AD, estimated at €551.9 billion in total for EU4/UK (Figure 12). The share for each stage of the disease of the total burden is 46% for MCI (€256 billion), 18% for mild AD (€97 billion), 19% for moderate AD (€102 billion), and 18% for severe AD (€97 billion).

The total socioeconomic burden per country ranges from €71 billion in Spain to €155 billion in Germany. The primary driver of differences in the estimated socioeconomic burden between countries is differences in the total number of people with AD, which range from 2.1 million in Spain to 4.0 million in Germany for 2026.

There is a notable discrepancy between the share of the total socioeconomic burden and the share of the total population for each stage of the disease (Figure 13). While two-thirds of patients are in the MCI stage, this represents 46% of the total socioeconomic burden due to lower per-person costs in earlier stages of the disease. Conversely, although only 7% of patients have severe AD, this comprises nearly 20% of the total socioeconomic burden. The implication is that while MCI has the highest total burden, this is a function of the large number of people in this stage; shifting any of these patients to later stages would increase the total socioeconomic burden.

Figure 12: Estimated socioeconomic burden of AD in EU4/UK by stage, 2026 (€ bn)

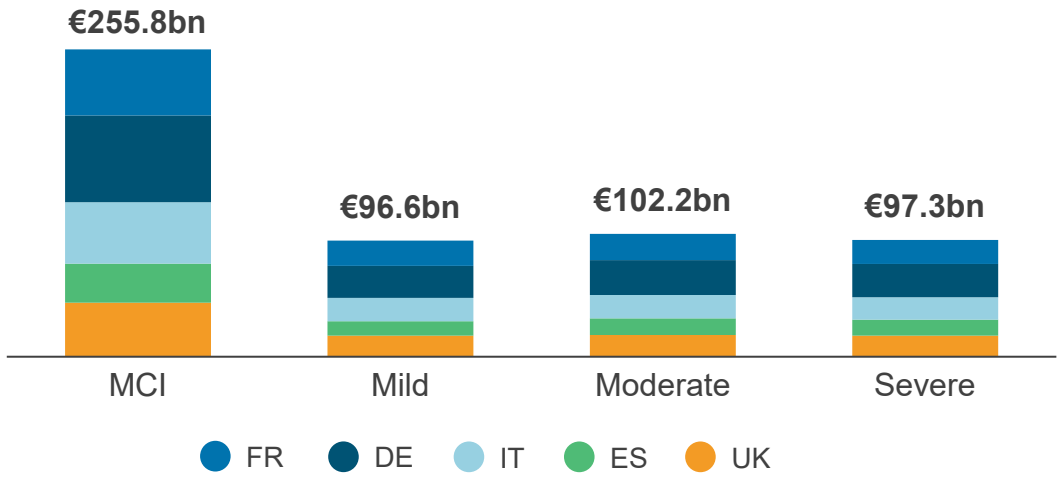
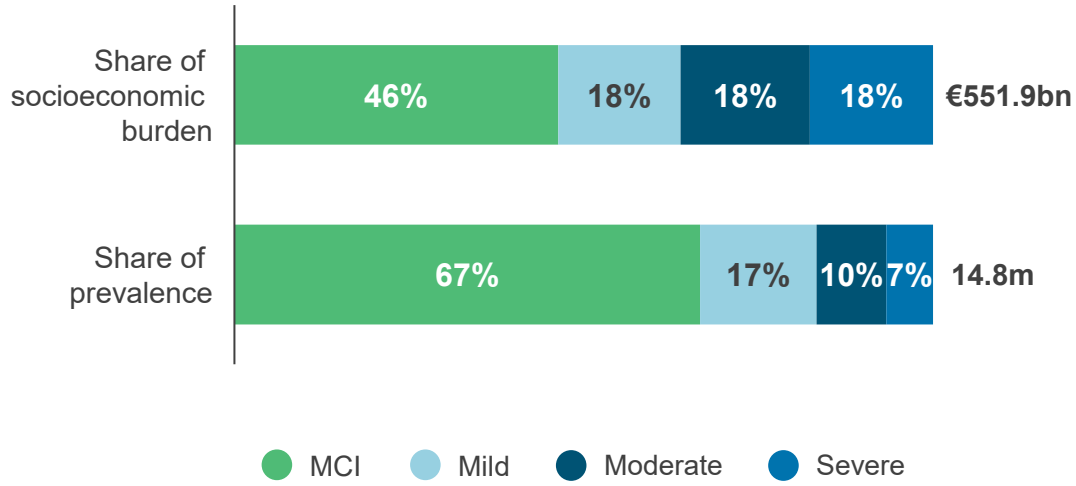


Figure 13: Share of total socioeconomic burden and of total prevalence by stage, 2026

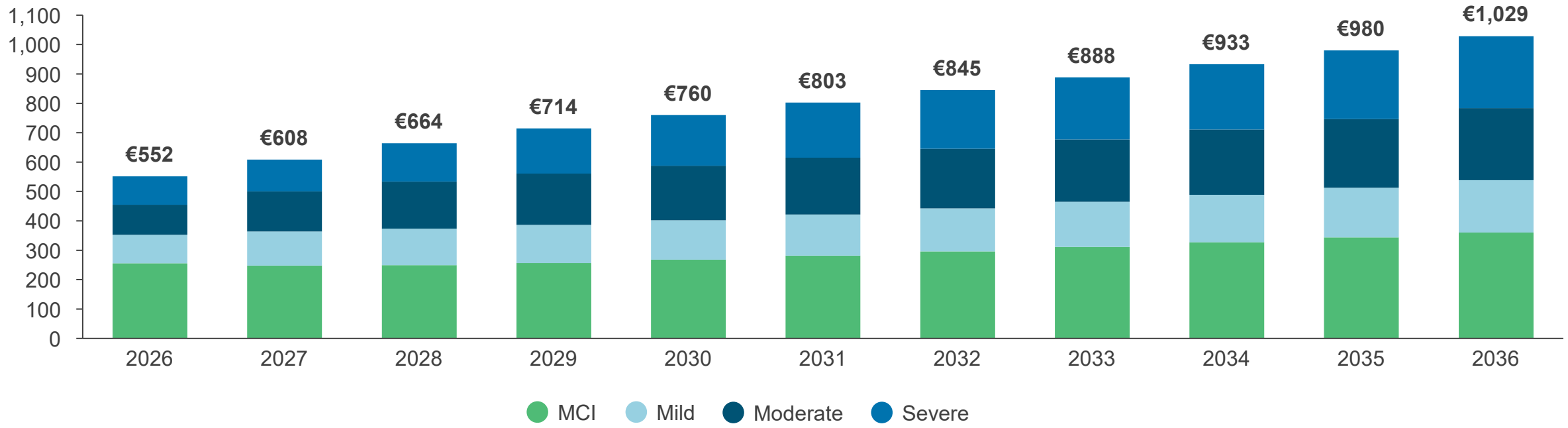


Future socioeconomic burden for 2026–2036 without policy action

The socioeconomic burden of AD in EU4/UK is expected to increase significantly from 2026 to 2036. This is driven by continued growth in prevalence across disease stages: based on Alzheimer Europe projections, the total number of EU4/UK AD patients is expected to increase from 14.8 to 18.3 million from 2026 to 2036.

Assuming stable disease progression probabilities in line with Potashman et al. (2021), this growth in prevalence translates directly into a substantial escalation in the socioeconomic burden across all stages of the disease. As shown in Figure 14, the total annual socioeconomic burden is projected to rise from €552 billion in 2026 to over €1 trillion by 2036. These projections suggest that, in the absence of policy action that can delay patients' progression to advanced disease, the socioeconomic burden of AD could increase by nearly €500 billion per year over the next decade, with the annual economic impact in 2036 around 1.8 times that of 2026.

Figure 14: Projected EU4/UK total costs due to AD per year without policy change (€ bn)



CRA Charles River Associates

Impact of AD policy prioritisation on the number of people per stage

The impact of AD policy prioritisation would be to modify how the total population with AD evolves across disease stages over time. A policy environment that enables the treatment of AD reduces the risk of progression to more advanced stages. As a result, AD policy prioritisation shifts the distribution of patients towards earlier, less severe stages of disease over time.

As shown in Figure 15, this results in an increase in the share of patients in the MCI stage, alongside a corresponding reduction in the proportion of patients with severe AD. Under a policy prioritisation scenario, the proportion of people with MCI could be 65% in 2036 (compared to 57% without policy prioritisation).

The proportion of patients with severe AD would be reduced, falling to around 8%, rather than stabilising at 10% without intervention.

These shifts in disease distribution translate into meaningful changes in absolute patient numbers. As illustrated in Figure 16, by 2036, policy action could result in over 430,000 fewer people living with severe AD across EU4/UK. At the same time, a substantial number of individuals remain in earlier stages of disease – 1.4 million patients would be retained in MCI rather than progressing to more advanced stages.

Figure 15: MCI and severe AD share of total AD over time (%)

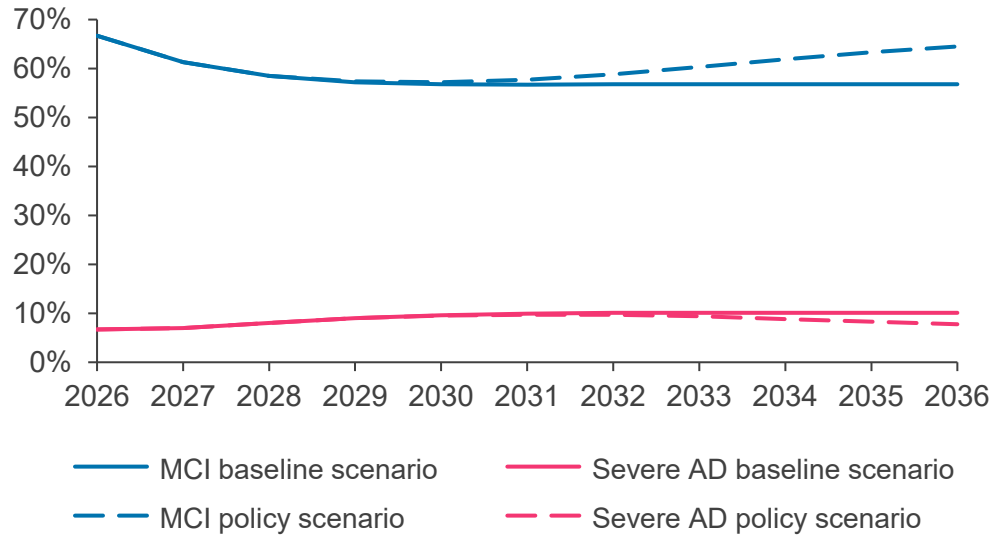
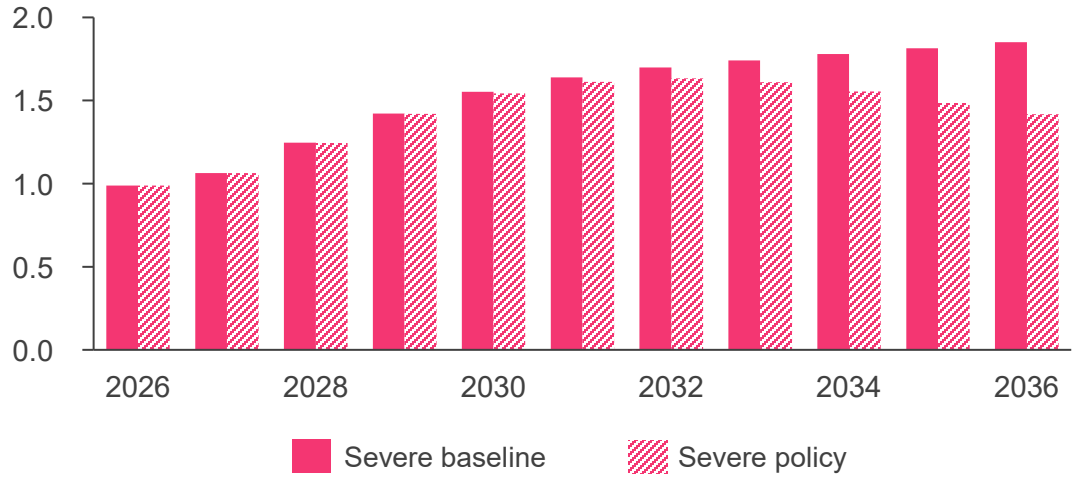


Figure 16: Total number of severe AD patients in EU4/UK (millions)



CRA Charles River Associates

Impact of AD policy prioritisation on the socioeconomic burden of the disease (EU4/UK)

AD policy prioritisation generates a substantial and accelerating socioeconomic benefit over time by slowing disease progression and reducing the number of patients in the costliest stages of disease. While the socioeconomic benefits are initially modest, over time the total socioeconomic burden of AD increases faster under the baseline scenario of no policy change compared to under a scenario of widespread, active, and sustained AD policy prioritisation. As more patients are treated with DMTs, the annual socioeconomic benefit to EU4/UK reaches €60 billion in 2036.

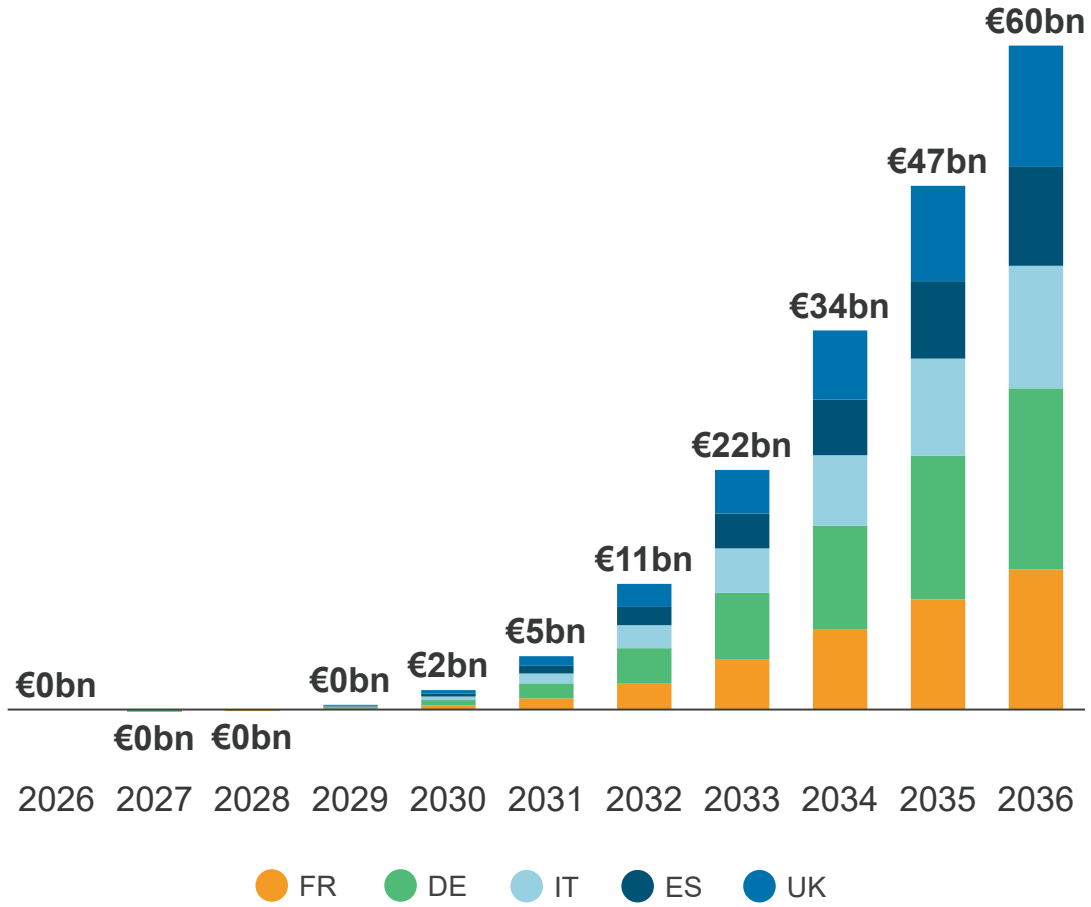
As a result, cumulative savings build significantly over time, reaching €182 billion in total for 2026–2036. This reflects the increasing number of patients benefiting from treatment and the compounding effect of avoided progression to moderate and severe AD – where the per-person socioeconomic burden is substantially higher.

The analysis also shows that sustained policy prioritisation of AD delivers an ROI from the associated direct and indirect costs of treatment, with an estimated €1.82 in societal savings for every €1 invested.*

€182 bn
Cumulative socioeconomic benefit 2026–2036

€1.82
ROI for every €1 invested

Figure 17: Total annual socioeconomic benefit for EU4/UK under the policy prioritisation scenario



* With future costs discounted at 3% annually

Charles River Associates

Assessing the case for action today and the cost of inaction

It is also possible to use the model to test the impact of delayed prioritisation of AD. We can compare the impact of widespread, active, and effective policy prioritisation with a scenario delaying action or only providing a more limited proportion of patients with access to diagnosis and treatment. Specifically, to do this, we analysed the impact on the total socioeconomic benefit of two alternative scenarios:

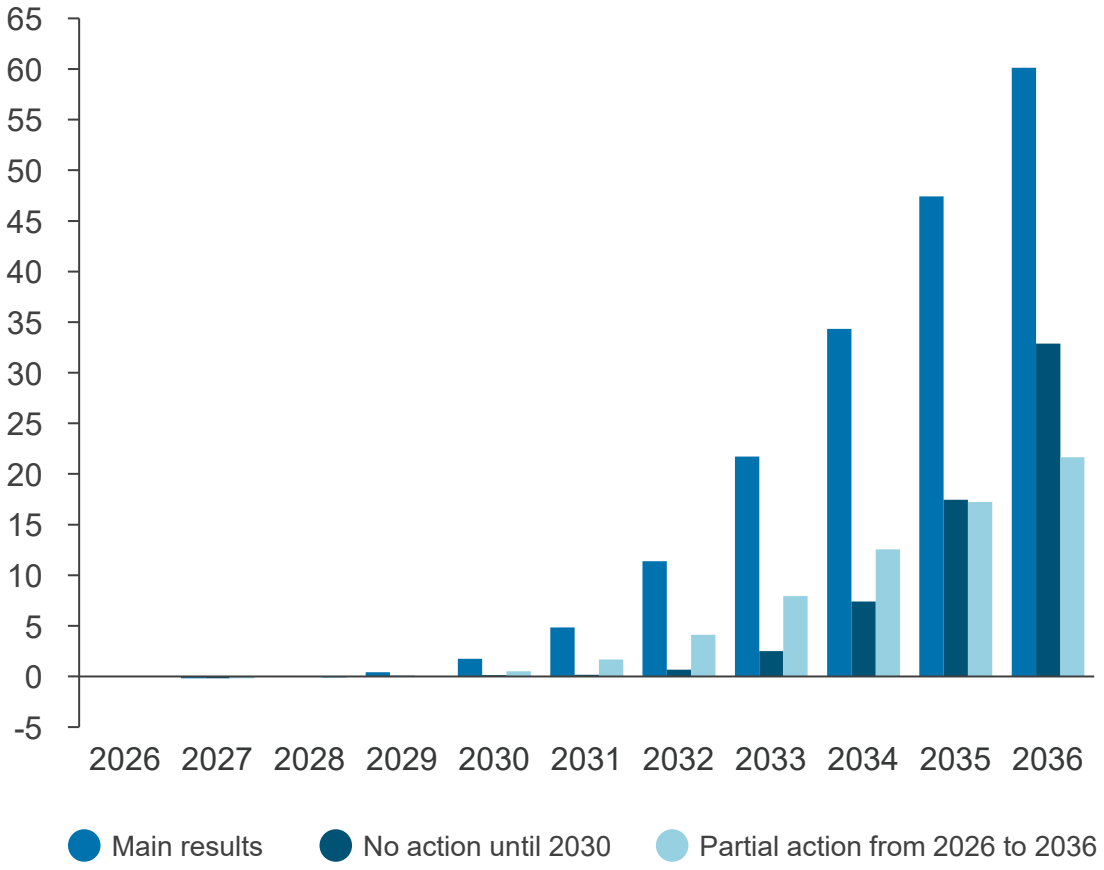
- **No action until 2030, with full prioritisation for 2030–2036:** Only a small share of patients (max. 1%) would benefit from treatment until 2030, and thereafter there would be an increase in line with what was expected in the first years of the main results.
- **Partial action from 2026 to 2036:** Some policy action takes place in 2026, but this is not comprehensive or sustained so that total treatment coverage increases to only 30% in 2036 (rather than 80%).

The impact of these alternative scenarios is shown in Figure 18.

- Under the **main results of policy prioritisation from 2026,** total annual savings reach €60 billion and cumulative savings for 2026–2036 reach €182 billion due to a steady accumulation of patients benefiting from the effects of diagnosis and treatment.
- If **no action is taken until 2030,** total annual savings reach only €33 billion, and cumulative savings for 2026–2036 reach only €61 billion.
- If only **partial action is taken from 2026 to 2036,** total annual savings reach only €22 billion and cumulative savings for 2026–2036 reach only €65 billion.

This analysis shows the substantial socioeconomic benefit foregone if policy action is not taken today or is not sufficiently prioritised.

Figure 18: Results for cost of inaction analysis - Annual socioeconomic benefit for EU4/UK (€ bn)



CRA Charles River Associates

Country-level findings on the impact of AD policy prioritisation – Germany case study

In Germany, the potential socioeconomic benefit from AD policy prioritisation could be €50 billion over 10 years

In Germany the estimated number of people with AD in 2026 is 4.0 million, projected to increase to 4.7 million in 2036. As a result, the total socioeconomic burden of the disease would rise from €155 billion in 2026 to €280 billion in 2036 without policy action.

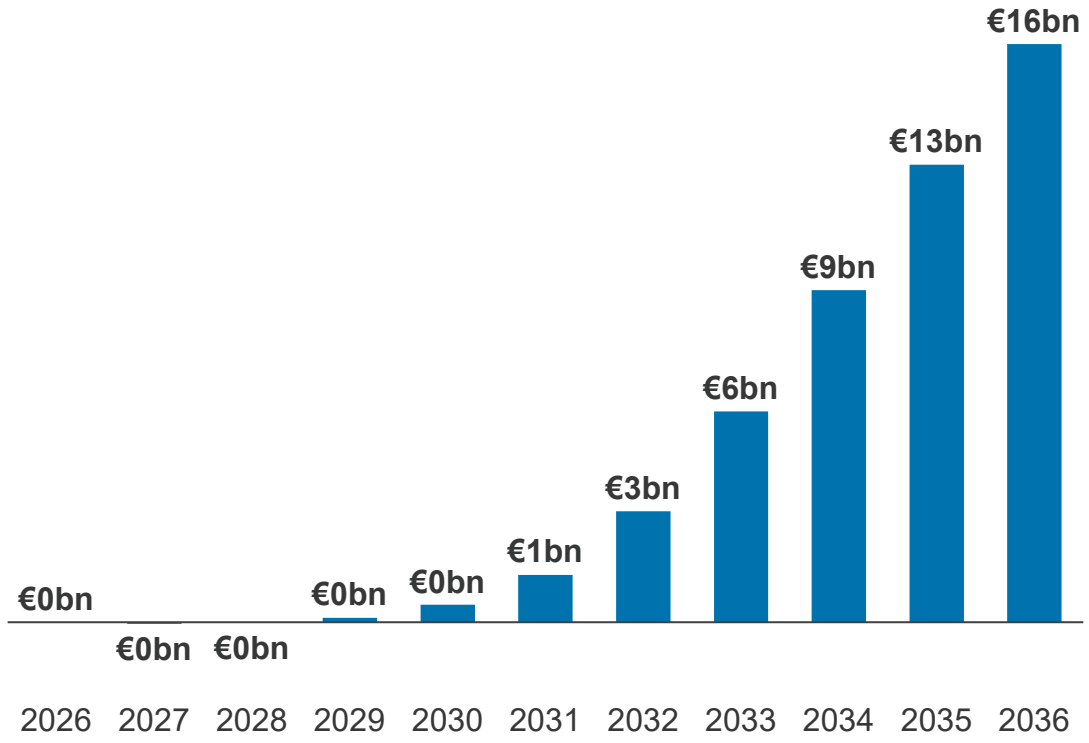
Under the scenario of widespread, active, and effective policy prioritisation, there could be 322,000 fewer people with severe and moderate AD and 359,000 more people with MCI in 2036 compared to if no action is taken.

As a result, over time there is a substantial and accelerating socioeconomic benefit generated: as more patients are treated with DMTs, annual savings reach €16 billion by 2036, and cumulatively the total savings reach €50 billion. The ROI to generate this saving is €1.31 for every €1 invested.

€50 bn
Cumulative socioeconomic benefit 2026–2036

€1.83
ROI for every €1 invested

Figure 19: Total annual socioeconomic benefit for Germany under policy prioritisation scenario, € bn



CRA Charles River Associates

4. Policy implications

Implications of the analysis for AD policy prioritisation

Socioeconomic benefit from policy prioritisation

Access to DMTs with enabling policies could generate a socioeconomic benefit of €182 billion over the next 10 years – roughly equivalent to one full year of health care expenditure in Italy. Sustained implementation of policy programmes over time will maximise the potential socioeconomic benefit.

Reduced burden of advanced stages of AD

Socioeconomic benefits are driven by fewer patients progressing to advanced stages. Keeping patients in earlier stages could lead to 1.3 million fewer people with moderate and severe AD in 2036 than if no action is taken, driving major benefits for caregivers, the social care system, and the wider economy by boosting the 'silver economy'.

Coordinated action maximises ROI

A return of approximately €1.82 is generated for every €1 invested. However, this assumes that a package of policies is implemented, showing the need for coordinated action with clear monitoring to realise the full benefits.

Furthermore, while we focused on actions related to diagnosis and treatment, comprehensive prioritisation would cover other domains such as prevention, data infrastructure, and caregiver support.[1]

Cost of delayed or incomplete action

The magnitude of the socioeconomic benefit is highly dependent on the timing and extent of policy prioritisation. The cost of taking partial action could be over half of the total potential socioeconomic benefits, showing the need for comprehensive prioritisation today.

What does this mean for AD policy action?

The actions needed from European policymakers to address the societal burden of AD have been set out in numerous reports, including the previous report which this analysis builds on.[1,45,46] Nevertheless, the analysis has pointed to specific areas where more urgent action is needed to deliver the potential ROI.

Accelerate diagnosing patients at scale

The modelled socioeconomic benefits depend critically on patients being identified and treated while in the MCI or mild AD stages. For this to happen in practice, a significant expansion of diagnosis leveraging novel blood-based biomarker testing will be needed. Integration of blood-based biomarker testing has the potential to significantly improve triaging and confirmatory diagnostic testing in order to enable timely initiation of treatment before the disease progresses.

Support expansion of infrastructure and capacity over time

Although we did not model the specific capacity constraints and investments needed as a result of AD policy prioritisation, many studies have shown that health systems have insufficient diagnostic and treatment capacity, such as AD specialists, memory assessment services, PET scanning, CSF analysis, and MRI scanning. While substantial, these investments have been found to be manageable relative to the socioeconomic benefits estimated here.[47,48]

Our analysis has reaffirmed the need for system investment to ensure readiness for treating AD at scale.

Establish necessary access and reimbursement frameworks

The analysis assumed that widespread, active, and sustained AD policy prioritisation would enable a steady accumulation of patients to benefit from the development of different treatments for AD. For this to be possible in practice, reimbursement frameworks that capture all relevant benefits to support equitable access, as well as funding approaches that can manage the immediate budgetary impact, will be needed.

List of references

List of references

1. Charles River Associates (2025). *Prioritising Alzheimer's disease policy in Europe: Insights from oncology.* https://www.crai.com/insights-events/publications/prioritising-alzheimers-disease-policy-in-europe-insights-from-oncology/.
2. Landeiro, F., Mughal, S., Walsh, K., Nye, E., Morton, J., Williams, H., ... & ROADMAP consortium. (2020). Health-related quality of life in people with predementia Alzheimer's disease, mild cognitive impairment or dementia measured with preference-based instruments: A systematic literature review. *Alzheimer's Research & Therapy*, 12(1), 154.
3. Wimo, A., Reed, C. C., Dodel, R., Belger, M., Jones, R. W., Happich, M., ... & Haro, J. M. (2013). The GERAS study: A prospective observational study of costs and resource use in community dwellers with Alzheimer's disease in three European countries—Study design and baseline findings. *Journal of Alzheimer's Disease*, 36(2), 385–399.
4. Bruno, G., Mancini, M., Bruti, G., Dell'Agnello, G., & Reed, C. (2018). Costs and resource use associated with Alzheimer's disease in Italy: Results from an observational study. *Journal of Prevention of Alzheimer's Disease*, 5(1), 55–64.
5. Olazarán, J., Agüera-Ortiz, L., Argimón, J. M., Reed, C., Andrade, P., & Dilla, T. (2017). Costs and quality of life in community-dwelling patients with Alzheimer's disease in Spain: Results from the GERAS II observational study. *International Psychogeriatrics*, 29(12), 2081–2093.
6. Jönsson, L., Tate, A., Frisell, O., & Wimo, A. (2023). The costs of dementia in Europe: An updated review and meta-analysis. *PharmacoEconomics*, 41(1), 59–75.
7. Alzheimer Europe (2026). *The Prevalence of Dementia in Europe 2025.* https://www.alzheimer-europe.org/news/new-alzheimer-europe-report-projects-64-increase-dementia-across-europe-2050.
8. Karantzoulis, S., & Galvin, J. E. (2011). Distinguishing Alzheimer's disease from other major forms of dementia. *Expert Review of Neurotherapeutics*, 11(11), 1579–1591.
9. Office for National Statistics (2023). Deaths registered in England and Wales: 2022. https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregistrationsummarytables/2022.
10. Dementia Researcher (2021). New WHO dementia statistics & status report. https://www.dementiaresearcher.nihr.ac.uk/who-dementia-statistics/.
11. World Health Organization (2021). World failing to address dementia challenge. https://www.who.int/news/item/02-09-2021-world-failing-to-address-dementia-challenge.
12. Alzheimer Europe (2023). *European Dementia Monitor 2023: Comparing and benchmarking national dementia strategies and policies.* https://www.alzheimer-europe.org/resources/publications/european-dementia-monitor-comparing-and-benchmarking-national-dementia.
13. Sugino, H., Watanabe, A., Amada, N., Yamamoto, M., Ohgi, Y., Kostic, D., & Sanchez, R. (2015). Global trends in Alzheimer disease clinical development: Increasing the probability of success. *Clinical Therapeutics*, 37(8), 1632–1642.
14. Alzheimer Europe (n.d.). National Dementia Strategies—France. https://www.alzheimer-europe.org/policy/national-dementia-strategies/France.
15. Alzheimer Europe (2025). *Dementia in Europe Yearbook 2025: Transport and access to cultural life, recreation, leisure and sport.* https://www.alzheimer-europe.org/resources/publications/dementia-europe-yearbook-2025-transport-and-access-cultural-life-recreation.
16. Care Network Germany (2025). Fortschritt bei der Nationalen Demenzstrategie. https://pflegenetzwerk-deutschland.de/fortschritt-bei-der-nationalen-demenzstrategie.
17. Nationale Demenzstrategie (n.d.). Das Monitoring zur Umsetzung der Strategie. https://www.nationale-demenzstrategie.de/umsetzung/monitoring-1.
18. Ministero della Salute (2026). Fondo per l'Alzheimer e le demenze. https://www.salute.gov.it/new/it/tema/demenze/fondo-lalzheimer-e-le-demenze/.
19. Le Scienze (2024). Ecco dove esiste la presa in carico territoriale delle demenze e dove. https://www.lescienze.it/news/2024/06/18/news/presa_carico_demenze-16190422.
20. Ministero della Salute (2024). Piano nazionale demenze. https://www.salute.gov.it/new/it/tema/demenze/piano-nazionale-demenze/.
21. Alzheimer Europe (2024). *Dementia in Europe Yearbook 2024: Independent Living and Housing.* https://www.alzheimer-europe.org/resources/publications/dementia-europe-yearbook-2024-independent-living-and-housing.

CRA Charles River Associates

List of references

22. El Diario (2023). El fracaso del plan integral de Alzheimer: “Ha sido un tiempo perdido.” https://www.eldiario.es/sociedad/fracaso-plan-integral-alzheimer-sido-tiempo-perdido_1_10527246.html.
23. NHS England (n.d.). Dementia. https://www.england.nhs.uk/mental-health/dementia.
24. Alzheimer Europe (2025) UK Government publishes 10 year Health Plan for England including a blueprint for improving dementia care. https://www.alzheimer-europe.org/news/uk-government-publishes-10-year-health-plan-england-including-blueprint-improving-dementia
25. Alzheimer’s Society (2023). Awaiting a 10-year dementia plan for England. https://www.alzheimers.org.uk/get-support/publications-and-factsheets/dementia-together/awaiting-10-year-dementia-plan-England.
26. Adjusted from £70,000. UK Government (2026). *The Green Book.* https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2026.
27. Rajan, K. B., Weuve, J., Barnes, L. L., McAninch, E. A., Wilson, R. S., & Evans, D. A. (2021). Population estimate of people with clinical AD and mild cognitive impairment in the United States (2020–2060). *Alzheimer’s & Dementia* 17: 1966.
28. Gustavsson, A., Norton, N., Fast, T., Frölich, L., Georges, J., Holzapfel, D., ... & van der Flier, W. M. (2023). Global estimates on the number of persons across the Alzheimer's disease continuum. *Alzheimer's & Dementia*, 19(2), 658–670.
29. Yuan, J., Maserejian, N., Liu, Y., Devine, S., Gillis, C., Massaro, J., & Au, R. (2021). Severity distribution of Alzheimer’s disease dementia and mild cognitive impairment in the Framingham Heart Study. *Journal of Alzheimer’s Disease*, 79(2), 807–817.
30. Potashman, M., Buessing, M., Levitchi Benea, M., Cummings, J., Borson, S., Pemberton-Ross, P., & Epstein, A. J. (2021). Estimating progression rates across the spectrum of Alzheimer’s disease for amyloid-positive individuals using national Alzheimer’s coordinating center data. *Neurology and Therapy*, *10*(2), 941–953.
31. Alzheimer’s Association (n.d.). Medications for memory, cognition and dementia-related behaviors. https://www.alz.org/alzheimers-dementia/treatments/medications-for-memory.
32. Chandler, J., Done, N., Desai, U., Georgieva, M., Gomez-Lievano, A., Ye, W., ... & Alzheimer’s Disease Neuroimaging Initiative. (2024). Potential implications of slowing disease progression in amyloid-positive early Alzheimer’s disease: estimates from real-world data. *Journal of Prevention of Alzheimer's Disease*, 11(2), 310–319.
33. Anderson, R., Knapp, M., Wittenberg, R., Handels, R., & Schott, J. M. (2018). Economic modelling of disease-modifying therapies in Alzheimer’s disease. London School of Economics Personal Social Services Research Unit.
34. Cummings, J. L., Zhou, Y., Lee, G., Zhong, K., Fonseca, J., Leisgang-Osse, A. M., & Cheng, F. (2025). Alzheimer's disease drug development pipeline: 2025. *Alzheimer's & Dementia: Translational Research & Clinical Interventions,* 11(2), e70098.
35. Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432–448). Routledge.
36. Cain, M., & Mittman, R. (2002). *Diffusion of innovation in health care.* http://resource.nlm.nih.gov/101155468.
37. European Brain Council & European Federation of Pharmaceutical Industries and Associations (2023). *Rethinking Alzheimer’s disease: Detection and diagnosis.* https://www.braincouncil.eu/wp-content/uploads/2023/04/RETHINK-AlzheimerDisease-Report_DEF3_HD_rvb_03042023.pdf.
38. Jönsson, L., Wimo, A., Handels, R., Johansson, G., Boada, M., Engelborghs, S., ... & Winblad, B. (2023). The affordability of lecanemab, an amyloid-targeting therapy for Alzheimer's disease: An EADC-EC viewpoint. *The Lancet Regional Health–Europe*, 29.
39. Ross, E. L., Weinberg, M. S., & Arnold, S. E. (2022). Cost-effectiveness of aducanumab and donanemab for early Alzheimer disease in the US. *JAMA Neurology*, 79(5), 478–487.
40. Hult, K. J., & Philipson, T. J. (2023). The value of medical innovation versus industry rewards. *Value in Health*, 26(3), 320–327.
41. Chapman, R. H., Kumar, V. M., Whittington, M. D., & Pearson, S. D. (2021). Does cost-effectiveness analysis overvalue potential cures? Exploring alternative methods for applying a “shared savings” approach to cost offsets. *Value in Health*, 24(6), 839–845.
42. Camejo, R. R., McGrath, C., Miraldo, M., & Rutten, F. (2014). Distribution of health-related social surplus in pharmaceuticals: An estimation of consumer and producer surplus in the management of high blood lipids and COPD. *European Journal of Health Economics*, 15(4), 439–445.
43. Frech III, H. E., Pauly, M. V., Comanor, W. S., & Martinez, J. R. (2026). Pharmaceutical pricing and R&D as a global public good. *Health Economics*, 35(8): 1158–1174.

CRA Charles River Associates

List of references

44. Institute for Clinical and Economic Review (2023). *Lecanemab for early Alzheimer's disease: Final evidence report*. https://icer.org/wp-content/uploads/2023/04/ICER_Alzheimers-Disease_Final-Report_For-Publication_04172023.pdf.
45. European Brain Council & European Federation of Pharmaceutical Industries and Associations (2023). *Rethinking Alzheimer's disease: Detection and diagnosis.* https://www.braincouncil.eu/wp-content/uploads/2023/04/RETHINK-AlzheimerDisease-Report_DEF3_HD_rvb_03042023.pdf.
46. Alzheimer Europe (2024). Helsinki Manifesto. https://www.alzheimer-europe.org/policy/campaign/Alzheimer-europe-election-campaign-2024/helsinki-manifesto.
47. Mattke, S., Shi, Z., Hanson, M., Mitchell, S., Lynch, C., MacLean Kalonji, K., & Lanman, L. (2024). Estimated investment need to increase England's capacity to diagnose eligibility for an Alzheimer's treatment to G7 average capacity levels. *Journal of Prevention of Alzheimer's Disease*, 11(4), 1022–1029.
48. Mattke, S., Gustavsson, A., Jacobs, L., Kern, S., Palmqvist, S., Eriksdotter, M., ... & Jönsson, L. (2024). Estimates of current capacity for diagnosing Alzheimer's disease in Sweden and the need to expand specialist numbers. *Journal of Prevention of Alzheimer's Disease*, 11(1), 155–161.
49. Martins, R., Urbich, M., Brännvall, K., Gianinazzi, M., Ching, J. E., Khoury, C. P., & El-Hayek, Y. H. (2022). Modelling the Pan-European economic burden of Alzheimer's disease. *Journal of Aging Research & Lifestyle*, 11, 38–46.
50. Boustani, M., Doty, E. G., Garrison Jr., L. P., Smolen, L. J., Klein, T. M., Murphy, D. R., ... & Johnston, J. A. (2024). Estimating the economically justifiable price of limited-duration treatment with donanemab for early symptomatic Alzheimer's disease in the United States. *Neurology and Therapy*, 13(6), 1641–1659.
51. GDP per capita data were taken from World Bank (2026). DataBank. https://databank.worldbank.org/home.aspx.
52. Herring, W. L., Romano, C. D., Houghton, K., Dardis, G., McLeod, L., & Paulsen, R. (2025). P47 quality of life and utility values across the Alzheimer's disease spectrum: Results from the What Matters Most Survey. *Value in Health*, 28(12), S36.

CRA Charles River Associates

List of abbreviations

List of abbreviations

AD	Alzheimer's disease
COPD	Chronic obstructive pulmonary disease
CSF	Cerebrospinal fluid
DMT	Disease-modifying therapy
EU4/UK	France, Germany, Italy, Spain, United Kingdom
GRACE	Generalized Risk-Adjusted Cost-Effectiveness
HRQoL	Health-related quality of life
ICER	Institute for Clinical and Economic Review
MCI	Mild cognitive impairment
MRI	Magnetic resonance imaging
NICE	National Institute for Health and Care Excellence
PET	Positron emission tomography
ROI	Return on investment
QALY	Quality-adjusted life year

Appendix

CRA Charles River Associates

Additional detail on the analysis inputs

As set out in the Methodology chapter, the per-person per stage socioeconomic burden in each country was based on previous studies on the societal costs of AD. All inputs were inflated to 2026 prices based on price indices for each country over time.

Monetised health impact to individuals

Individual costs are valued based on HRQoL disutilities reported in Landeiro et al. (2020).[2] Utilities per stage are 0.86 for MCI, 0.85 for mild AD, 0.59 for moderate AD, and 0.36 for severe AD as per HRQoL measured using the EQ-5D. Annual value of disutilities are calculated based on a QALY value of €80k as per the HM Treasury Green Book.[26]

Direct medical costs

Direct medical costs are extracted from the GERAS studies on the total costs of AD.[3,4,5] We used estimated patient health care costs per month for mild, moderate, and moderate severe/severe (which we used for severe AD). Patient health care costs include costs of patients' medications (AD medications, antipsychotic/hypnotic medication, medications for comorbidities), nights in hospital, emergency room visits, and outpatient visits.

As the GERAS studies do not include MCI patients, we assume a 14.75% reduction in direct medical costs relative to mild AD, in line with Martins et al. (2022).[49]

Direct nonmedical costs

Direct nonmedical costs are extracted from the GERAS studies on the total costs of AD.[3,4,5] We used estimated patient social care costs per month for mild, moderate, and moderate severe/severe (which we used for severe AD). Patient social care costs include costs of patient living accommodation, community care services, structural adaptations to the patient's living accommodation, consumables, and financial support received.

As the GERAS studies do not include MCI patients, we assume a 45.98% reduction in direct nonmedical costs relative to mild AD, in line with Martins et al. (2022).[49]

Informal care impact

Informal care costs include caregiver productivity and leisure time losses and are taken from Jönsson et al. (2023).[6] We assumed that the reported annual cost of caregiver time and caregiver work loss in Western Europe is the total cost of informal care for EU4/UK. As such, we used the same annual costs for mild, moderate, and severe AD reported by Jönsson et al. for each country.

As Jönsson et al. (2023) do not include MCI patients, we assume a 54.76% reduction in informal care costs relative to mild AD, in line with Martins et al. (2022).[49]

Analysis of alternative approaches to valuing the morbidity impact of AD

Assumptions are needed for each of the four types of cost. These were based on previous studies on the cost of the disease. There are different approaches that could be used to determine the value of the morbidity impact to individuals

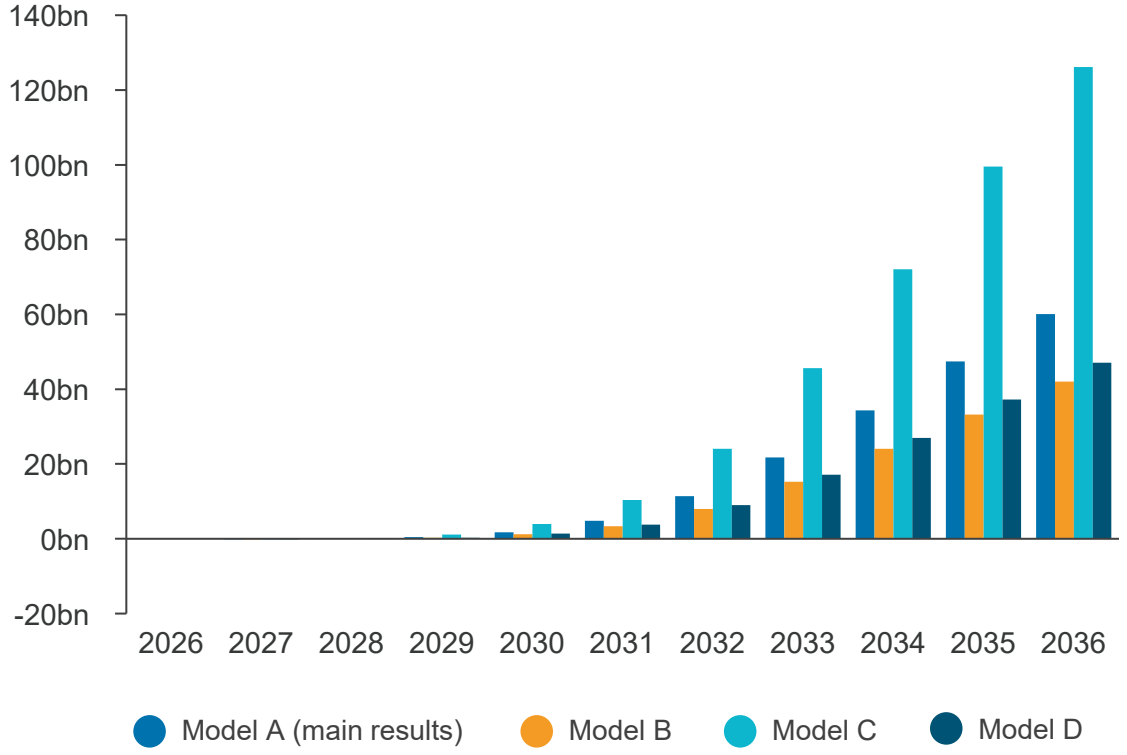
In our main results, individual costs are valued based on HRQoL disutilities reported in Landeiro et al. (2020). Utilities per stage are 0.86 for MCI, 0.85 for mild AD, 0.59 for moderate AD, and 0.36 for severe AD as per HRQoL measured using the EQ-5D. Annual value of disutilities per stage are calculated based on a QALY value of €80,000, as per the HM Treasury Green Book. These are shown in Figure 19 as Model A.

We assessed the impact of three alternative approaches for valuing the morbidity impact to individuals:

- **Model B:** Alternative QALY value based on NICE threshold of £30,000 (~€34,500), with Landeiro et al. (2020) utilities.
- **Model C:** The Generalized Risk-Adjusted Cost-Effectiveness (GRACE) approach adopts higher cost-effectiveness thresholds for more severe diseases and suggests a higher threshold for more advanced AD compared to other diseases. We therefore apply a willingness to pay of five times the average GDP per capita in EU4/UK for moderate and severe AD (MCI and mild AD are not changed from the base case).[50,51]
- **Model D:** Alternative disutility values per stage are taken from Herring et al. (2025), of 0.31 for MCI, 0.33 for mild AD, 0.47 for moderate AD, and 0.60 for severe AD. We assume a QALY value of €80,000.[52]

Figure 19 presents the outputs of these analyses, showing there are savings over time for all four scenarios, with the greater willingness to pay used for Model C driving substantially greater societal benefits.

Figure 19: Alternative approaches to valuing the morbidity impact of AD – Total annual socioeconomic benefit for EU4/UK, € bn



CRA Charles River Associates

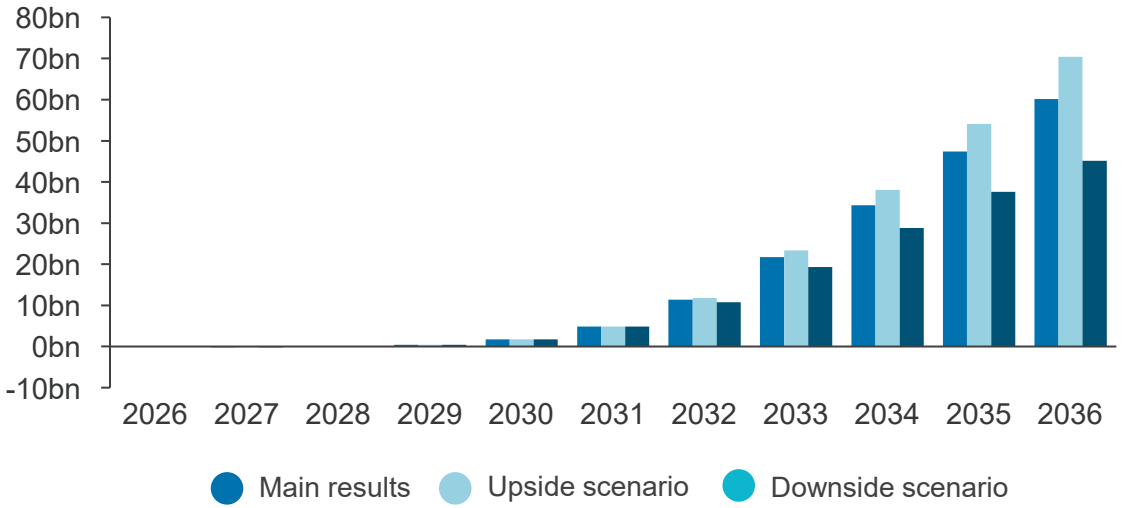
Analysis of alternative approaches to the efficacy of DMTs and cost of treatment

There are two additional drivers of costs that could affect policy prioritisation: (1) treatment efficacy of DMTs and (2) cost of treatment

Treatment efficacy of DMTs

The main results assumed a 30% rate reduction in transition probabilities from MCI and mild AD for 2026–2030, increasing linearly to 50% in 2036. Depending on how the pipeline evolves, changes to efficacy could be greater or lesser than this. We therefore modelled an upside scenario in which efficacy increases to 60% from 2030 to 2036 and a downside scenario in which efficacy increases to only 35% in 2036 (Figure 20).

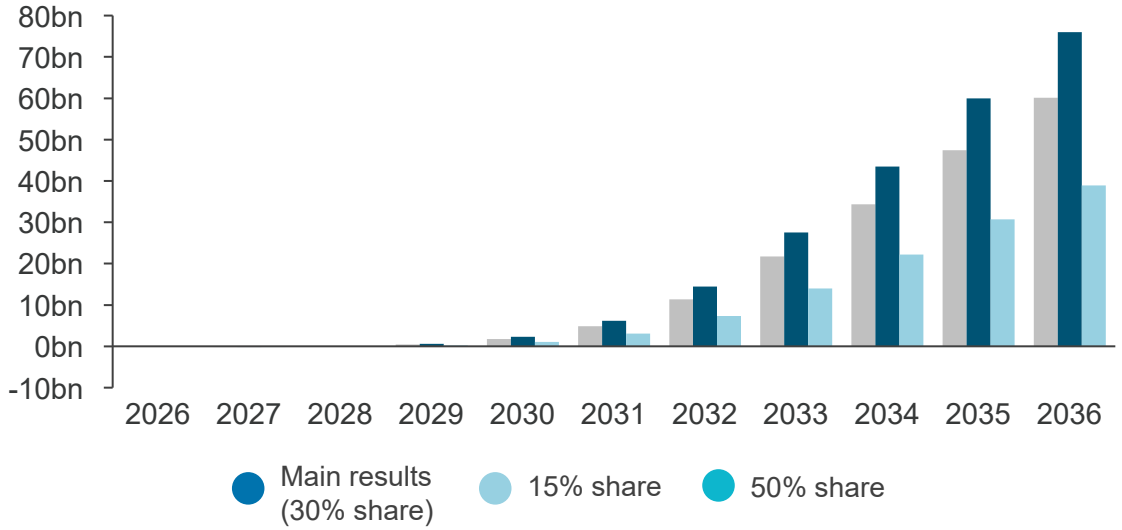
Figure 20: Alternative approaches to the treatment efficacy of DMTs – Total annual socioeconomic benefit for EU4/UK, € bn



Modelling the cost of treatment

As recognised in the Methodology chapter, determining the appropriate share of the societal benefits to model as the cost of treatment is not straightforward. In the main results, we used a 30% share, as towards the lower end of the 20%–50% often reported. As alternative scenarios, we replicated the analysis with 15% and 50% shares to assess the sensitivity of the results to this assumption (Figure 21).

Figure 21: Alternative approaches to modelling the cost of treatment – Total annual socioeconomic benefit for EU4/UK, € bn



CRA Charles River Associates

Tim Wilsdon
Vice President

+44 20 7664 3707
twilsdon@crai.com

Hugh Nicholl
Senior Associate

+44 20 7959 1478
hnicholl@crai.com

CRA Charles River Associates