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Letter to the Editor

Health-economic challenges for new Alzheimer's disease treatments

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1. Introduction

After decades of drug development setbacks, the Alzheimer's disease (AD) research field is now experiencing major innovation across diagnostics and therapies. The first amyloid-targeting drugs for early-stage AD are available on the market in multiple countries. Yet these scientific breakthroughs have not translated into positive reimbursement decisions, as appraisal processes to date, including those in major health systems such as the United Kingdom (UK), France and Australia, have resulted in negative decisions. It is possible that these drugs will not become widely available in Europe. Many concerns hinder reimbursement, including the drug costs outweighing the benefits, uncertainty regarding both meaningfulness and long-term efficacy beyond trial follow-up periods, and safety considerations related to serious side effects. The 9th International Pharmaco-Economic Collaboration on Alzheimer's Disease (IPECAD) meeting in Glasgow, Scotland in November 2025 brought together leading experts from academia, industry, regulatory bodies, and patient organizations to reflect on these challenges and chart future directions. We summarize the proceedings under three main topics. For details we refer to abstract and presentation slides on the IPECAD website www.ipecad.org.

2. Advances in cost-effectiveness modeling

Health-economic modeling approaches have evolved alongside ongoing debates about the value and affordability of new AD interventions. At this conference, multiple innovations were presented, including the development of new microsimulation model designs, various options for incorporating treatment effects, exploratory work in deep learning models, and the use of advanced statistical models on disease progression data from trials or observational studies. New theoretical models were introduced to more rigorously quantify health-related quality of life of informal caregivers. Improved estimates of utility and caregiving time were drawn from diverse data sources to cover the wider AD severity spectrum. Transparency, open-sourcing, and cross-country validation were emphasized as critical steps to increase the validity and generalizability of AD health-economic models. A systematic review of evidence on biomarker diagnostics underscored how diagnostic value depends on downstream intervention strategies, but separating the value of diagnostics from amyloid-targeting therapies in economic evaluation remains a topic for discussion. Discussions on the impact of diagnostic strategies to efficiently identify the target population eligible for treatment and their associated budget impact are needed when introducing amyloid-targeting therapies.

3. The role of registries and real-world evidence

Despite progress in health-economic modeling, substantial decision uncertainty persists, particularly on the translation of relatively small effects on clinical outcomes from 18-month trial results to lifetime, patient relevant changes in disease progression and independent functioning. Other uncertainties relate to how patients and clinicians will behave in seeking a diagnosis and therapy once new therapies become available and how long patients will receive therapy. The potential of real-world data to reduce these uncertainties was discussed. In the United States, regulators have already implemented Coverage with Evidence Development (CED). As different countries may introduce new therapies at different times, phased implementation may create a natural experiment to learn from early adopters, informing treatment patterns, safety monitoring, and real-world effectiveness evidence. However, concerns were raised about whether registries can produce meaningful, unbiased, and high-quality evidence given their non-randomized designs, as well as about their added costs and operational complexities for reimbursement decisions. The International Registry for Alzheimer's Disease and Other Dementias (InRAD) Foundation outlined its efforts to offer an efficient and scalable infrastructure to accelerate international collaboration on standardized evidence collection. The field now has the opportunity to harmonize real-world evidence collection that can shape not only current but also future generations of AD therapies.

4. Are health systems ready?

Changes in AD management raise concerns about the required infrastructure for biomarker testing and the administration of amyloid-targeting therapies. Representatives from patient groups and clinical

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initiatives highlighted system-level challenges, including diagnostic and treatment capacity, safety monitoring, workforce limitations, geographic variability, registry data-collection capabilities, and the need for cultural change within healthcare providers. New delivery pathways and service models have been designed for the broader domain of brain health in terms of risk factor management for primary prevention, early detection and drug treatment. In low- and middle-income countries, the limited avilability of health-economic evidence constrains value assessments of whether current prices are justified.

5. Looking forward

The AD health-economics field has benefited from improving data and methods over time. However, there remain opportunities for innovation in the design and evaluation of new interventions. There is a need for international alignment on collecting real-world evidence and sharing health-economic models. Future modeling efforts may incorporate pre-symptomatic stages, reflecting both therapeutic and 'brain health' perspectives for the prevention of dementia. Care pathways should integrate risk identification, early diagnosis and treatment, comprehensive care needs, and caregiver support across the disease spectrum. Generating robust evidence that links biomarker endpoints to long-term outcomes will facilitate more efficient clinical trials and faster access to innovative treatments. With these continued advancements, the future of AD health-economics holds exciting opportunities to refine the evaluation of innovative interventions, paving the way for more accessible care.

AI statement

During the preparation of this work the authors used microsoft Teams in order to transcribe the conference presentations and ChatGPT to support in summarizing the contents and grammatical correction. After using these tools/services, the authors reviewed and edited the content as needed and take full responsibility for the content of this published work.

CRediT authorship contribution statement

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Declaration of competing interest

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