Predicting how many people might receive treatment with new therapies for Alzheimer's disease

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One hundred and seventeen years after Alzheimer described the condition that bears his name, the first treatments have been identified which appear to modify its course.[1 2] These treatments are monoclonal antibodies which clear one of the presumed pathogenic proteins (amyloid) from the brain. This is welcome progress, but it has come with concerns including the extent of benefits and risks of potentially significant harm.[3] Further concerns are the potential economic impact and whether health services can deliver these treatments given the number of people living with Alzheimer's disease. Estimates of the numbers of people who might receive them are vital to inform preparation of services. The *JNNP* paper by Dobson *et al* is therefore welcome.[4]

Previous work has applied the exclusion criteria used in trials to clinic populations to estimate demand. Dobson *et al* extend this. They report data from a general National Health Service memory service and not just specialist clinics which may not be representative of most practice. Second, they consider factors which other studies have not always included, including anticoagulation as a contraindication and Rockwood clinical frailty scores as a proxy for whether individuals might tolerate repeated imaging and intravenous infusions. They conducted their study to consider both general and specialist clinics, both of which are included in a service model proposed for use in the UK.[5] This is important as planning needs to account not just for those receiving treatment but for those who will need further investigation to assess amyloid positivity via positron emission tomography (PET) scanning or cerebrospinal fluid (CSF) analysis. The authors found 32% of those attending general memory clinics could require further screening in a specialist centre, though only 14% of all those currently seen in these centres would be eligible for treatment and current confirmation of amyloid status was low, 62% of those with a diagnosis of Alzheimer's disease had such investigations even in a tertiary clinic. These figures need to be considered in a complex context of which populations are examined and where exclusion criteria are applied in pathways, but they do reflect a consensus in the literature that only a minority of people with Alzheimer's disease are likely to be eligible for treatment. Their finding that 49% of patients with a diagnosis of Alzheimer's disease in general clinics and 40% in specialist would meet cognitive, frailty and imaging criteria for treatment is consistent with data from other UK settings.[6]

The authors acknowledge limitations of the study. It is retrospective and several 'unknowns' remain, including how many people would choose to have treatment if eligible, how many would meet criteria for 'amyloid positivity' and whether the advent of treatment might encourage more people to present. Nevertheless, if these treatments are approved for use, the work presented here will help plan services. It also provides a reminder that only a minority of people will be appropriate to receive these treatments. It is essential that services retain focus on the majority of people who will need other forms of treatment and care.

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REFERENCES

1 van Dyck CH, Swanson CJ, Aisen P, *et al*. Lecanemab in early Alzheimer's disease. *N Engl J Med* 2023;388:9–21.
2 Sims JR, Zimmer JA, Evans CD, *et al*. Donanemab in early symptomatic Alzheimer disease. *JAMA* 2023;330:512.
3 Liu KY, Villain N, Ayton S, *et al*. Key questions for the evaluation of anti-Amyloid Immunotherapies for Alzheimer's disease. *Brain Communications* 2023;5:fcad175.
4 Dobson R. n.d. Eligibility for anti-Amyloid treatment: preparing for disease modifying therapies for Alzheimer's disease. *J Neurol Neurosurg Psychaitry*.
5 Barber R, Ivenso C, Jenkinson J, *et al*. Old age psychiatry faculty executive. delivering disease modifying treatments in Alzheimer's disease-an old age psychiatry UK perspective. *Int J Geriat Psychiatry* 2023;38:e6030.
6 Laurell AAS, Venkataraman AV, Schmidt T, *et al*. Estimating demand for potential disease-modifying therapies for Alzheimer's disease in the UK. *Br J Psychiatry* 2024;1–7.