



Are we ready to deliver disease modifying treatments?

Old Age Psychiatrists' views on diagnosing and treating Alzheimer's disease before dementia.

May 2021



Dementia
Access
Taskforce



Alzheimer's
Research
UK

Executive Summary

The drug development pipeline for Alzheimer’s disease, the most common cause of dementia, is increasingly focused on delivering treatments that can modify the progression of the disease. It is likely that these treatments will have the greatest benefits for people with Alzheimer’s disease when implemented in the early stages, before symptoms have reached the threshold of clinical dementia. Given that the first life-changing treatment may shortly be available, this puts significant onus on being able to diagnose Alzheimer’s disease at the earlier stages.

This joint project, between Alzheimer’s Research UK and the Royal College of Psychiatrists, explored the diagnostic and service challenges experienced by old age psychiatrists

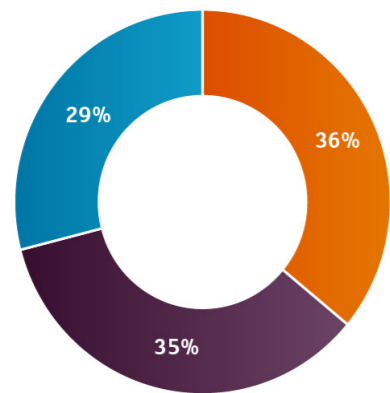
Overall findings

1. Old age psychiatrists believe that delivering new disease modifying treatments for Alzheimer’s disease would be a core component of their clinical practice and holistic care.
2. Psychiatrists do not think their services are ready to deliver disease modifying treatments for Alzheimer’s disease:
 - o Only 36% of psychiatrists thought their services could adapt to deliver disease modifying treatments within a year.
 - o Just 6% of psychiatry services are able to fully meet the current NICE guidelines regarding accessing further biomarker and diagnostic tests for Alzheimer’s disease.

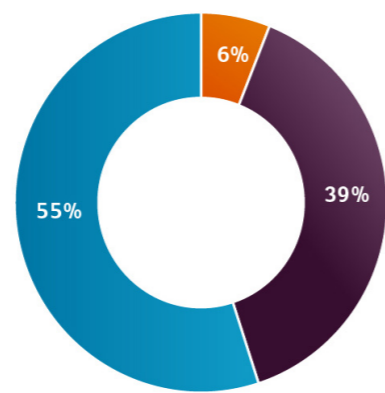
across the UK. Through these insights, we were able to gauge the readiness of psychiatry services to deliver future life-changing treatments to those living with dementia, and the challenges that would need to be addressed to do so.

We found that psychiatrists are keen to embrace the arrival of new disease modifying treatments, but that their services needed support in order to increase access to biomarker tests for diagnosing Alzheimer’s disease early and to meet the future requirements of a new treatment. Service developments can only be achieved with investment to increase and enhance capacity, infrastructure and clinical skills.

3. Psychiatrists recognise there are clinical uncertainties associated with diagnosing the early stages of Alzheimer’s disease:
 - o A clear diagnostic framework for Alzheimer’s disease across all stages has not been universally established, resulting in inconsistencies in clinical use.
 - o Limited access to infrastructure and uncertainty of test results has constrained the availability and use of diagnostic and biomarker tests in psychiatry. Greater access to biomarker tests helped psychiatrists to feel more confident about their use.
 - o Psychiatrists were more cautious about giving an early diagnosis of Alzheimer’s disease compared to previous findings on public desire for early diagnosis - potentially reflecting the scientific and clinical challenges in an earlier diagnosis.



● Agree ● Neutral ● Disagree
Perceived service readiness to deliver treatments within one year



● Yes - fully ● Yes - partially ● No
Current ability of services to implement NICE diagnostic guidelines for Alzheimer’s disease

Our recommendations

1. The NHS should dedicate specific funding to increase diagnostic infrastructure and improve equity of access.
2. The NHS should work with key organisations to commission a clinical pathway that would meet the needs of patients to access a disease modifying treatment. This would need commitment from NHSE/I, devolved nation equivalents and clinical organisations to ensure the:
 - a. Development of a cross-speciality approach to support multidisciplinary working led by the NHS and in conjunction with clinical stakeholders.
 - b. Development of new clinical pathways, to support the equitable delivery of new treatments led by the NHS and in conjunction with clinical stakeholders.
 - c. Delivery of ongoing training and professional development to support the changes in clinical practice required to deliver disease modifying treatments – including the use of emerging biomarkers, treatment delivery and safety monitoring.
3. A commitment across the clinical community to develop and use consistent clinical terminology for early Alzheimer’s disease.

Commitments

The Royal College of Psychiatrists has a unique role to support psychiatrists and relevant mental health service clinicians in being able to respond effectively to the introduction of disease modifying treatments. The College will seek to do this by:

a

Focusing initially on the existing workforce and producing appropriate Continuous Professional Development (CPD) support.

b

Engaging with leadership in the sector who are able to effect the changes needed in service configuration.

c

Ensuring that the updated Psychiatric Old Age curriculum provides for training, which aligns with medical advancements, to deliver the skilled & competent future workforce that people with dementia need.

Contents

02	Executive Summary
06	Introduction
06	Diagnosing early Alzheimer's disease
08	The role of Old Age Psychiatry
08	Why is this information important now?
09	Methodology for research
09	Survey
09	Focus groups
09	Poll testing
10	Results
10	The concept of diagnosing Alzheimer's disease before dementia in clinical practice
16	Access to diagnostic infrastructure supporting the diagnosis of early Alzheimer's disease
18	UK Psychiatry services are not ready to implement new treatments for Alzheimer's disease
26	Conclusion
27	Acknowledgements
27	References
28	Appendices
28	Appendix 1



Introduction

Dementia is one of our greatest healthcare challenges. There are almost one million people currently living with dementia in the UK¹. With an ageing population and no current treatments to delay the onset or reduce the progression of dementia, this number is set to rise to 1.3 million by 2030¹. Today, the cost of dementia to the UK economy is over £26 billion per year¹.

The arrival of a disease modifying treatment has the potential to radically improve the lives of people living with dementia. A first in class disease modifier is currently under regulatory review with further potential treatments in late-stage clinical trials at the time of this report (May 2021)². This is a field that has had no significant innovations in disease management since the arrival of cholinesterase inhibitors in the late 1990s, and memantine in early 2000s.

To ensure that new treatments reach people as quickly as possible, we need to consider the opportunities and barriers that may arise from a clinical and health service perspective, many of which have been set out in the Edinburgh Consensus³. The Royal College of Psychiatrists and Alzheimer's Research UK have collaborated on a project to increase our understanding of psychiatrists' opinions on diagnosing Alzheimer's disease in the earlier stages of disease progression, before the onset of clinical dementia.

The findings from this project provide powerful evidence in identifying how the opportunities of new treatments can be supported by memory assessment services. While much of this interest is driven by the need to prepare for new treatments, more broadly we recognise the importance of creating opportunities to reflect on the recent progress in research and how this may change clinical practice within psychiatry to benefit those living with dementia now.

Diagnosing early Alzheimer's disease

The purpose of this project was to better understand psychiatrists' opinions regarding diagnosis of Alzheimer's disease at the stage before clinical dementia, when symptoms are starting to emerge but have not reached the threshold of dementia. We focused on the diagnosis of early Alzheimer's disease specifically, rather than other causes of dementia, because of the more advanced nature of the drug pipeline for new treatments that will specifically target the proteins implicated in Alzheimer's disease. However, we believe that many of our findings are relevant to the other diseases that cause dementia.

The continuum model of Alzheimer's disease (figure 1) sets out the understanding that Alzheimer's is not a disease with sudden onset, but a progressive pathology that emerges over many years. This progression is divided into three stages:

1. 'Pre-symptomatic Alzheimer's disease', where there are no external signs of memory complaints or any other clinical symptoms.
2. 'Prodromal Alzheimer's disease', where patients show signs of memory loss that does not significantly impact their day-to-day functioning or independence.
3. 'Dementia due to Alzheimer's disease', which is further categorised into mild, moderate and severe stages. Progression through these stages is highly variable.

In this report, we have gained insight on psychiatrists' experiences of diagnosing early Alzheimer's disease. By this, we specifically refer to the stage of disease where symptoms are recognised as most likely being due to Alzheimer's disease, but have not yet met the clinical criteria for dementia. Diagnosis of early Alzheimer's disease should not be confused with the diagnosis of young onset Alzheimer's disease, which is not within the scope of this report.

Alzheimer's disease treatments are likely to have the best chance of success when offered early in disease progression. This places a significant reliance on the ability to diagnose Alzheimer's disease at the earlier stages. Cognitive impairment, particularly memory problems, are often the first noticeable changes in people with Alzheimer's disease, however the underlying pathology could have been present for many years prior to this. Cognitive changes can initially be subtle, and presentation can be similar to other conditions and causes of dementia, making a definitive diagnosis of Alzheimer's disease in the early stages challenging.

A diagnosis of mild cognitive impairment (MCI) is often given in the prodromal stage of the Alzheimer's disease continuum. There are a wide range of symptoms associated with MCI, including impact on mental processes such as attention and memory, and behavioural changes such as apathy, anxiety or irritability. The fact that MCI symptoms are so varied increases the difficulty clinicians face in associating them with a single condition in these early stages. Studies suggest that around 8-15% of individuals with MCI will go on to develop dementia each year⁴, however symptoms can also be a sign of many other medical conditions and, in approximately a quarter of cases, individuals with MCI will return to full cognitive functioning⁵. MCI does not have defined guidelines in terms of diagnosis, treatment or follow up, and the NICE dementia guidelines from 2018 did not include MCI. Therefore, there is a risk of lack of consistency and standards in MCI diagnostic practice.

Currently, Alzheimer's disease is primarily assessed by undertaking a detailed clinical evaluation supplemented by a series of cognitive tests and measures of day-to-day functioning. These examinations need to be repeated at regular intervals to capture subtle changes in a person's behaviour and abilities. Physical examination and blood tests are used to help rule out other conditions, such as thyroid problems or vitamin B12 deficiency.

Further diagnostic tests, particularly brain imaging scans, can show changes associated with Alzheimer's disease and other types of dementia and exclude the presence of other conditions. Certain characteristic findings on MRI (magnetic resonance imaging), CT (computerised tomography), SPECT (single-photon emission computerised tomography) and FDG-PET (fluorodeoxyglucose-positron emission tomography) scans can increase the likelihood that symptoms expressed are due to Alzheimer's disease as opposed to another condition, however they lack the specificity to confirm the presence of Alzheimer's disease pathology.

Molecular diagnostic tests are used to confirm the presence of pathological changes that are associated with Alzheimer's disease. To date, clinical practice is focused on detecting two main proteins that are linked to the Alzheimer's disease process – namely amyloid-beta and tau. Brain imaging using positron emission tomography (PET-amyloid), is used to measure the amyloid protein in the brain, whilst a lumbar puncture procedure is used to collect cerebrospinal fluid (CSF), where these proteins can also be measured.

NICE guidelines (2018) recommend that in uncertain cases of dementia where Alzheimer's disease is suspected, or where it would be of benefit to diagnose a subtype, the use of FDG-PET or CSF should be considered. CSF is considered the most feasible option currently available that could be introduced into memory assessment services, however there are concerns about service capacity and patient acceptance. Currently the majority of lumbar punctures for dementia associated diagnoses are undertaken within acute hospital settings (such as neurological services, either by neurologists or specialist nurses).

Looking to the future, we anticipate that there will be a growing number of biomarkers available. Blood biomarker tests for Alzheimer's disease are much anticipated as they are expected to be the most cost-effective and non-invasive test. Blood biomarkers are likely to be easily scalable and deliverable in a range of clinical settings.

More broadly, accurate and early diagnosis is crucial to identifying the right participants for late-stage clinical trials⁶. Clinical trials are essential to continuing research into life-changing treatments and will continue to have a lower chance of success than if more patients could be diagnosed at the earlier stages of disease.

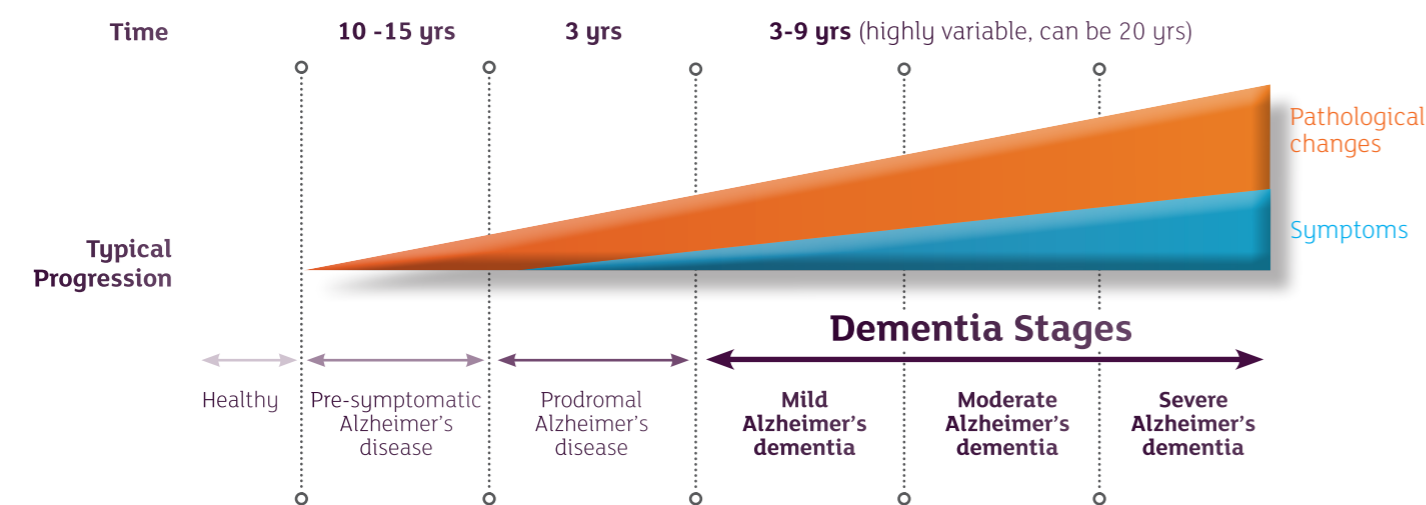


Figure 1: The continuum model of Alzheimer's disease.



The role of Old Age Psychiatry

Old age psychiatry focuses on the mental and emotional disorders that are experienced by older adults. Working closely with general practitioners, other hospital specialists, such as neurologists, and members of the multidisciplinary team including social services, old age psychiatrists provide specialised and holistic assessment, treatments and care. This speciality is unique in that in addition to the complexities of co-morbidities in older age, and the psychological impact of mental health problems, the patient's wellbeing within both their family and social settings must also be taken into consideration.

The Royal College of Psychiatrists Census, 2019⁷, recorded a total of 808 full and part time consultant old age psychiatrists and 1,093 speciality doctors across the UK. There were 196 trainees registered on the psychiatry specialist registrar in 2019. Psychiatry has experienced a significant rise in vacancies over the previous six-year period and although not yet evidenced, there is anticipation of retirement numbers increasing due to pension changes.

Memory assessment services, commonly led by old age psychiatrists, are the foundation of dementia services and the main provision for both diagnosis and management. The memory assessment service teams conduct cognitive tests, diagnose dementia, and deliver strategies and medication to help minimise symptoms and support people to live as independently and safely as possible. These services also provide ongoing support and information to patients, and their families and carers.

The arrival of disease modifying treatments for Alzheimer's disease has the potential to significantly change how memory assessment services operate on many levels. A new treatment will impact the way that patients are assessed, diagnosed, treated and monitored. If treatments are successful in slowing disease progression, people living with Alzheimer's disease will remain in the milder stages of dementia for longer. This may mean that those living with dementia are able to live independently for longer, and there may be an initial increase in the number of people living with dementia^{8,9}.

The outbreak of coronavirus (COVID-19) has hugely impacted the number of referrals to memory assessment services. Data from NHS England shows that the total number of referrals in 2020 were down by almost 50% compared to 2019¹⁰. This implies a substantial increase in the number of

people living with undiagnosed dementia and a significant potential backlog of patients waiting for assessment. We are mindful that any new treatment will add to the demands for assessment and diagnosis.

Why is this information important now?

There is limited understanding of how old age psychiatrists, as a key clinical speciality that delivers the majority of Alzheimer's disease assessments and diagnoses, perceive the benefits and risks to diagnosing the disease earlier. Without this understanding, any attempt to develop future services to meet the demands and opportunities of new treatments, or other innovations in the field, are far less likely to be successfully implemented.

Existing evidence has principally explored the perceptions of general practitioners (GPs)¹¹⁻¹³. This insight broadly suggests that GPs see the value in diagnosing Alzheimer's disease before clinical symptoms of dementia, but there are concerns surrounding the lack of definitive biomarker tests, confidence in current diagnostics, and the benefit of a diagnosis to the individual. Alzheimer's Research UK and MSD (Merck & Co., Inc.) investigated public opinion of receiving a diagnosis of Alzheimer's disease before the onset of dementia. This research found that the public were supportive of knowing if they have Alzheimer's disease prior to the onset of symptoms¹⁴.

While this project was initiated before COVID-19, we recognise that the past year has potentially changed the way that the public view health and research. Media coverage and public awareness of medicine and medical procedures, including diagnostics, drug development, research and clinical trials procedures has increased. We also recognise that COVID-19 has particularly, and tragically, impacted on people living with dementia. Over a quarter of all deaths associated with COVID-19 have been in people living with dementia¹⁵. More broadly, COVID-19 has highlighted the vulnerability of people with dementia, and there is a wide public appetite to address the underlying issues. When a life-changing treatment for Alzheimer's disease is approved in the UK the spotlight will be on the health system to deliver. People living with dementia and their families have never had the opportunity of a life-changing treatment, and when this is available, we anticipate there will be significant demand and an expectation that healthcare services have prepared for its arrival.

Methodology for research

Working with an Expert Reference Group including seven psychiatrists and a qualitative researcher, Alzheimer's Research UK and the Royal College of Psychiatrists set out to gain insight on psychiatrists' views on diagnosing and treating Alzheimer's disease before the threshold of dementia.

In this report, our aim was to ask questions on three themes that are key to facilitating diagnosis in early Alzheimer's disease.

1. Psychiatrists' opinions about diagnosing Alzheimer's disease when patient's symptoms are mild and before they have reached the stage of dementia.
2. Psychiatrists' use of and familiarity with different diagnostic tools and biomarker tests. Their confidence in the results of these tests and how they saw psychiatry's involvement with testing in the future.
3. Psychiatrists' confidence in their services' abilities to deliver new treatments, based on the information we have, and what changes would be needed to assist services to make these adaptations and prepare for treatments.

Survey

An online survey was made available to all members of the Faculty of Old Age Psychiatry between 11 December 2019 and 28 February 2020. The full set of survey questions can be found in appendix 1. A total of 492 psychiatrists working in the UK completed this survey.

Information was requested relating to responders' grade, area of clinical practice and the nation they worked in. This demographic information was used to show representation of opinion and reveal any pertinent differences in answers based on this information.

- The majority of survey responders were consultant old age psychiatrists (67%). Other grades included trainees (17%) and speciality and associate specialist and/or trust doctors (13%).
- Area of practice was primarily split between those currently working in memory clinics (49%), and those who worked in other Old Age Psychiatry services, including liaison, community, and inpatients. Psychiatrists who worked in areas outside of clinical psychiatry, such as academia and management made up 5% of the total respondents.
- Most survey responders worked in England (79%), with 11% from Scotland, 8% from Wales and 2% from Northern Ireland.
- There was a relatively equal breadth of experience from those with under five years to those with more than 20 years.

To assess any differences in attitude and practice based on demographic status, additional analysis beyond the overall set of responses was considered against several of the questions asked in the survey.

Focus groups

Following the survey, a number of focus groups were organised. A structured guide for the focus groups was written with support from the Expert Reference Group to ensure consistency and robustness of conclusions. Eight focus groups were conducted between 13 October and 30 October 2020, with a total of 41 psychiatrists participating in groups of between three and seven attendees.

Focus group participants may or may not have taken part in the initial survey and all groups were given an overview of the survey intentions and specific results where necessary. Focus groups were facilitated by at least one member of the Expert Reference Group, who steered the conversation in line with the focus group guide.

Twenty-five participants were based in England, four from Scotland and Wales respectively and eight from Northern Ireland. Thirty-five participants were consultant old age psychiatrists, four higher trainees, one speciality doctor and one consultant liaison psychiatrist. All focus groups were recorded and transcribed by an external analyst.

Results from the focus groups and the survey are presented together in the results sections. All quotes included in this text are attributed to the focus groups.

Poll testing

At the Old Age Psychiatry Faculty conference, 25 March 2021, we presented some of the findings of this report and asked three multi-choice polling questions to the audience (appendix 1).



Results

Psychiatrists highlighted that their services are not ready to meet the anticipated requirements of a new disease modifying treatment for Alzheimer's. Services need investment in infrastructure and clinical skills to enable them to meet the current diagnostic guidelines and to prepare for new treatments.

Our findings are divided into three key themes:

- Exploring the concept of delivering a diagnosis of early Alzheimer's disease in clinical practice.
- What current access to diagnostic infrastructure and challenges do psychiatrists experience?
- Are services ready for the arrival of disease modifying treatments and what challenges would need to be addressed to support memory services to implement these treatments?

The concept of diagnosing Alzheimer's disease before dementia in clinical practice

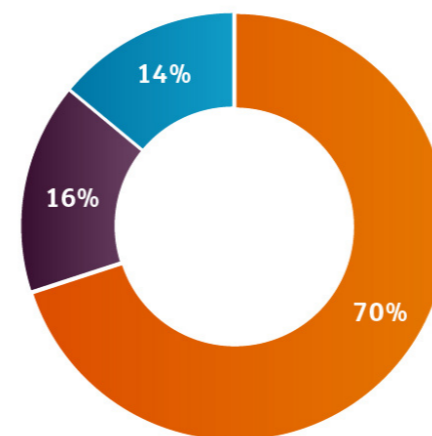
Key finding: The conceptualisation of Alzheimer's disease as a disease spectrum was considered helpful, however, applying this model in clinical practice was more challenging.

Psychiatrists were generally supportive of the concept of the Alzheimer's disease continuum model as a way to describe the progressive stages of dementia and the potential variation in timescale. In our survey, we asked participants whether they felt the model was helpful for current NHS practice, and, in a separate question, whether they found it useful to discuss the continuum model with patients in their clinical practice.

We found that 70% of respondents agreed that the model was helpful in their understanding of Alzheimer's disease progression (see figure 2). There were more varied views on whether the continuum should be used in clinical practice. Just over half of psychiatrists (56%) advocated for discussing the continuum model with patients (see figure 3).



Do you think that the Alzheimer's disease continuum model is helpful for current NHS clinical practice?



● Helpful ● Neutral ● Unhelpful

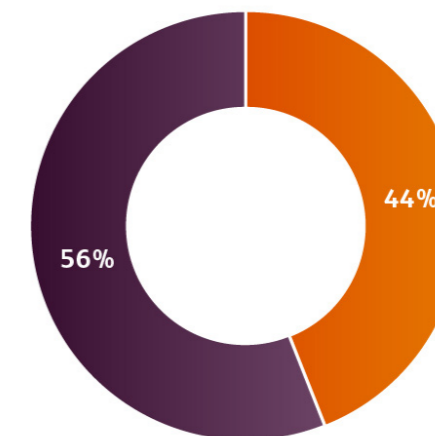
Figure 2: Perceived value of the continuum model of Alzheimer's disease.

Views about the continuum model were further explored in the focus groups. Participants explained that from an academic standpoint, the model describes disease progression coherently while incorporating the considerable variation in individual progression. In clinical practice, some psychiatrists were more comfortable than others to discuss the continuum model with patients.

Those who advocated discussing the model with patients felt it was a clear way of describing the stages of dementia, explaining the variability of disease progression and helping patients understand that early symptoms do not guarantee progression to Alzheimer's disease. Others felt that the continuum model was not helpful in discussions with patients, and that bringing it into conversations too early could generate more speculation and ambiguity when the person was looking for definitive answers.

There were particular circumstances where psychiatrists felt more able to introduce the continuum model into early conversations. This included where biomarker evidence was

Which of these statements most closely aligns with your views on discussing the continuum model of Alzheimer's disease with patients and the public?



● It is better to limit the use of the model until further research can demonstrate its utility
● It is better to advocate for the use of the model as it more accurately reflects the disease process and informs awareness

Figure 3: Perceived value of discussing the Alzheimer's disease continuum model with patients and the public

available, and in retrospective cases, with patients who were at a more advanced stage of disease. In retrospective cases psychiatrists found it appropriate to discuss the continuum model and explained that it could help patients to understand the changes they had been experiencing.

Overall, psychiatrists felt less able to introduce the continuum to patients in the earlier stages of disease progression. This was primarily due to uncertainty in the diagnosis. The second reason psychiatrists were reluctant to discuss Alzheimer's disease at the early stages was that they felt that without a disease modifying treatment, discussing the possibility of Alzheimer's disease did not provide enough benefit to patients to outweigh the potential negative consequences, such as distress caused to them and their families. Approval of a life-changing treatment, and improvements in the reliability and confidence in diagnostic and biomarker tests for early-stage Alzheimer's disease are needed before clinicians will feel fully able to discuss the possibility of Alzheimer's disease with patients as part of their routine practice.

“The [continuum model] might be helpful if we get disease modifying agents because it will help explain to patients why it's worth putting them through potentially invasive investigations in order to make very early diagnosis, but we're not in that position currently.”

(Consultant, ID6)

Key finding: Psychiatrists are uncertain as to whether they should communicate a diagnosis of early Alzheimer's disease to patients. Their decisions are influenced by concerns for patient implications and certainty of the diagnosis.

Psychiatrists acknowledged a dilemma in whether they should communicate and share a diagnosis of Alzheimer's disease with a patient before the onset of clinical dementia. We found that 60% of psychiatrists would use the term Alzheimer's disease in a diagnosis of Alzheimer's disease before symptoms had reached the clinical threshold for dementia while 40% would not (figure 4).

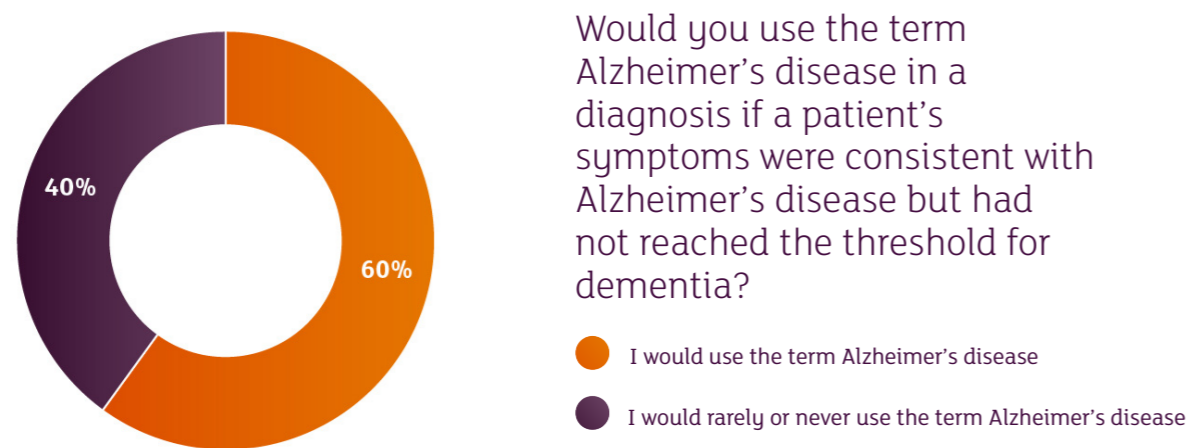


Figure 4: Diagnosing Alzheimer's disease before symptoms reach the clinical threshold of dementia.

Would you use the term Alzheimer's disease in a diagnosis if a patient's symptoms were consistent with Alzheimer's disease but had not reached the threshold for dementia?

Psychiatrists who would use the term Alzheimer's disease for diagnosis before symptoms had reached the dementia threshold explained that they felt there were significant benefits to doing so. Benefits included allowing patients more time to plan, to consider their options for future support, and to discuss their diagnosis with others on their own terms. They also remarked that having a formal diagnosis helped clinicians to approach conversations about changes an individual can make to their health and lifestyle choices that can help to reduce their risk of dementia.

Conversations about participating in research and clinical trials were also easier to introduce and psychiatrists felt that patients were more receptive to research opportunities and participating in clinical trials than before a diagnosis. Further benefits included being able to monitor patients more closely than if they were discharged with a diagnosis of MCI, as those with a diagnosis of Alzheimer's disease often remain within the clinical care of the psychiatrist. If functioning or cognitive abilities deteriorated while under the care of the psychiatrist, they could offer therapies or medications without the patient having to be re-referred.

Psychiatrists who advocated for making an earlier diagnosis also shared their concerns that not informing a patient of their diagnosis can be stressful for the patient. They felt that discharging a patient who is experiencing symptoms, without explaining what the cause might be, could be more detrimental than raising the possibility of Alzheimer's

disease. Many psychiatrists found that patients can be very accepting of their diagnosis, even when there is a high level of uncertainty, and reported that it can help patients to make better sense of their symptoms.

For the 40% of psychiatrists who would rarely or never use the term Alzheimer's disease in a diagnosis before the onset of dementia, leading concerns were risk of misdiagnosis (76%) and negative impact for individuals (75%, see table 1). There was concern that with a diagnosis of Alzheimer's disease, patients will expect to be offered disease modifying treatments. The lack of available treatments could discourage people from raising their health concerns later, or when symptoms are more pronounced, and when they might qualify for symptomatic medication. This group felt that providing a diagnosis of Alzheimer's disease before the dementia threshold had been reached could unnecessarily heighten anxiety and worry for patients when there was still a chance that their MCI was not due to Alzheimer's disease.

There is clearly a struggle for psychiatrists as they try to balance the benefits of early diagnosis with their desire to protect patients from the distress of misdiagnosis and lack of intervention opportunities. Looking to the future, improving the abilities of psychiatrists to deliver a diagnosis of early Alzheimer's disease will be dependent on increasing the confidence and reliability of the assessments that can determine early Alzheimer's disease.

Concerns about giving a diagnosis of Alzheimer's disease prior to dementia	Agreement
Accuracy of clinical criteria for pre-dementia and risk of misdiagnosis	76%
Negative impact for individuals (psychological, legal and ethical)	75%
Lack of validated diagnostic framework and conflicts with the International Classification of Diseases (ICD) criterion	60%
Accuracy of biomarker tests to diagnose Alzheimer's disease at this stage	59%
Concerns about inaccurate prescribing	49%
Concerns about negative consequences for services	43%

Table 1: Primary concerns for diagnosing Alzheimer's disease before symptoms reach the clinical threshold.

Key finding: Psychiatrists were more cautious about giving an early diagnosis of Alzheimer's disease compared to previous findings on public desire for early diagnosis - potentially reflecting the scientific and clinical challenges in an earlier diagnosis.

This research found that 37% of psychiatrists thought that the majority of the public would want to know if they had Alzheimer's disease before the onset of clinical symptoms (see figure 5). This contrasts with recent insight by Alzheimer's Research UK that 74% of the public said that they would want to know if they had Alzheimer's disease before the onset of clinical symptoms despite there being no available treatments¹⁴.

Do you agree that the majority of the public would want to know they had Alzheimer's disease prior to the onset of symptoms?

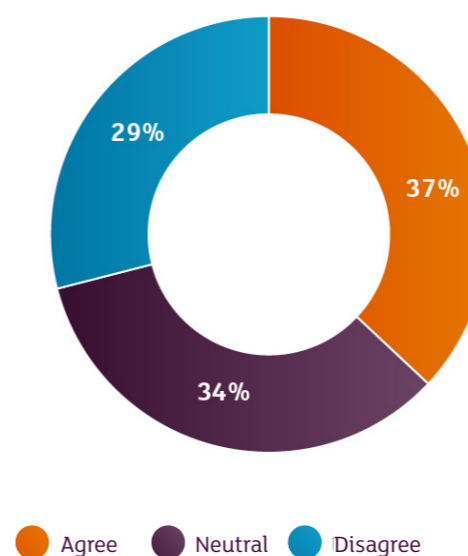


Figure 5a: Psychiatrists' views of public interest in a diagnosis of early Alzheimer's disease.

Would you want to know if you had Alzheimer's disease before symptoms develop?

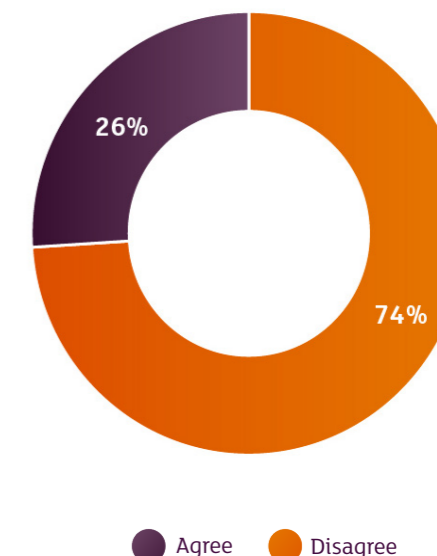


Figure 5b: Public opinion data from the Alzheimer's Research UK report 'Public Perceptions' (2019)¹⁴.

Focus group participants discussed the reasons why there might be such a difference in the opinions expressed. Psychiatrists explained that people can show very varied opinions, with some clearly expressing that they want a diagnosis as an answer to the symptoms that they have noticed, while others prefer not to speculate about uncertainties. The degree of variability in personal preference was believed to be greater in those in the early stages of disease. In clinical practice, psychiatrists felt that individuals with the greatest desire for a formal diagnosis were those with young onset Alzheimer's disease, or who had first-hand experience of dementia through a family member or friend. These individuals were the most aware of genetic risks and more alert to mild symptoms.

The differences we found between public wishes and psychiatrists' beliefs could be partly due to the positive shift in public attitude towards dementia. Ongoing destigmatisation and increased awareness of risk reduction and preventative measures have led to people being more open to talking about Alzheimer's disease, wanting information on disease progression and understanding the steps they can take to reduce their risk. In our survey, 90% of psychiatrists felt that public perception and awareness of Alzheimer's disease will be further improved with the approval of a disease modifying treatment. In the focus groups, it was hypothesised that the gap between public and clinician views on early diagnosis could be due to psychiatry having fallen behind in this attitude change, and that psychiatrists had retained a legacy of wanting to protect and shield patients from potentially distressing information, particularly when that diagnosis was uncertain.

“We're living in the age of patient empowerment and knowledge, and generally patients want to know as much as they can about their own health and well-being, therefore that 74% is aligned with that. Whereas, as clinicians maybe we have a more pragmatic view that we actually don't have a lot that we can offer you right now... that diagnosis comes with a heavy label and so we can perhaps see the other side of that perspective.”

(Consultant, ID33)

Another potential reason that psychiatrists were more conservative regarding the public's desire for a diagnosis is a concern that the public can have an overly optimistic view of the impact and efficacy of cognitive enhancing medications. Psychiatrists have seen that there is often a misconception that disease modifying treatments are already available. The Dementia Attitudes Monitor (2018) reported that 31% of people think there are 'medicines on NHS prescription that slow down the underlying diseases that cause dementia'¹⁶. Psychiatrists are concerned that having been given a diagnosis of Alzheimer's disease, people will have an unrealistic expectation of the treatment and follow up care they will receive. Psychiatrists felt that if the public were fully aware of the limitations of the currently available treatments, they would be less motivated to have an early diagnosis.

Balancing the ambiguity of early Alzheimer's disease and the preference of the patient is at the forefront of psychiatrists' decision-making processes regarding their communication of a diagnosis to patients. Improving clinical culture and increasing confidence in diagnostic tools to reduce ambiguity in a diagnosis would help to bring psychiatrists' and the public's opinions closer together. Ultimately the most influential change to clinical culture would be the arrival of a disease modifying treatment.

Key finding: Terminology used for the diagnosis of Alzheimer's disease before dementia is complex and lacks clinical consistency as it has not been universally established.

Current diagnostic practice within psychiatry focuses on the latter stage of Alzheimer's disease, when patients will typically have the clinical signs of dementia. For diagnosis in earlier stages, there is considerable uncertainty as to which of the many diagnostic terminologies available are best to use. In our survey, the majority of psychiatrists found the term 'MCI' (76%) to be the most helpful when patients are experiencing mild symptoms that do not meet the threshold for dementia. Of the seven diagnostic terminologies we asked about, only 'MCI' and 'MCI due to amnesic subtype' were considered to be more helpful than unhelpful (see figure 6).

Focus group discussions highlighted that terminologies that specified Alzheimer's disease, such as 'prodromal Alzheimer's disease' and 'MCI due to Alzheimer's disease', would typically be avoided in the early stages if there was no biomarker evidence to suggest Alzheimer's disease, due to the uncertainty of the cause of the symptoms.

Are these diagnostic terms helpful or unhelpful when diagnosing early Alzheimer's disease?

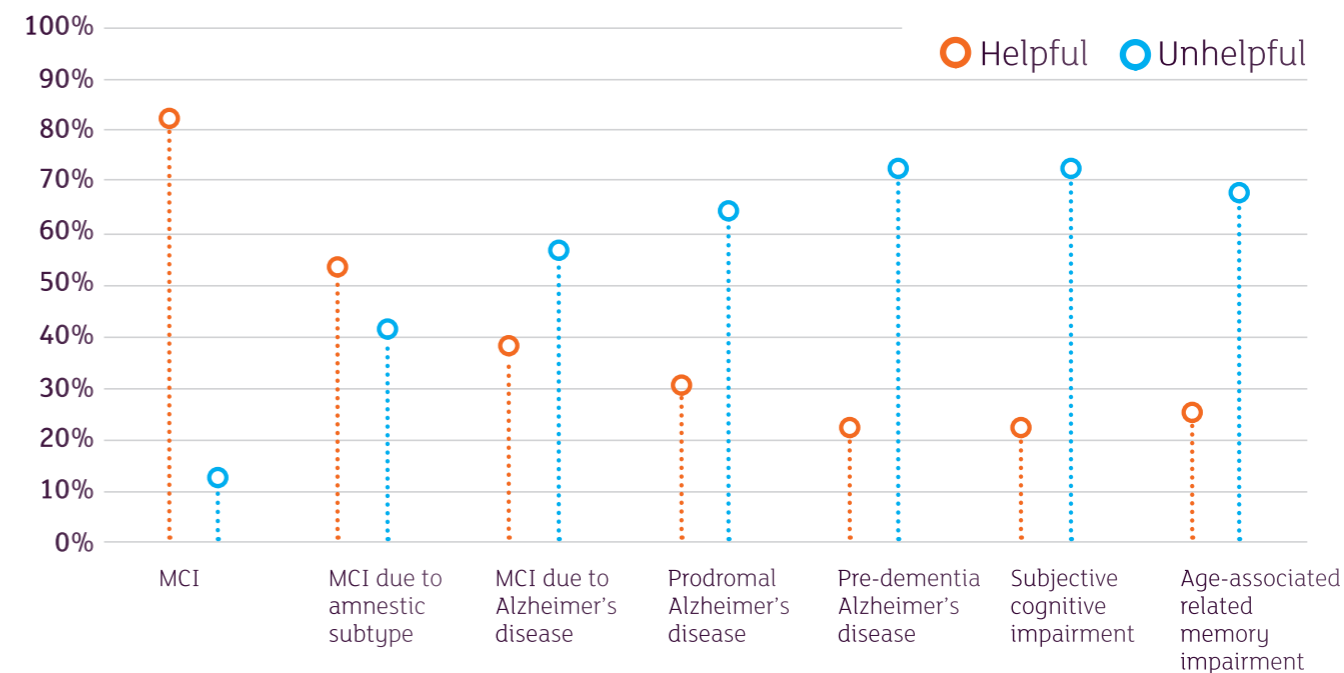


Figure 6: Perceived helpfulness of diagnostic terms in early Alzheimer's disease.

A lack of formal agreement on terminology has led to inconsistencies in the application of diagnostic terminology and has impacted the diagnostic nomenclature and coding for this stage of illness. Survey respondents who worked in areas outside of Old Age Psychiatry and memory clinics (i.e., academics, leadership and management roles) were more likely to use the terms 'prodromal dementia' and 'pre-dementia Alzheimer's disease'. For psychiatrists practising in Northern Ireland, 'age-associated related memory impairment' was considered the second most helpful term after 'MCI', whereas for all other nations the second preference was 'MCI due to amnesic subtype'.

Psychiatrists remarked that MCI was often used as a 'catch-all' and could be easily generalised to apply to multiple presentations. A diagnosis of MCI typically results in the patient being discharged to primary care, often to be referred again at a later date. Psychiatrists recognised that this approach was not beneficial to patients or their colleagues in primary care, but that currently they are unable to offer an alternative at that stage of diagnosis. Even in situations where psychiatrists did not personally think MCI was the most helpful diagnosis, it would often be used to minimise patient concerns as it was felt that it could 'bring more hope' than some of the other terminologies.

In the focus groups, it was clear that clinical context influences the choice of terms used. 'Prodromal Alzheimer's disease' was considered to be a more useful diagnosis than 'MCI' if a patient were in the early stages, but it was felt they could benefit from medication. 'MCI due to amnesic subtype' and 'prodromal Alzheimer's disease' were more often used in situations where a patient was being referred

to research or clinical trials. Patients presenting in acute settings, such as A&E, liaison services, intensive care, and emergency psychiatric services were more likely to be diagnosed with 'pre-dementia due to Alzheimer's disease' or 'prodromal Alzheimer's disease'. It was felt that these terms could initiate greater support for the patient than MCI, such as social care packages and educational materials for their families.

There was a consensus across all participants that the inconsistent use of multiple terminologies was confusing, and that there needed to be an agreement on the application of terminology in the early stages of Alzheimer's disease. The Manchester Consensus 2020 explored the use of MCI and evaluated previous attempts to generate consensus on its use⁴. Their findings supported our observations that further clarification on the use of pre-dementia diagnostic terms is warranted. Psychiatrists acknowledged the recent work by the National Institute on Aging (NIA) and the Alzheimer's Association (AA) to develop guidelines to modernise the diagnosis of Alzheimer's disease with the ATN (amyloid, tau and neurodegeneration biomarkers) framework. The complication with the NIA-AA guidelines is that the criteria for diagnosing Alzheimer's disease before the onset of clinical dementia has not been universally established. The arrival of a disease modifying treatment and the eligibility requirements associated with this is likely to be the main driver in the change towards more consistent and comprehensible terminology.

Recommendation: There needs to be a commitment across the clinical community to develop and use consistent clinical terminology for early Alzheimer's disease.

Access to diagnostic infrastructure supporting the diagnosis of early Alzheimer's disease

Key finding: Less than 10% of psychiatrists have sufficient access to molecular biomarker tests. Confidence in the use of these tests is lower than other diagnostic tests that have better accessibility.

We found that psychiatrists' access to the range of diagnostic tests for Alzheimer's diseases was highly variable (figure 7). Structural imaging accessibility was generally good, however, access to molecular biomarker tests was considerably more limited. Only 7% of psychiatrists felt they had adequate access to PET-amyloid scans, and only 4% to lumbar punctures for CSF samples.

Geographically there were significant variations in access to different tests, and equity of access was a major concern among the focus group participants. Northern Ireland survey responders reported considerably lower access to CT, MRI and SPECT than other nations. This group also reported 0% access to both CSF and PET-amyloid. Psychiatrists practicing in Wales had the most access to PET-amyloid, 22%, compared to 6% in England and 2% in Scotland. Regardless of number of years since qualification, psychiatrists were equally keen to have sufficient access to tests and include diagnostic and biomarker testing in their practice.

Do you have access to, and confidence in the interpretation of, the following diagnostic and biomarker tests?

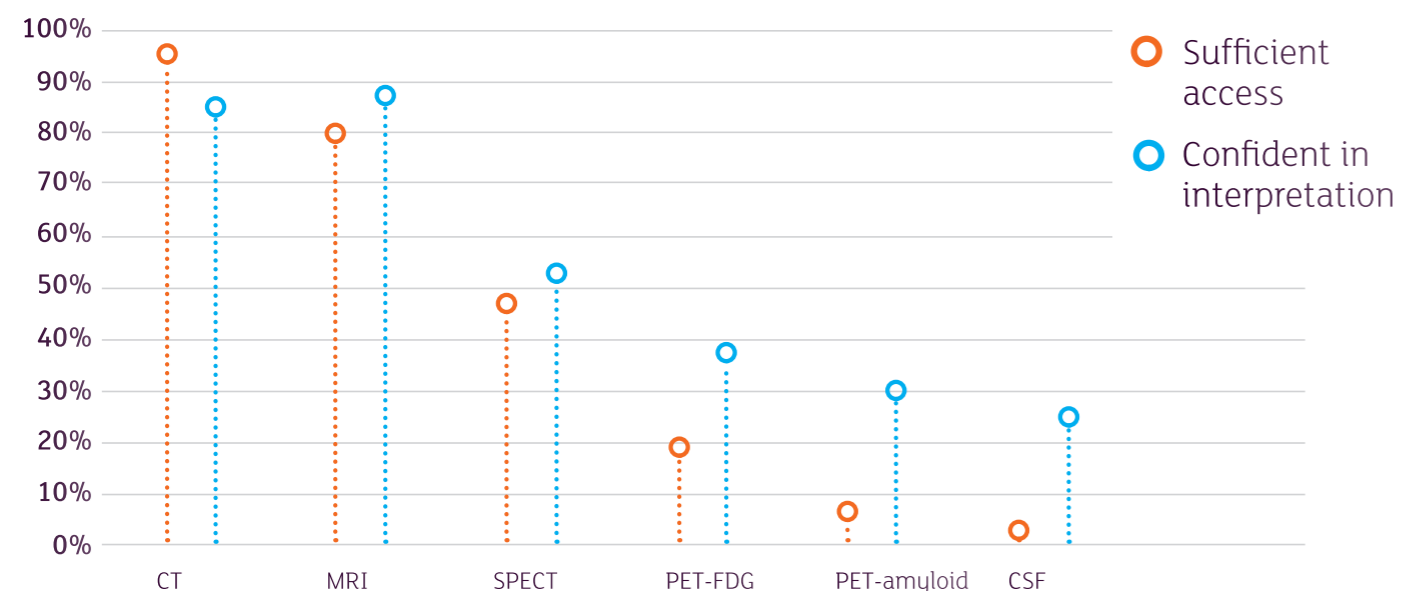


Figure 7: Access to and confidence in interpreting diagnostic and biomarker tests.

There is considerable reliance on neurology and radiology teams to provide access to these tests, as well as interpretation of scan results. Psychiatrists discussed that they do not routinely have access to neuroimaging training and that as diagnostic test results could sometimes be ambiguous, having such reliance on services that were often physically distant made it difficult to easily query results or to request second opinions. This has sometimes led to a reluctance to request use of these tests for future patients.

Our findings show that there is a correlation between the access to diagnostic and biomarker tests and psychiatrists' confidence in the interpretation of those test results. There is greatest access and clinical confidence in the interpretation of CT and MRI scans, while PET-amyloid and CSF tests have the least access and the least confidence in interpretation. Clinicians are less likely to continue the use of a test if they are not confident in the results. Therefore, the lack of access creates a vicious circle with lack of confidence. Investment in diagnostic infrastructure to increase capacity will be required.

Recommendation: The NHS should dedicate specific funding to increasing diagnostic infrastructure and improving equity of access.

Key finding: Access to diagnostic tests supports psychiatrists to make more accurate and timelier diagnoses.

Survey results showed that psychiatrists felt that the primary benefit to having sufficient access to diagnostic tests was the ability to use the positive findings to support their diagnosis of Alzheimer's disease (64%, figure 8). Another key benefit was to support the investigations of patients with young onset and atypical Alzheimer's disease. This finding reflected focus group observations that services specialising in these populations tended to have better access to a wide range of tests. Psychiatrists also felt that good access to a range of diagnostic tests improved their chances of making a timelier diagnosis and advanced their understanding of the disease.

“In the population that I see, which is often a lot of younger people, I'm working really, really hard to make a clear diagnosis for them and so any available option that I have at my fingertips I will be pushing to try and make a clear diagnosis because it's so supremely important... I don't know if it's just characteristic of seeing a younger group of people but working extremely hard mainly because the presentations are atypical and complex, and I need a lot of tools in order to make that diagnosis.”

(Consultant, ID34)

What are the main benefits of having access to biomarkers for Alzheimer's disease?

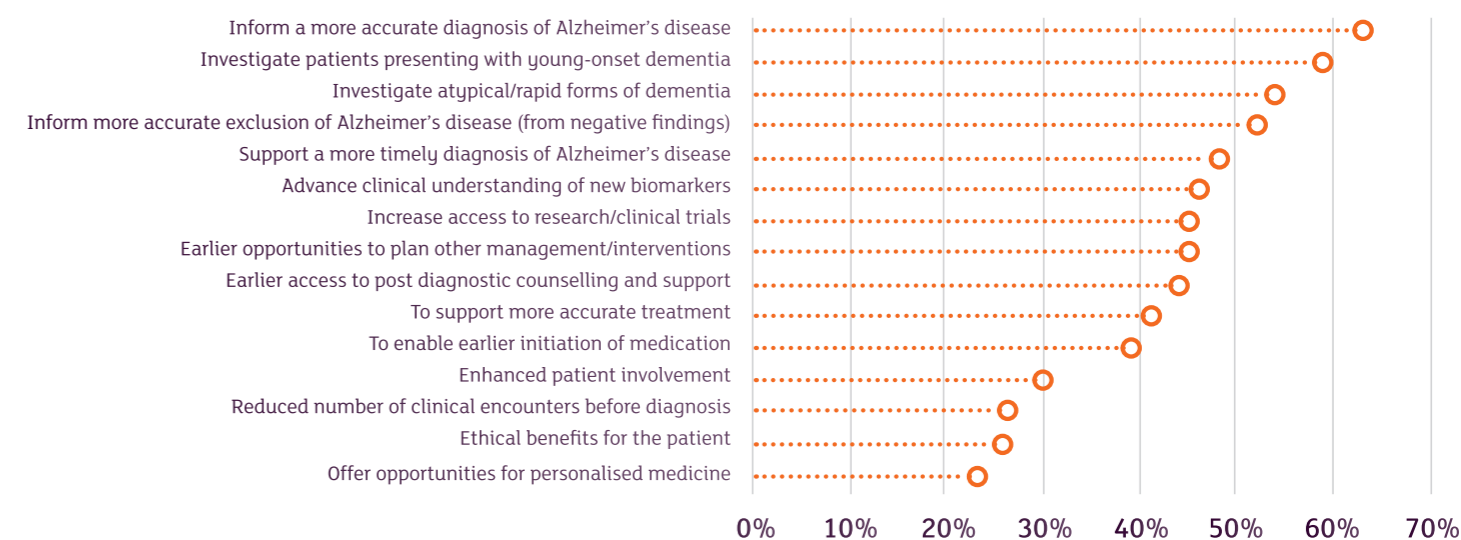


Figure 8: Perceived benefits of access to biomarkers for Alzheimer's disease.

Key finding: The use of biomarker tests in psychiatry is limited by the lack of infrastructure, clinical skills and collaboration between specialist services.

Psychiatrists reported that the main barriers they encountered to using diagnostic tests included limited infrastructure, lack of clinical expertise and a lack of commissioned services (see figure 9). Many of the barriers identified also impacted on decision-making processes regarding the communication of a formal diagnosis of Alzheimer's disease. It is intriguing to note that almost a quarter of survey respondents were concerned that molecular biomarkers may place too much emphasis on the biological rather than the clinical factors of the disease. This could be because psychiatrists are used to making diagnoses where there are clinical features, so a shift to earlier diagnosis may be more disruptive to usual practice than initially seems evident.

What are the main barriers to using biomarker investigations in your clinical services?

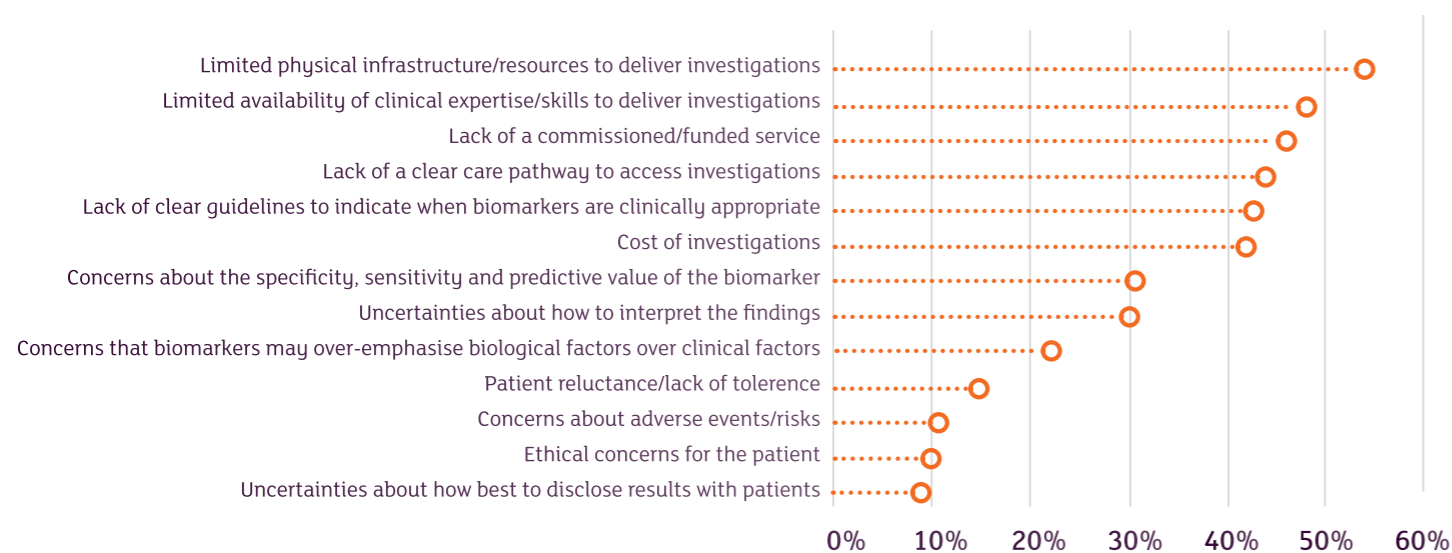


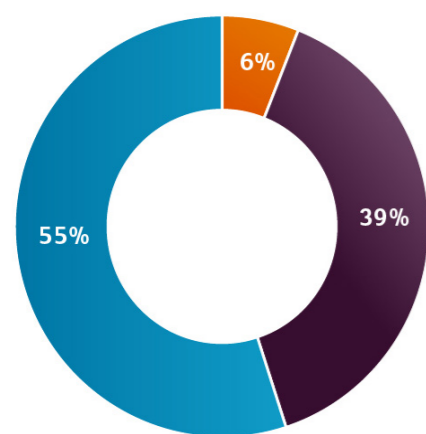
Figure 9: Perceived barriers to using biomarkers in clinical services.

Overall, our findings show the stark reality that for many psychiatrists there is very limited access to the key diagnostic tools for Alzheimer's disease. There was recognition that without appropriate access it will be very difficult for psychiatrists to develop the clinical skills and confidence to fully utilise the potential of these tests, with the negative impact that brings for their patients.

UK psychiatry services are not ready to implement new treatments for Alzheimer's disease

Key finding: Just 6% of psychiatry services are able to fully meet the current NICE guidelines regarding accessing further biomarker and diagnostic tests for Alzheimer's disease.

Only 6% of psychiatrists in the UK said that their services can fully meet the NICE 2018 recommended guidelines for biomarker tests (see figure 10). This finding highlights that the majority of services are unable to meet the criteria recommended for diagnosing patients with Alzheimer's disease now, and further emphasises the challenge ahead to prepare the NHS for the arrival of disease modifying treatments.



Are NICE guidelines relating to FDG-PET and CSF implemented in your clinical service?

● Yes - fully ● Yes - partially ● No

Figure 10: Current ability of services to implement NICE diagnostic guidelines for Alzheimer's disease.

Key finding: Although psychiatrists felt that delivering disease modifying treatments is an important part of holistic care, only 36% thought their services could adapt to deliver a new treatment within a year.

The majority of UK psychiatrists did not think their services have the necessary clinical skills and resources to deliver new therapies that could require biomarker testing and new methods of drug administration, such as infusion and subcutaneous injection (see figure 11).

Only 15% of psychiatrists thought their services could meet these requirements now, while 21% felt that they could access the resources needed to deliver therapies, stressing the importance of cross speciality working. Only 36% of survey responders thought their services could adapt to deliver new treatments within a year.

“I think most places at the moment are nowhere near set up for having the investigations it would require, let alone the treatments. So, it feels like we are quite a while away from being able to offer that kind of service. But obviously, if all those treatments and investigations [were something] that we could do, then yes, I think everyone's practice would change in terms of what they would do with pre-dementia patients.”

(Higher trainee, ID3)

Polling results from the 2021 Old Age Psychiatry Faculty conference supported our survey findings. These results showed that very few psychiatrists believed that their services could meet the requirements now (4%), but the majority thought their services could be ready to offer treatments in one to five years (see figure 12).

The overall view was that services were currently a long way from having the sufficient staffing, clinical skills and resources to offer investigations and treatments. The capacity required was expected to depend on the type of treatment that became available. For example, infusion procedures administered in a clinic would be more resource-intensive to administer than a treatment that could be given in tablet form. Nevertheless, as opposed to the current practice of many memory services which is to discharge those with a diagnosis of MCI, if there was treatment available for at least part of this patient group, the service would be required to continue patient care for a considerable time. This would add pressure to services which are already under-resourced and have long waiting lists. Further, it was anticipated that were a treatment to become available, people would be more likely to come forward with mild symptoms and concerns, so that demand, particularly for assessment and potential diagnosis, could increase dramatically. As a result, it was considered essential that a reliable and accessible biomarker test is available to identify those who would benefit from the treatment and ensure any treatment was used appropriately.

Which of the following statements reflects your service's ability to deliver disease modifying treatments that could include new methods of drug administration?

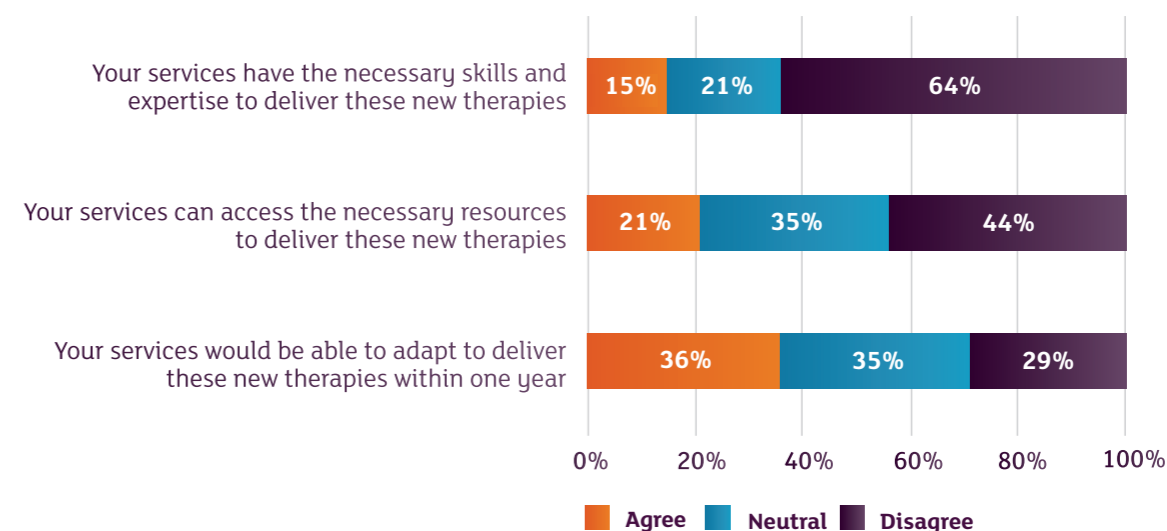


Figure 11: Psychiatrists' views on whether their services had the necessary skills and expertise to deliver disease modifying treatments.

Do you think your service would be ready to offer a disease modifying treatment if one were available?

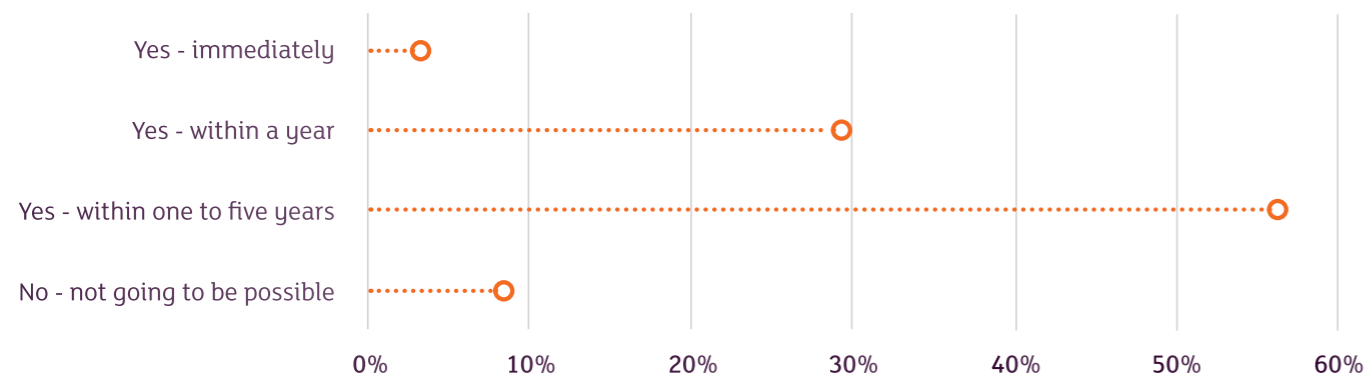


Figure 12: Perceived time needed to prepare services to deliver disease modifying treatments.

Key finding: Psychiatrists are enthusiastic about having a central role in the delivery of disease modifying treatments and highlighted the key areas where memory assessment services need to adapt.

The possibility of a disease modifying treatment for Alzheimer’s disease was met with great anticipation. Psychiatrists were enthusiastic about having a central role in the delivery of any new treatment. The belief that Old Age Psychiatry should be a core speciality to provide these treatments to patients was prominent in our focus group discussions and this finding was echoed in the polling results at the Old Age Psychiatry Faculty conference (see figure 13).

Despite the positivity expressed, there were concerns about the changes that new treatments would bring to assessment services, and how these adaptations would look in practice. In the survey and focus group discussions, psychiatrists told us that improving clinical skills and competencies, making changes to service models, and increasing cross specialty working, were the key factors that would need to be urgently addressed. It was felt that these changes were not only necessary to prepare services for delivering new treatments (figure 14) but to improve services abilities to provide appropriate diagnostics to patients currently.

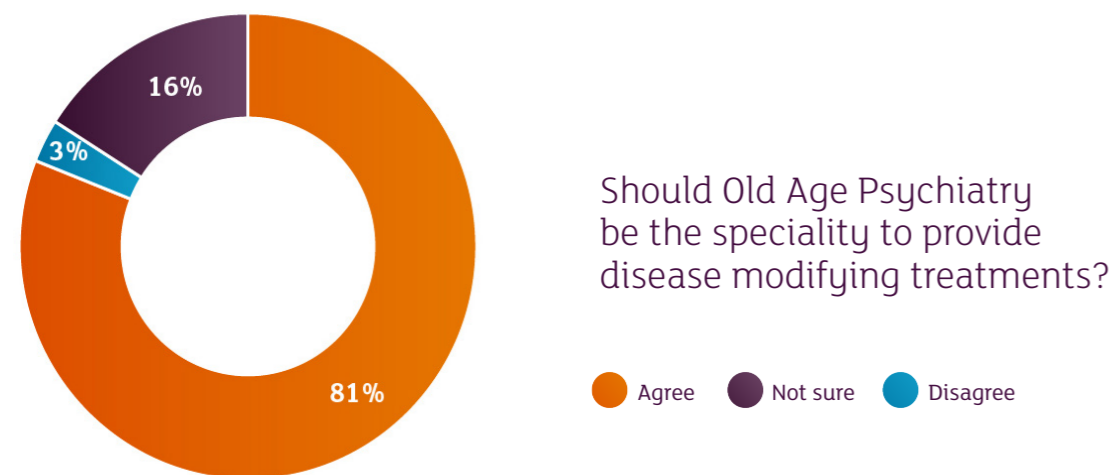


Figure 13: Psychiatrists’ opinions on psychiatry services delivering disease modifying treatments.

What do you see as being the most important factors to address in order to deliver disease modifying treatments?

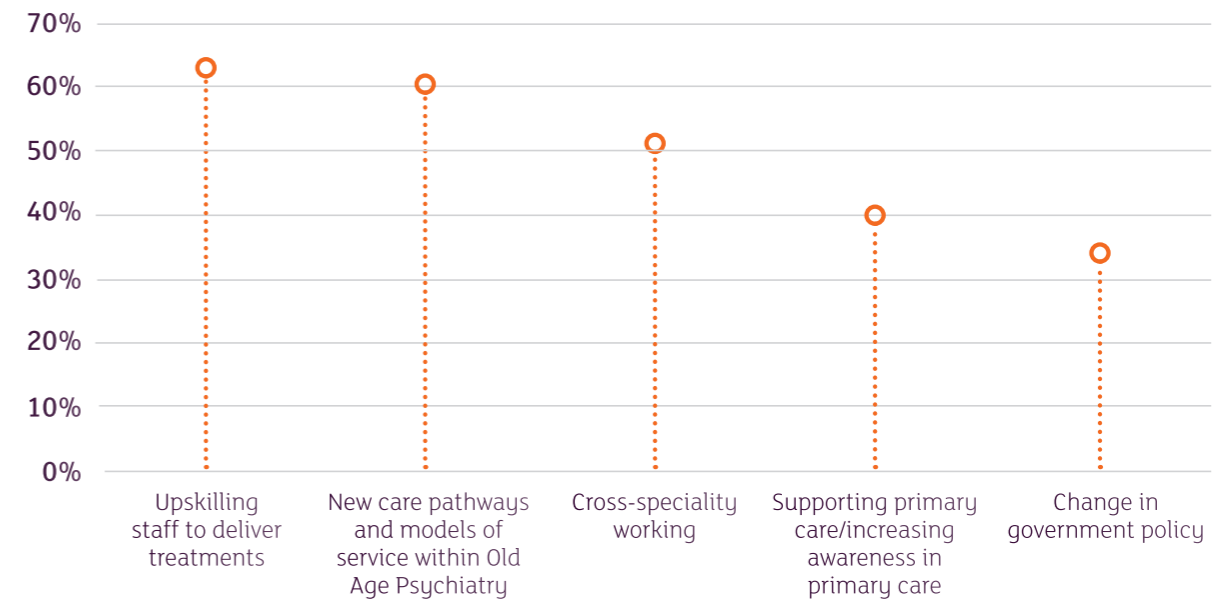


Figure 14: Service areas that are most important to focus on improving to enable delivery of new treatments.

• Additional training is needed to support earlier diagnosis to provide delivery of disease modifying

In general, psychiatrists were open to discussing ways that they could be more directly involved with diagnostic assessments within memory clinics. They recognised the need for ongoing professional development to ensure all clinicians could keep up to date with innovations in the diagnostic field. Suggestions to improve integration of imaging biomarkers and tests into clinical practice included:

- A need for better IT access to diagnostic images.
- More training opportunities for trainees and consultants.
- Access to neuroimaging training.

The experience of our focus group participants was that arranging and accessing neuroimaging training was currently difficult, but, when achieved, it was considered invaluable in supporting more informed diagnoses. There is a need to develop closer working practices between memory services and acute hospital services where neurological and radiological services are located to enable more opportunities for additional training.

Neurology and radiology services typically provide diagnostic and biomarker tests, however, preparing for the future will require thought as to how memory services can have a higher involvement in the delivery of these assessments.

Psychiatrists were supportive of exploring how CSF sampling could be expanded, made more accessible and potentially more directly available via memory clinics. It was suggested that the introduction of such a procedure would enhance the skill base of the specialty and improve patient accessibility. It was recognised that psychiatrists would not usually have the skills to offer this investigation, and collaboration with other medical colleagues (such as neurologists and anaesthetists) would be required.

There may also be opportunities to explore training of other clinical staff to undertake lumbar punctures. In order to retain skill and confidence levels, lumbar puncture procedures would need to be conducted regularly. Therefore some psychiatrists highlighted that this approach should only happen when there was sufficient local demand for a regular CSF sampling service. Improving public and clinician perception of lumbar punctures will be important in raising willingness to recommend and undergo this procedure in the future. It was suggested that highlighting evidence of patient tolerability and the utility of CSF would be beneficial for both clinicians and patients.

“You actually have to actively seek out those opportunities, maybe as part of your special interest. That’s something I’ve been able to set up in [my local area] but that’s partly also because of the good relationship between my consultant and the neuroimaging department within the hospital”.

(Higher trainee, ID3)

“Maybe it is because we worry that a lumbar puncture is too difficult for a patient, but I think our colleagues in the acute trust would dispute that actually... If we were better informed maybe, we would be more inclined to refer for it or offer it, or even put forward a case for being able to develop it where we work.”

(Consultant, ID16)

Blood biomarkers were recognised as having great future potential. However, it is not clear if, and when, they would be able to fully replace other molecular biomarkers such as CSF or PET-amyloid. While a blood test could alleviate many of the current challenges set out in this report, there remains a legitimate need to consider how to expand diagnostic infrastructure within CSF and PET-amyloid¹⁷.

Training and upskilling of psychiatric service staff is required in order to prepare services, potentially to administer biomarkers and treatment, but also in interpreting biomarker results, monitoring patient response to treatment and providing follow-up care. It was suggested that such areas should be added to the current training programme for psychiatry trainees, including greater coverage of neuropsychiatry.

Recommendation: Delivery of ongoing training and professional development by the NHS and other key stakeholders to support the changes in clinical practice required to deliver disease modifying treatments – including use of emerging biomarkers, treatment delivery and safety monitoring.

• **Multi-speciality working, between dementia specialities and more widely with primary care, needs to be enhanced and strengthened.**

Cross-speciality working with specialisms such as neurology, geriatrics and neuroradiology was considered to be essential to developing a psychiatry service that could provide high quality treatment. There were suggestions of joint clinics where patients could receive various services from different specialists located in one clinic, similar to current practice in oncology. Focus group discussions recognised that primary care colleagues held a crucial role in the identification and assessment of early Alzheimer’s disease. The majority of memory clinic referrals come from primary care, and if

these at-risk patients are not identified in the early stages, memory assessment services will not see these patients until too late in their disease progression. GPs need support and training to help identify MCI and early Alzheimer’s disease patients who can be referred to services for diagnosis and, in time, treatments. Old age psychiatrists are keen to work with primary care colleagues to ensure collaboration and the development of coherent clinical pathways across the health system.



“Working together (with neurology, neuroradiology, neuropsychology) in joint clinics is completely appropriate but it is difficult to see how that could be organised at local level at the moment when there are access barriers and practical barriers.”

(Consultant, ID34)

More broadly there was enthusiasm to nurture and support stronger multi-disciplinary working, to share skills and approaches from each specialty and to support a high-quality service for patients. There is an important role for strengthened cross-speciality working to ensure that the skills and competencies of the relevant specialities are fully utilised both to benefit colleagues and patients. The arrival of a new treatment for Alzheimer’s disease will accelerate the need to work collaboratively, to ensure that skills and capacity are utilised to best effect.

Recommendation: Development of a cross-speciality approach, led by the NHS and in conjunction with clinical stakeholders, to support multidisciplinary working.



• New clinical pathways would need to be developed.

It was recognised in the focus groups that new treatments for Alzheimer’s disease would drive the development of new clinical pathways. Within the focus groups there was a preference for existing local memory services to be restructured so that they could offer such treatments, rather than diverting patients to regional, tertiary hubs, in order to ensure universality of access. Furthermore, in order to create a nationally standardised, streamlined care pathway, it was felt that the current geographical variation in access to biomarkers needed to be resolved.

It was argued that it made sense that the team who administered and monitored the effects of treatment was the same as that which delivered the diagnosis and provided follow-up holistic patient care. The latter being an area that was seen as a clear and unique strength of Old Age Psychiatry services.

There was a strong steer to ensure that any changes to clinical pathways should provide more capacity at memory clinic level, rather than to only increase diagnostic and treatment capacity at regional or specialist centres. Desire to keep these services local reflected psychiatrists’ experiences that patients prefer to access local services and are often unwilling to travel long distances. There was recognition both in the focus groups and at the Old Age Psychiatrists Faculty conference that if there is insufficient diagnostic capacity at the time of first access to a disease modifying treatment, there may need to be a short-term regional approach while investment in infrastructure and training enables local services to ultimately deliver new treatments.

Recommendation: Development of new clinical pathways, led by the NHS and in conjunction with clinical stakeholders, to support the equitable delivery of new treatments.

• Commissioning of diagnostics and any new clinical pathways will be needed to enable the delivery of disease modifying treatments.

Psychiatrists felt that the available diagnostic infrastructure could be better utilised if relationships between clinical specialities were strengthened and formalised. Many of the psychiatrists we spoke to relied on informal relationships with colleagues in radiology and neurology to provide them

with access to diagnostic tests. These connections were sometimes based on good will and professional interest, which, while beneficial for those involved, can further enhance inequality of access even within a particular geographical area.

“Having to go through neurology to seek investigations for a patient is completely inappropriate... there should be service level agreements... to allow us to refer directly. Access to CSF seems to be hugely problematic locally.”

(Higher trainee, ID36)

The lack of current diagnostic capacity reflects the lack of commissioned molecular diagnostic access within memory services. Where commissioned services do exist, they are often inadequate, or are not prioritised against demands from other disease areas. Annual quotas for imaging diagnostics, particularly PET-amyloid, are often not sufficient to match patient volume. One psychiatrist spoke of having a quota of four scans per year. Sometimes even these scans could not be completed as other departments, such as oncology, were prioritised and patients from memory services were continually moved down the waiting lists. Processing complications, including indirect referral procedures and confusion over service payment causes further delays.

Psychiatrists felt that development of local service level agreements that allow memory clinics to refer their patients directly to other specialists would be a significant improvement as a starting point to improving diagnostic

capacity and regular access to a range of diagnostic techniques. Individual services may also be making adaptations to their own service models, one participant mentioned that their service was in the process of developing an interdisciplinary joint model to overcome the barriers they had experienced in accessing CSF. The model proposed would allow neurologists to set up a clinic with access to scans and on-site CSF sampling.

Commissioning and specialist commissioning procedures need to be strengthened in order for psychiatrists to meet the current and future demands of diagnostic testing. The development of Integrated Care Systems in England may encourage a more joined up approach to service delivery, which could support improved diagnostic referral pathways. Formalising these arrangements between services would help to stabilise the relationships and ensure that patients receive equal opportunities to assessment, diagnosis and subsequent management.

Recommendation: The NHS should work with key organisations to commission a clinical pathway that would meet the needs of patients to access a disease modifying treatment.

• Psychiatrists are keen to support greater participation in research.

Another area of cross working improvement that could benefit those living with dementia was research involvement. There were clear opportunities to increase the promotion of research and clinical trials in psychiatry-led services. We found that 93% of psychiatrists thought that patients should be given more opportunities to participate in clinical trials,

and 80% said that they would like to have more information on clinical trials (see table 2). Improving the clinical trials space in Alzheimer’s disease research is imperative to the eventual approval of a disease modifying treatment, which will in turn drive the necessity for earlier diagnosis.

Current involvement with research into new therapeutic treatments for Alzheimer’s disease	Agreement
I think patients should have greater access to clinical trials	93%
I would find it helpful if I knew more about clinical trials	80%
I refer/recruit patients for these studies	63%
I participate in running pharmacological clinical trials	15%

Table 2: Psychiatrists’ current involvement and opinions on research and clinical trials.



Conclusion

This insight project has enabled psychiatrists to reflect on their current perceptions about diagnosing Alzheimer's disease at an early stage. We have made a number of recommendations to address some of the challenges, issues and barriers identified by psychiatrists. While many are framed around the context of new treatments in the field, currently still a theoretical concept, we are clear that most recommendations need to be addressed now if we are to be ready for the arrival of disease modifying treatments. We would make the case that we need skilled clinicians, sufficient service capacity and equitable access to diagnostic infrastructure now even if new treatments are not immediately available.

Our recommendations

1. The NHS should dedicate specific funding to increase diagnostic infrastructure and improve equity of access.
2. The NHS should work with key organisations to commission a clinical pathway that would meet the needs of patients to access a disease modifying treatment. This would need commitment from NHSE/I, devolved nation equivalents and clinical organisations to ensure the:
 - a. Development of a cross-speciality approach to support multidisciplinary working led by the NHS and in conjunction with clinical stakeholders.
 - b. Development of new clinical pathways, to support the equitable delivery of new treatments led by the NHS and in conjunction with clinical stakeholders.
 - c. Delivery of ongoing training and professional development to support the changes in clinical practice required to deliver disease modifying treatments – including the use of emerging biomarkers, treatment delivery and safety monitoring.
3. A commitment across the clinical community to develop and use consistent clinical terminology for early Alzheimer's disease.

Commitments

The Royal College of Psychiatrists has a unique role to support psychiatrists and relevant mental health service clinicians in being able to respond effectively to the introduction of disease modifying treatments. The College will seek to do this by:

a

Focusing initially on the existing workforce and producing appropriate Continuous Professional Development (CPD) support.

b

Engaging with leadership in the sector who are able to effect the changes needed in service configuration.

c

Ensuring that the updated Psychiatric Old Age curriculum provides for training, which aligns with medical advancements, to deliver the skilled & competent future workforce that people with dementia need.

The opportunity to engage with psychiatrists across the UK and to better understand their perspectives around the diagnosis of early Alzheimer's disease has been a fascinating experience. While for some topics there remains a breadth of perspectives and there are areas where greater clarity or certainty is needed, there is much common ground. The strength of feeling around the role of psychiatrists in supporting the implementation of treatments is constructive and forward looking. Psychiatrists are rightly concerned that their services do not currently meet national clinical guidelines, and that new service developments can only be achieved with investment to increase and enhance capacity,

infrastructure and clinical skills.

The impact of COVID-19 will create new challenges as services seek to address the backlog of patients who have not been able to seek a diagnosis for Alzheimer's disease. However, COVID-19 has highlighted the vulnerability of people with dementia. This cannot continue. Research, innovation and progress towards new treatments that can delay, or slow disease progression are the only way we will ultimately minimise the devastating impact of the diseases that cause dementia.

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Appendices

Appendix 1: Additional methodological details

Survey

In questions where psychiatrists were asked to consider the usefulness of commonly used pre-dementia terminology, these included mild cognitive impairment (MCI), MCI amnesic subtype, prodromal Alzheimer’s disease, pre-dementia Alzheimer’s disease, subjective cognitive impairment and age-associated related memory impairment. These options were preselected in the survey and discussions in the focus group built on these terms therefore, while others may be used in different services they are not covered in this report.

Participants were also asked their thoughts on biomarker and diagnostic tests for Alzheimer’s disease. Tests considered in this survey were, cerebrospinal fluid (CSF tests), and brain imaging including CT (computed tomography), MRI (magnetic resonance imaging), SPECT (single photon emission computed tomography), FDG-PET (fluorodeoxyglucose positron emission tomography) and PET-amyloid scans (positron emission tomography amyloid). We did not include neuropsychological or EEG tests. Blood tests and PET tau were also not included as these have not yet been developed into clinically available tests.

Survey questions

Question 1	Which option best describes your role as a doctor?
Question 2	Which option best describes your current area/s of practice in Old Age Psychiatry
Question 3	How many years have you practiced in Old Age Psychiatry
Question 4	What is the geographical location of your employer (by division)?
Question 5	Alzheimer’s disease is increasingly conceptualised as a disease continuum starting with a pre-symptomatic phase, then a symptomatic pre-dementia phase, and finally a clinical dementia phase. Overall, how helpful do you feel this approach is for current NHS practice?
Question 6	After assessment and investigation, you suspect that a patient’s MCI symptoms are due to Alzheimer’s disease pathology, yet the symptoms do not meet the clinical threshold for dementia. Thinking of which diagnostic term you would currently use in this situation please rate how helpful you find each of these terms in clinical practice?
Question 7	As before, after assessment and investigation you suspect a patient’s presentation is consistent with the symptomatic but pre-dementia phase of Alzheimer’s disease. Would you make a diagnosis of “Alzheimer’s disease” before the symptoms reach the threshold of dementia?
Question 8	Which of the following concerns do you have that may influence whether you diagnose Alzheimer’s disease prior to dementia?
Question 9	How helpful are these biomarkers in dementia due to Alzheimer’s disease?
Question 10	How helpful are these biomarkers in the symptomatic but pre-dementia phase of Alzheimer’s disease?
Question 11	How helpful are these biomarkers in the presymptomatic phase of Alzheimer’s disease?
Question 12	How important do you think it is for Old Age Psychiatry services to have access to the following biomarkers to enhance diagnostic assessment of Alzheimer’s disease?
Question 13	Do you have access to these biomarkers?
Question 14	How would you rate your confidence in interpreting the results from the currently available biomarkers to detect changes consistent with Alzheimer’s disease?
Question 15	What would you see as the main benefits of having access to biomarkers for Alzheimer’s disease?
Question 16	The NICE Dementia guidelines from 2018 state that if after routine assessment the diagnosis of dementia remains uncertain and Alzheimer’s disease is suspected, when clinically beneficial consider using FDG-PET (or SPECT) or CSF measurements of tau and amyloid. Thinking about being able to offer access to FDG-PET and CSF, are these NICE guidelines implemented in your clinical service?

Question 17	What do you see as the main barriers to using biomarkers for Alzheimer’s disease in your clinical services?
Question 18	Which one of these two statements most closely aligns with your views about the best way to explain to patients and the public the continuum of Alzheimer’s disease from pre-dementia through to clinical dementia?
Question 19	In the context of current knowledge and practice, how strongly do you agree that the majority of the public would want to know if they had Alzheimer’s disease prior to the onset of symptoms?
Question 20	How strongly do you agree that the emergence of disease modifying treatments will positively change the public’s awareness and perception of Alzheimer’s disease?
Question 21	If a disease modifying treatment for Alzheimer’s disease emerges in the next few years, it is likely to include new methods of drug administration. This could include subcutaneous injection or intravenous infusion and (subject to approvals) require biomarker assessment prior to treatment. It may also be available to patients with prodromal Alzheimer’s disease as well as those with dementia due to Alzheimer’s disease. Do you agree that (a) Your services have the necessary skills and expertise to deliver these new therapies (b) Your services can access the necessary resources to deliver these new therapies (c) Your services would be able to adapt to deliver these new therapies within one year
Question 22	If a disease modifying treatment for Alzheimer’s disease emerges as described in the previous question, what would you see as the most important factors to address to be able to deliver these treatments?
Question 23	Which of the following statements describes your current involvement with research into new therapeutic treatments for Alzheimer’s disease (a) I participate in running pharmacological clinical trials for Alzheimer’s disease (b) I refer / recruit patients to these studies (c) I would find it helpful if I knew more about clinical trials in Alzheimer’s disease (d) I think patients should have greater access to clinical trials

Focus group analysis

The data from the focus groups were analysed using a framework approach, involving two stages. First, the analytical framework was set up using the structure of the topic guide used to guide discussion of the groups, with matrix columns representing each question theme and rows representing responses from each group. The second stage of analysis involved working through the matrix in detail, drawing out the range of experiences and views, identifying patterns, contrasts and similarities, and interrogating the data to seek to explain emergent themes and findings for each question. All quotations included in this report were obtained from the focus groups.

Faculty of Old Age Psychiatry meeting polling questions

- In principle, should Old Age Psychiatry services provide disease modifying treatments?
 - Yes
 - Not sure
 - No
- In practice, do you think your service would be able to offer a disease modifying treatment if available?
 - Yes – immediately
 - Yes – within a year
 - Yes – within 1-5 years
 - No – this is not going to be possible
- Which model of delivery of disease modifying treatments do you think is the best future pathway?
 - Disease modifying treatments should always be provided by regional centres
 - Disease modifying treatments should initially be provided by regional centres with phased expansion to local Old Age Psychiatry services
 - Disease modifying treatments should be provided by local Old Age Psychiatry services from the outset



Alzheimer's Research UK is the UK's leading dementia research charity dedicated to making life-changing breakthroughs in diagnosis, prevention, treatment and cure.

For more information visit www.alzheimersresearchuk.org or contact the Policy Team at policy@alzheimersresearchuk.org

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The Royal College of Psychiatrists (RC Psych) was founded in 1841 and is the main professional organisation of psychiatrists in the UK. RC Psych is responsible for representing psychiatrists, psychiatric research and for providing public information about mental health problems.

For more information visit www.rcpsych.ac.uk

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