ALZHEIMER'S RESEARCH UK FOR A CURE

TIPPING POINT: THE FUTURE OF DEMENTIA

SEPTEMBER 2023

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FOREWORD

"Never let one failure from the past hold you back in the future." Nobody plans to fail, but failure is inevitable. What matters most is that we use each failure to build momentum, not slow it. That's especially true when it comes to medical research.

Around a decade ago, some pharmaceutical companies witnessed a litany of failures and, in contrast to that phrase, I saw many give up on one of humanity's cruellest health conditions. Dementia research was deemed by some to be a costly, hopeless cause and investors chased larger rewards in other medical fields. Notably those that weren't reliant on accessing and understanding the complexities of the human brain.

"If dementia research has taught us anything in the past year, it's that we're now at a tipping point for change."

Research into illnesses we used to think were intractable, like cancer and heart disease, powered ahead. Thanks to that research, there are many survivors of these conditions. But that's not true for dementia. Nearly one million people are living with dementia in the UK today. Tragically, none of them will survive.

I'm incredibly hopeful of a world where this won't be the case. And if dementia research has taught us anything in the past year, it's that we're now at a tipping point for change.

The arrival of lecanemab and donanemab, the first ever Alzheimer's drugs that tackle the cause of the disease rather than only its symptoms, proves what we've always known – that through research we can find a way to cure dementia.

The power of scientific discovery, coupled with lessons learned from past research failures, means we now have a new sense of urgency in the UK, fuelled by opportunity. And as the research community takes inspiration from these developments and redoubles its efforts to find drugs that are even more effective and with fewer side effects, this opportunity will only continue to grow. As a proud member of the Covid Vaccines Taskforce, I've seen the UK's clinical research environment deliver great discoveries for the benefit of the world. I know it can do the same for dementia.

But making discoveries alone is not enough. Discoveries need to be turned into diagnostics, treatments and prevention measures that can stop dementia in its tracks. By prioritising action on dementia, there is a significant opportunity for policy makers to improve societal wellbeing and lifelong health, reducing the burden on our NHS and most importantly, building a future free from the fear, harm and heartbreak of dementia.

The voices of people affected by dementia – people like Alison, Anna, Des, Frank, Valli, and Zac, who you'll hear from in this report – must be heard at the very top. This is a wake-up call. It's time for politicians to listen and take action on the greatest health challenge of our time.

Divya Chadha Manek, OBE
Trustee, Alzheimer's Research UK

EXECUTIVE SUMMARY

Alzheimer's Research UK is the leading dementia research charity in the UK working to revolutionise the way we treat, diagnose and prevent dementia. Almost one million people are living with dementia in the UK today. One in two of us will be directly affected in our lifetime, either by caring for someone with the condition, developing it ourselves or both.

We are at a tipping point. New ways of diagnosing the diseases that cause dementia earlier and more accurately, like blood tests for Alzheimer's disease, are showing promise. New treatments that can affect the course of Alzheimer's disease could be approved in the UK in just a few months' time. New insights are showing how we can reduce the prevalence of dementia in the first place by addressing factors that affect our brain health. This life-changing progress, made possible by breakthroughs in dementia research, means we can change the future of dementia. We don't have to watch the number of people in the UK living with dementia continue to increase to 1.6 million by 2050. We can start to ease some of the fear, harm and heartbreak caused by dementia. We can alleviate the pressure it places on society, our health and care system, and the economy. But only if we act now.

We call on all political parties to **harness the outputs of dementia research to revolutionise the way we prevent, diagnose and treat dementia.**

"The voices of people affected by dementia must be heard at the very top. This is a wake-up call. It's time for politicians to listen and take action on the greatest health challenge of our time."

Divya Chadha Manek, OBE, *Trustee, Alzheimer's Research UK*

1.
LOOKING AFTER OUR BRAIN HEALTH TO REDUCE DEMENTIA RISK NOW

The challenge

New dementia treatments on the horizon offer hope for the future, but there is a pressing need to identify and understand the factors that increase our risk of dementia. By looking after our brain health now and addressing risk factors such as hearing loss and high blood pressure, we can help prevent dementia cases in the future, sparing families from its heartbreak. We need a combined approach that reduces risk across the whole population and provides targeted interventions for the most at-risk groups.

The solution

Create a **cross-governmental strategy for the prevention of ill health** to address the health and lifestyle factors that affect our risk of developing dementia, particularly those beyond individuals' control, like air pollution.

KEY FACTS AND STATS

40%
of dementia cases world-wide could be preventable

£111BN
– annual burden of neurological diseases like dementia on the UK economy

£1.8BN
potential annual dementia-related savings in England alone if three targeted interventions were implemented

ONE IN SIX
dementia cases in East London could be prevented by lifting the poorest 20% out of poverty

Anna, whose parents both lived with Alzheimer's disease, wants the government to prioritise brain heath.

Click to play the film

2. DIAGNOSING AND TREATING PEOPLE WHILE WE CAN STILL MAKE THE BIGGEST DIFFERENCE

The challenge

To treat people living with dementia, we must first be able to diagnose them, but current diagnostic capacity in the UK is severely limited after years of underinvestment. The way we diagnose and treat people also isn't geared up to deal with the rapidly evolving research into new diagnostic tools and treatments. Dementia services urgently need support to prepare for the arrival of disease-modifying treatments so they can work across specialities, embrace new technologies and adopt innovation.

The solution

Invest in the current diagnostic pathway to make it fit for purpose and fit for the future. This means increasing capacity in current technologies while paving the way for next-generation diagnostics like blood tests.

KEY FACTS AND STATS

38%
of over-65s in England estimated to be living with dementia never get a diagnosis

TWO IN THREE
memory assessment services said they would need more than a year to get ready to deliver new treatments

2%
of people can currently access recommended advanced diagnostic tests like PET scans or lumbar punctures on the NHS

Zac, whose father was diagnosed with young-onset Alzheimer's in 2019, explains the challenges of seeking a diagnosis.

Click to play the film

3.
WHAT ARE NEW TREATMENTS WORTH? VALUE AND AFFORDABILITY CHALLENGES

The challenge

The first ever treatments that can slow cognitive decline in people with Alzheimer's disease could be approved in the UK in just a few months. But these disease-modifying treatments won't be seen as affordable by the NHS if compared to current spend on dementia, which is just £1.7bn per year. A key challenge is that the impact on carers' quality of life and their ability to remain in the workforce isn't taken into consideration when assessing the affordability of new drugs.

The solution

Ensure new disease-modifying treatments for dementia are available on the NHS, by creating a world-leading regulatory and clinical adoption pathway for new treatments and considering the full benefit to society of new dementia treatments when assessing their affordability.

KEY FACTS AND STATS

140
new dementia treatments currently in clinical trials

TWO
new disease-modifying treatments for Alzheimer's disease now available to people in the US

JAN 2024
– the first new treatments for dementia could be approved for use in the UK

£22.7BN
– annual cost of dementia on social and informal care

1.1M
25- to 49-year-olds are out of work because of caring responsibilities

Des, who lives with dementia with Lewy bodies, and his wife Valli, explain why the possibility of new treatments brings hope to so many.

Click to play the film

4.
FOR A CURE: ACCELERATING DEMENTIA RESEARCH

The challenge

We are on the cusp of a new era of disease-modifying treatments for dementia: a strong environment for dementia research is essential to make this a reality. Although investing in dementia clinical trials would benefit families affected by dementia and the UK economy, the UK is currently falling behind other countries. People living with dementia in the UK are less likely to be offered the opportunity to take part in research and clinical trials, both in comparison to other health conditions and to other countries.

The solution

Establish the UK as a world leader in dementia research, capitalising on initiatives such as the Dame Barbara Windsor Dementia Mission and increasing opportunities for people to participate in research across the country.

KEY FACTS AND STATS

£2.91 FOR EVERY £1
– estimated economic benefits of dementia research investment between 2020 and 2040

£355M
– NHS income from delivering commercial clinical trials across all disease areas in 2019

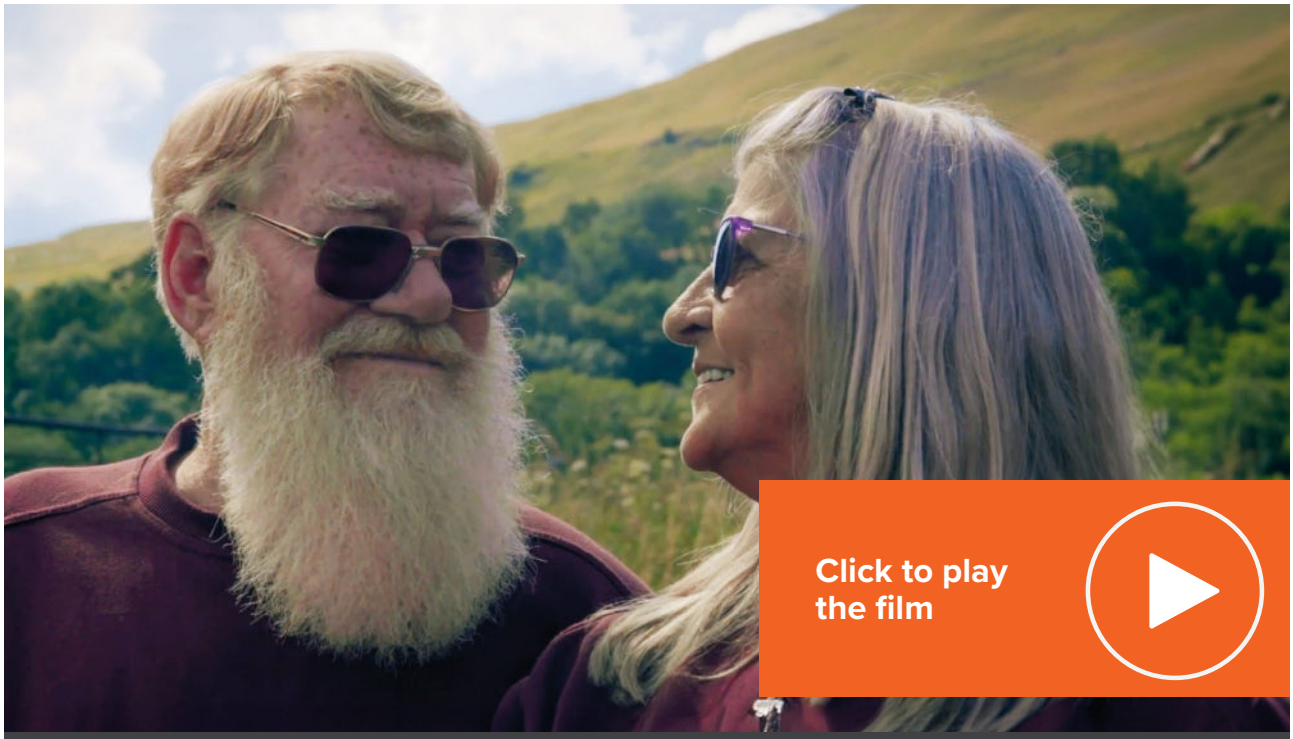
7%
– UK share of current clinical trials for dementia

2%
of people with a dementia diagnosis are currently registered to hear about clinical trials

Frank, who is living with Alzheimer's, and his wife Alison, explain why they're taking part in dementia research.

Click to play the film

INTRODUCTION



Dementia devastates families. We exist for a cure.

Dementia robs us of everything that matters. Our memories. Our connections. Our story. Dementia is the biggest killer in the UK, and over half of us know someone affected by it.[1] No wonder, then, that it is the most feared condition amongst people aged over 55.[2]

Almost one million people are living with dementia in the UK today. Tragically, not one of them will survive. If nothing changes, one in two of us will be directly affected by the condition in our lifetime – either by developing it ourselves or caring for someone who has it.[3]

Not only does dementia cause harm and heartbreak to millions, but it is completely unsustainable for our health and care system. The economic cost to the UK of caring for people with dementia is expected to grow from £25bn in 2021 to £47bn by 2050. It will be the nation's most expensive health condition by 2030.[4]

One in five of us still think dementia is a natural part of ageing and can't be stopped, but that's wrong. Dementia is caused by physical diseases, like Alzheimer's, and we know diseases can be cured. If we can find ways to prevent or cure the diseases that cause dementia, we can turn the tide. We don't have to watch the number of people in the UK living with dementia continue to increase to 1.6 million by 2050.[5]

We are at a tipping point. New treatments that can affect the course of diseases like Alzheimer's are becoming available. New insights are emerging showing how we can reduce the prevalence of dementia in the first place. This life-changing progress is thanks to breakthroughs: recent investment in dementia research is beginning to bear fruit.

We can start to ease some of the fear, harm and heartbreak caused by dementia. We can alleviate the pressure it places on society, our health and care system, and the economy. But only if we act now.

We call on all political parties to **harness the outputs of dementia research to revolutionise the way we prevent, diagnose and treat dementia.** This means making a commitment to:

1. Create a cross-governmental strategy for the prevention of ill health to address the health and lifestyle factors that affect our risk of developing dementia.
2. Invest in the current diagnostic pathway to make it fit for purpose and fit for the future.
3. Ensure new dementia treatments are available on the NHS as soon as possible.
4. Establish the UK as a world leader in dementia research.

Alzheimer's Research UK is the UK's leading dementia research charity. We're striving for a cure, by revolutionising the way we treat, diagnose and prevent dementia. But we cannot conquer dementia alone. In this report we set out the steps government can take now – and that all political parties should commit to taking in the future – to help tip the scales towards a better future for those affected by dementia.

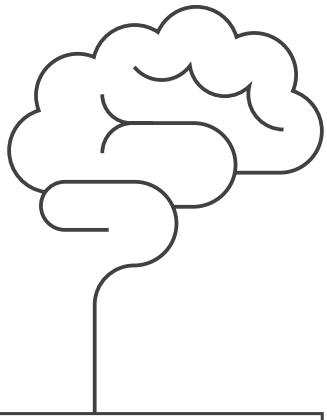
Acknowledgements

We would like to acknowledge the invaluable contributions of our Policy Insights and Experience Panel, a community of individuals from across the UK with lived experience of dementia,[6] as well as the clinicians, researchers and policy makers who provided advice and challenge. We would also like to thank those who have shared their stories about dementia through videos and quotes.

A note on scope

At Alzheimer's Research UK, our focus is on using progress in biomedical research and innovation to benefit people affected by dementia. This means that while we acknowledge the vital role of post-diagnostic support and care, these topics are not within the scope of our work.

UNDERSTANDING DEMENTIA



Dementia is not a disease. It is a word used to describe what occurs when brain function is disrupted, particularly when it affects our memory, speech or thinking.

Alzheimer's disease is the most common cause of dementia, accounting for about two-thirds of cases. Other causes include vascular dementia, dementia with Lewy bodies, frontotemporal dementia, Parkinson's disease dementia, posterior cortical atrophy and primary progressive aphasia.

- Although often thought of as a disease of older people, 7.5% (70,800) of people with dementia in the UK are under 65 when diagnosed. Clinicians call this 'young-onset dementia'.
- It is possible to have more than one of the diseases that cause dementia at the same time. Clinicians call this 'mixed dementia'.

CHALLENGES

ONE IN TWO

of us will develop dementia ourselves, care for someone with dementia, or both.

Only a third of people realise they can reduce their dementia risk.

£25BN

- the cost of dementia to the UK each year. This will grow to £47bn by 2050.

OPPORTUNITIES

140 new dementia treatments currently in clinical trials.

40% of all dementia cases could be prevented or delayed by promoting brain health.

£2.91 FOR EVERY £1

estimated economic benefits of dementia research investment between 2020 and 2040.

THE CHALLENGE

Despite the scale and impact of dementia, the inaccessibility of the brain and historic global underinvestment in research has resulted in a limited understanding of dementia prevention and a lack of treatment options. We have been slow to understand the factors which increase our risk of dementia, and there have been no new treatments for over 20 years. We still have no drugs available in the UK that can slow or stop the diseases which cause dementia.

Without hope of a treatment there has been no urgency to improve dementia diagnosis. Dementia is currently diagnosed far too late, with most people waiting years to seek a formal diagnosis. One in three people with dementia will never receive a diagnosis at all. Without an accurate and early diagnosis, we can't recruit suitable participants to clinical trials. Without the right participants, trials will never succeed – and so the cycle of no new treatments continues.

A TIPPING POINT

Today, we are at a tipping point for progress in dementia research. Developments in imaging and digital technology are enabling researchers to better understand the way the brain works. Developments in genetics and new drug types are creating new opportunities for future treatments. This progress is mirrored by active and growing investment in drug development in the field of neurology. This shift shows the growing potential to tackle one of society's greatest medical challenges.

We have seen notable commitments to the field from the UK government over the last decade. The government elevated this issue globally during the UK's presidency of the G7 in 2013 and made subsequent domestic commitments through the Challenge on Dementia. Initiatives like the UK Dementia Research Institute and the Dementia Discovery Fund have helped to position the UK as one of the best places in the world to undertake research into dementia and other neurodegenerative diseases. But we must go further.

WHAT WE NEED NOW

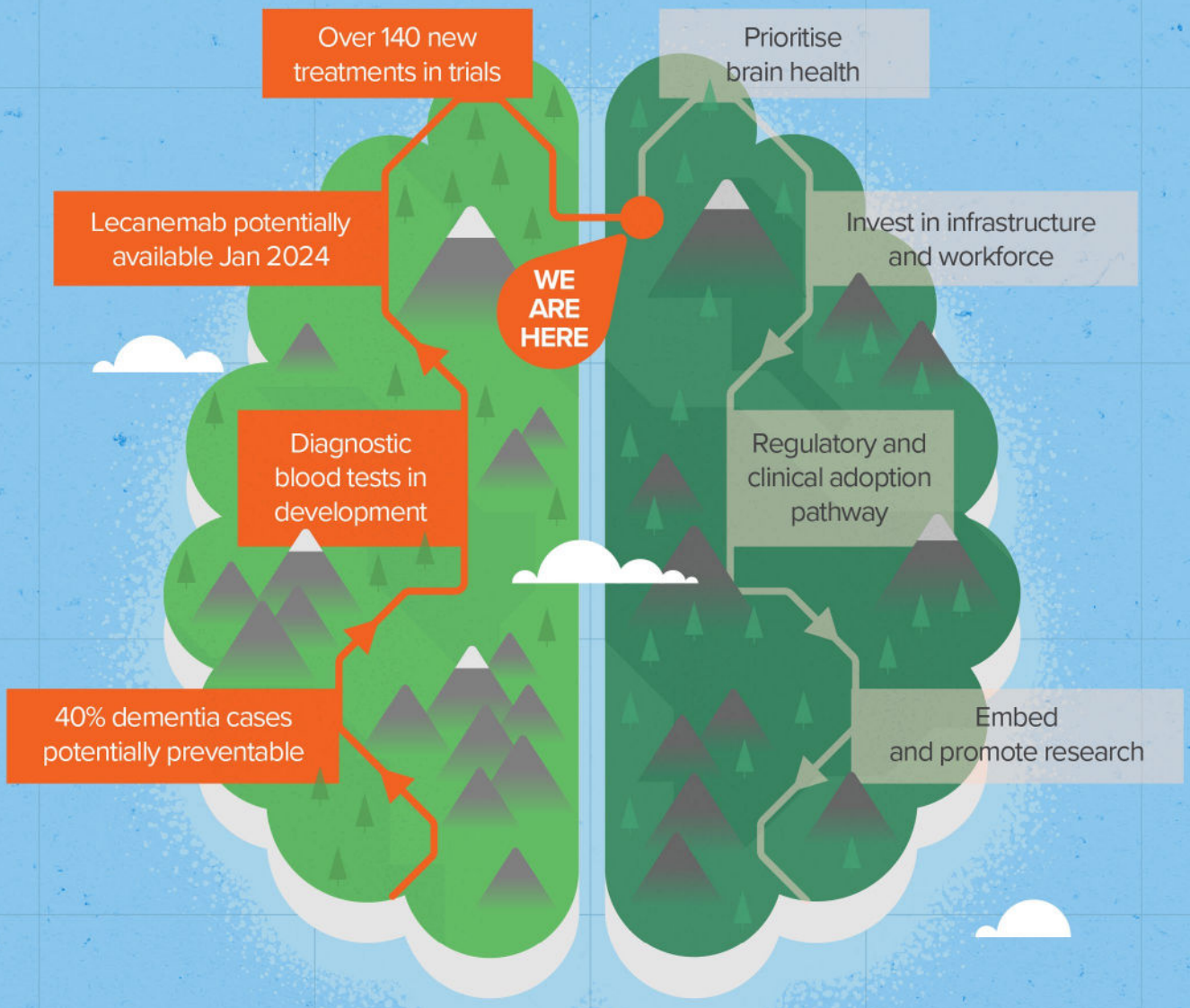
We cannot accept dementia as an inevitable part of ageing any longer. We can, and must, do better for people affected by dementia. Given the scale of the challenge, dementia must be a top priority for all governments, who must deliver ambitious, long-term solutions. We need action now to reduce the number of people affected by dementia in the future while minimising the impact for those already living with the condition.

We know more than ever before about how health and lifestyle factors can lower dementia risk (Chapter 1). While working towards longer-term treatment solutions, we must make the most of the potential to reduce dementia risk now, particularly for those who have the highest chances of developing dementia. Governments, both now and in the future, must play a crucial role in promoting brain health across the whole population – and this is impossible without addressing underlying health inequalities.

Research is our only chance of stopping dementia in its tracks. Recent investment is advancing our understanding of the diseases that cause dementia, our ability to diagnose and differentiate between different forms of dementia and the potential for new treatments. These breakthroughs need to progress from labs into clinics, so that people who can benefit from them now, will. This means revolutionising the way we detect and diagnose the diseases that cause dementia (Chapter 2), as well as the way the health service measures the value of new treatments (Chapter 3), whilst laying the groundwork for future breakthroughs by supporting dementia research (Chapter 4). Parties from across the political spectrum should commit to driving this forward, to ensure this agenda receives cross party support and continues to be a priority for the next government.

We are at a tipping point: with the right action now, we can empower people to reduce their risk of dementia and bring about life-saving treatments for those who develop the condition.

A TIPPING POINT FOR DEMENTIA



We can change the future of dementia. But only if we act now.

New ways of diagnosing the diseases that cause dementia earlier and more accurately are showing promise. New treatments that can affect the course of Alzheimer's disease could be approved in the UK next year. New insights are showing how we can reduce the prevalence of dementia by protecting our brain health. This life-changing progress has been made possible by breakthroughs in dementia research.

We call on all political parties to commit to:

- A cross-governmental strategy for the prevention of ill health.
- Investment to make the current dementia diagnostic pathway fit for purpose.
- Ensuring new dementia treatments are available on the NHS as soon as possible.
- Establishing the UK as a world leader in dementia research.

1. LOOKING AFTER OUR BRAIN HEALTH TO REDUCE RISK NOW

AT A GLANCE

The challenge:

New dementia treatments on the horizon offer hope for the future, but we must identify and understand the factors that increase our risk of dementia.

There is a pressing need to identify and understand factors that increase risk of dementia, like hearing loss, air pollution and high blood pressure.

Looking after our brain health now can help prevent dementia cases in the future, sparing families from its heartbreak.

We need a combined approach that reduces risk across the whole population and provides targeted interventions for the most at-risk groups.

40%
of dementia cases world-wide could be preventable

£111BN
– annual burden of neurological diseases like dementia on the UK economy

ONE IN SIX
dementia cases in East London could potentially be prevented by lifting the poorest 20% out of poverty

£1.8BN
– potential annual dementia-related savings in England alone of properly implementing three targeted interventions

The solution:

Create a cross-governmental strategy for the prevention of ill health to address the health and lifestyle factors that affect our risk of developing dementia, particularly those beyond individuals' control, like air pollution.

Anna, whose parents both lived with Alzheimer's disease, wants the government to prioritise brain heath.

"We're finding more and more evidence that suggests huge potential for us to reduce our risk of dementia through modifiable lifestyle risk factors. We can all take steps to look after our brain health, but the government must also play a crucial role in tackling the problems we can't solve on our own. Cleaning up the air we breathe, reducing health inequalities, making a healthy lifestyle more affordable and accessible – these must be government priorities!"

Dr Chi Udeh-Momoh, *neuroscientist and senior researcher at Imperial College London.* Chi coordinates several dementia prevention studies around the world.

1.1. WHAT THE EVIDENCE SHOWS

Looking after our brain health

Good brain health is essential for better and longer living, yielding social and economic benefits.[7] Maintaining our brains' functionality throughout life can help reduce the burden of neurological disease on society, which costs the UK is around £111bn a year.[8, 9] Addressing various health and lifestyle factors can potentially prevent or delay up to 40% of global dementia cases. [10]

Understanding the diverse factors affecting brain health is crucial. While there is some overlap with other conditions like cardiovascular disease and cancer,[11] their specific impact on dementia needs further research. Some factors are within our control, such as maintaining physical and mental fitness and staying socially active as we age. Others, like childhood education, the affordability of a healthy lifestyle and air quality require attention from politicians and policymakers.

BOX 1: BRAIN HEALTH

Up to 40% of dementia cases worldwide could be attributed to these risk factors:

- Less education
- Hearing loss
- Traumatic brain injury
- Hypertension
- Excessive alcohol consumption
- Obesity
- Smoking
- Depression
- Social isolation
- Physical inactivity
- Diabetes
- Air pollution

"My wife suffered from hypertension and yet it was never linked to her Alzheimer's disease. There was no intervention at the time of her hypertension diagnosis."

Member of the Alzheimer's Research UK Policy Insight and Experience Panel

Brain health resonates with the public.

We know that brain health as a concept resonates more strongly with the population than dementia risk - our Dementia Attitudes Monitor demonstrated this. In the UK, only a third of people (33%) realise that there are steps that they can take to reduce their dementia risk. This is much lower than the 75% of people who believe they can influence their brain health.[12]

"I like the use of the phrase brain health. I think it helps get the message across in a way that is understandable and gives a sense of agency."

Member of the Alzheimer's Research UK Policy Insight and Experience Panel

ONLY A THIRD
of people realise they can reduce their dementia risk.

Reducing risk in the whole population

Promoting brain health in the population requires an approach to address poverty and the growing disparities between the richest and poorest in the UK.

Changes are needed at a societal level to address risk factors that individuals have little or no control over. We can't do much to tackle air pollution or improve the affordability of a healthy diet and active lifestyle without action from the government, and these factors significantly impact our brain health. Government can also make it easier for people to make healthier choices – for example, by making it easier to access hearing health facilities. Despite the importance of maintaining good hearing, it takes on average 10 years for people to seek help for hearing loss.[13]

Risk factors for dementia often disproportionately impact those who are worst off in society. Not only does deprivation increase exposure to the known risk factors for dementia, but deprivation itself is damaging to brain health: one in six dementia cases in East London could potentially be prevented by lifting the poorest 20% out of poverty.[14] Minority ethnic groups are often over-represented in these demographics.

Targeting those at increased risk

Cost-effective targeted interventions already exist which could substantially reduce dementia risk, offering more immediate benefits. Implementing the following interventions could reduce dementia prevalence by 8.5%, delivering more than £1.8bn every year through dementia-related savings in England alone, with the potential for further savings across the rest of the UK:[15]

- Managing blood pressure using NICE-recommended anti-hypertensives from midlife.
- Providing hearing aids for people with identified hearing loss from midlife.
- Smoking cessation support using nicotine replacement therapies for older people.

"Prevention strategies don't need a specialist to deliver them, and they will protect against other diseases, but they do need to be delivered early on. My dad finally got support from a local physiotherapist about a year before he ended up in a care home – I'm sure both his dementia and his mobility problems would have been slowed if he had had the intervention much sooner."

Member of the Alzheimer's Research UK Policy Insight and Experience Panel

1.2. HOW WE MAKE THINGS BETTER

Look after our brain health

It is never too early or too late to look after our brain health. Communicating this message to increase awareness is vital to reducing dementia risk across the population and preventing avoidable ill-health. Our research shows that we need a range of messages from a variety of sources to maximise effectiveness of brain health messaging.[16]

Our Think Brain Health campaign[17] aims to empower and enable the public to take action to manage their individual risk through achievable steps. But raising public awareness alone is not enough: socioeconomic and environmental factors can limit an individual's ability to change their behaviour on their own.

Reduce risk in the whole population

We are not alone in calling for a shift to prevention. Across all disease areas – from cardiovascular disease to cancer – there is a growing realisation that we need to move away from simply managing the consequences of ill-health and towards tackling the root causes of it.

Government has a vital role to play in promoting healthy ageing and addressing the wider determinants of health that individuals have little control over, such as access to quality education and air pollution. Brain health should be integrated into policymaking by current and future governments, recognising that reducing health inequalities requires a coordinated effort across all relevant government departments and devolved administrations when applicable.

Target those at increased risk

Health and care practitioners must understand the risk factors for brain health, so that they can identify and support those in their community who may be at increased risk.

A newly emerging health service model, 'brain health clinics', could be ideally positioned to find people at greater risk of developing dementia and offer them personalised support to improve their brain health [Box 2, pages 22, 23].
As well as supporting personalised prevention, brain health clinics could link personalised risk reduction and early detection, offering targeted support for those at increased risk and using emerging technologies, such as digital cognitive tests, to identify people with more advanced cognitive impairment for onward referral to diagnosis.

1.3. WHAT GOVERNMENT NEEDS TO DO

Look after our brain health

We call for health promotion to be at the heart of policymaking for governments across the UK, with **national prevention of ill-health strategies** developed for England, Scotland, Wales and Northern Ireland. These strategies must reduce risk in the whole population as well as targeting those at increased risk, with the explicit promotion of lifelong brain health. This requires co-ordination across relevant government departments and devolved administrations. Key to this is **accountability**: policies must be robustly evaluated based on their potential impact on health inequalities and brain health, with ministers and policymakers required to justify departmental decisions.

Reduce risk in the whole population

Implement health interventions that target the whole population, equitably addressing factors such as air pollution, ease of access to green spaces and active travel, and the affordability of a healthy diet and lifestyle. This should include:

- More ambitious air quality targets in line with World Health Organisation guidelines,
- Bolder action to reduce smoking rates to below 5% by 2030,
- Tougher regulations on unhealthy food and junk food advertising, building on the success of the Soft Drinks Industry Levy.

Target those at increased risk

Fully implement known, cost-effective, targeted interventions to reduce brain health risk factors, such as those for hearing loss, hypertension, and smoking. This could produce dementia-related savings of £1.8 billion a year in England alone. While data is only available for England, there is likely to be potential for further savings across the rest of the UK.[21]

As well as these interventions, a new prevention strategy should include a commitment to:

- **Identify individual risk.** For example, transforming the NHS Health Check into a more holistic tool which can better identify individuals at increased risk of dementia. This could be achieved through simple additions such as a hearing check to identify mid-life hearing loss.[22]
- **Provide personalised risk reduction.** A nation-wide roll-out of brain health clinics [Box 2, pages 22, 23]. will make sure those identified as being at increased risk by the NHS Health Check can get further personalised prevention support. This includes risk profiling: helping individuals understand their personal dementia risk and how they can improve their brain health.

40%
of all dementia cases could be prevented or delayed by promoting brain health.

BOX 2: BRAIN HEALTH CLINICS

NHS services aren't currently set up to meet the needs of people living with dementia or to enable access to future treatments. There is an emerging health service model that can and should play a vital role in harnessing research to transform our approach to preventing, diagnosing and treating dementia. 'Brain health clinics' are being explored across Scotland as part of Brain Health Scotland,[18] and in places like Oxford and Manchester and combine research and clinical expertise. Their aim is to diagnose people with the diseases which cause dementia earlier and with more accuracy.

BOX 2: BRAIN HEALTH CLINICS

A national brain health clinic network, that works in tandem with existing dementia services, can deliver:

- Early intervention for people at the highest risk of developing dementia, e.g., via the NHS Health Check, and personalised risk-reduction plans to help reduce their risk.
- Earlier and accurate diagnosis that enables people to benefit from new, disease-modifying treatments for dementia when they become available in the near-future.
- Opportunities for people to be matched with appropriate clinical trials and access to the most innovative treatments and diagnostics, whilst furthering progress in research.

Case study: The Oxford Brain Health Clinic

This pilot project evaluated the feasibility of the brain health clinic model, with a view to future scaling across the NHS. The Oxford Brain Health Clinic takes patients referred to one local memory clinic as part of the usual patient pathway. Patients can opt in to attend the brain health clinic and have access to higher quality memory assessments and imaging, as well as the opportunity to participate in research studies and trials. The results of the pilot have been hugely successful, with 93.5% of patients consenting for their data to be used in research, and consultant memory clinic appointment times reduced from 75 to 45 minutes, as well as more clinicians feeling more confident in the accuracy of their diagnosis. One of the clinic's ambitions for their next phase is to explore measuring brain health and help recognise risk factors for dementia earlier.[19, 20]

The definition of research within brain health clinics is broad. It ranges from collecting data to refine and improve diagnostic tests like scans or blood tests to precisely matching people with clinical trials for new treatments.

2. DIAGNOSING AND TREATING PEOPLE WHILE WE CAN STILL MAKE THE BIGGEST DIFFERENCE

AT A GLANCE

The challenge:

To treat people living with dementia, we must first be able to diagnose them, but current diagnostic capacity in the UK is severely limited after years of underinvestment.

The way we diagnose and treat people isn't geared to make the most of the rapidly evolving research into new diagnostic tools and treatments.

Dementia services urgently need support to prepare for the arrival of disease-modifying treatments so they can work across specialities, embrace new technologies and adopt innovation.

38%
of over-65s in England estimated to be living with dementia never get a diagnosis

TWO IN THREE
memory assessment services said they'd need more than a year to get ready to deliver new treatments once approved

JAN 2024
the first new treatments for dementia could be approved for use in the UK

10x
increase in annual lumbar punctures would be needed to identify people who might be eligible for new dementia treatments

2%
of people can currently access recommended advanced diagnostic tests like PET scans or lumbar punctures on the NHS

The solution:

Invest in the current diagnostic pathway to make it fit for purpose and fit for the future. This means increasing capacity in current technologies while paving the way for next-generation diagnostics like blood tests.

BOX 3: THE NEED FOR AN EARLY AND ACCURATE DIAGNOSIS

An earlier and accurate dementia diagnosis is key to unlocking access to personalised care and support and directing people to the most suitable treatments. It enables people to plan ahead, identify any potential ways to improve their brain health and opens up opportunities to take part in medical research.

- An **accurate diagnosis**, which tells someone the specific disease(s) causing their dementia, impacts how their medicines are prescribed and managed. It will also be important for identifying people who are most likely to benefit from the first disease-modifying treatments, which are now within reach. Drugs like lecanemab and donanemab target amyloid plaques caused by Alzheimer's disease at very early stages of disease progression. This means they will be most effective for people with 'Mild Cognitive Impairment' due to Alzheimer's and people with mild Alzheimer's disease. They won't be suitable for people with later-stage Alzheimer's disease or for people with dementia caused by other diseases, like vascular dementia.

- An **earlier and accurate diagnosis** can also offer greater opportunities to participate in clinical trials, increasing our chances of finding more life-changing treatments. Trials for disease-modifying treatments increasingly target earlier stages of the diseases that cause dementia.

People want to know if they are in the early stages of dementia. 89% of people we asked in 2021 said they would be likely to seek a formal diagnosis if they thought they might be in the early stages of Alzheimer's disease or another form of dementia.

"My dad clearly struggled to manage the stresses of his job, watching him go to work every day almost in tears was horrible. But without a diagnosis, a lot of people can't retire early or benefit from schemes they have been paying into all their lives. "... Alzheimer's is never fun. But understanding what it is and being able to deal with it would make it a lot less painful."

Zac Sherwani, *son of gold-medal winning Olympian cricketer Imran Sherwani.* Imran lives with young-onset Alzheimer's disease.

Zac, whose father was diagnosed with young-onset Alzheimer's in 2019, explains the challenges of seeking a diagnosis.

2.1. WHAT THE EVIDENCE SHOWS

To treat people living with dementia, we must first be able to diagnose them. But in England, we know that more than a third of over-65s living with dementia never get a diagnosis at all. In other UK nations, we lack even this information as data on dementia diagnosis rates aren't routinely published.

The UK still has a long way to go before we can widely and equitably offer early stage, accurate diagnoses as standard.

Limited availability of diagnostic tools and tests

Currently, we can't routinely identify people who would most benefit from new dementia treatments because of limited availability of specific diagnostic tests. Changes in the brain can happen up to 10-15 years before people notice clinical symptoms like memory loss. Emerging tools and technologies, like digital cognitive tests, mean we can now detect some of these changes and potentially diagnose diseases like Alzheimer's earlier in their development, but health services like the NHS aren't equipped to deploy these technologies at scale.[23]

Limited and patchy availability of diagnostic tools and tests and variability in clinical attitudes on the need to offer a diagnosis at all[24] has resulted in an unacceptable postcode lottery. Diagnosis rates vary hugely across the country. Just 53% of people living with dementia in Herefordshire and Worcestershire will be diagnosed, compared to 73% in South Yorkshire.[25]

PET scans (positron emission tomography) and lumbar punctures that sample cerebrospinal fluid (CSF) are the most effective tools for diagnosing the diseases that cause dementia. Although

recommended by clinical guidelines from NICE (the National Institute for health and Care Excellence),[26] only 2% of people can currently access such tests on the NHS.[27] For PET scanners, the UK has fallen far behind other countries, with only 0.5 scanners per one million people, compared to 1.6-5.1 scanners per million people in France, Germany, Italy, Spain and the US.[28] There are also capacity challenges with other types of brain scan, for example MRI (magnetic resonance imaging), which is sometimes used in diagnosis but would also be needed to monitor for potential side-effects of the new disease-modifying treatments when they become available.

The way we diagnose and treat dementia now isn't fit for the future

Dementia hasn't seen significant innovation in the way we diagnose and treat it – the clinical pathway – for almost 20 years. Without the driving force of new treatments, there has been little appetite to innovate, and new technologies have struggled to be adopted into clinical practice. The imminent arrival of the first disease-modifying treatments means this needs to change, and quickly.

We currently estimate that if a new treatment was approved tomorrow only 2% of people eligible would be able to receive it,[29] and only one in three services would be able to deliver it within a year.[30] With the promise of new treatments, we are likely to see more people coming forward for a diagnosis, at a younger age and with less obvious symptoms. From GPs through to specialist dementia services, the NHS will need support to develop new clinical pathways, requiring new skills and infrastructure, allowing clinicians to work across specialities, embrace new technologies and adopt innovation.

2.2. HOW WE MAKE THINGS BETTER

To ensure that every person in the UK who has or is at risk of developing dementia can receive an early and accurate diagnosis, we need to ensure the way we diagnose and treat dementia can adapt and change to keep pace with medical advances, like the arrival of new disease-modifying treatments.

Increase capacity in current diagnostic technologies

The NHS urgently needs to increase access to CSF sampling from lumbar punctures so that we can identify people who would most benefit from new dementia treatments.

Scaling up provision of PET scans would cost the NHS an estimated £3bn over the next decade because of their large-scale infrastructure requirements, costs and need for a specialist workforce.[31] Whilst that isn't realistic, scaling up access to lumbar punctures is. To support the arrival of new treatments, we need to go from delivering just 2,000 lumbar punctures each year to at least 20,000 a year.[32]

Ensure the way we diagnose and treat dementia is fit for the future

The NHS needs to prepare to deliver new disease modifying treatments by developing and evaluating new health service models, and by implementing innovative diagnostics like digital cognitive tests and blood tests for dementia.

The emerging brain health clinic model has the potential to improve access to cutting edge diagnostics and the latest care and support interventions; foster multidisciplinary working in dementia; embed research into clinical practice outside of large academic centres, and prepare the NHS for new treatments. While a 'one-size fits all' approach isn't appropriate, existing brain health clinics can act as trailblazers in a UK-wide roll-out of clinics based on this model, commissioned by the NHS and adapted to meet the needs of local communities.

Blood tests are the future of dementia diagnosis. They can detect diseases like Alzheimer's earlier, they are cheaper than PET scans or lumbar punctures and could be offered to people in local healthcare settings, wherever they live. Research into blood tests for dementia diagnosis is rapidly evolving, with some already being piloted in the US, Europe and some parts of Scotland, but these tests need to move out of the lab and into the NHS. Before we can do this, we need to trial blood tests for dementia in the real world. Brain health clinics could be the ideal place for this.

2.3. WHAT GOVERNMENT NEEDS TO DO

Every person in the UK who has or is at risk of developing dementia should have the right to know the disease or diseases causing their dementia, and to be diagnosed early enough to make the biggest difference. It shouldn't matter where in the UK they live. To deliver this, governments – both now and in the future – must commit to increasing capacity in existing diagnostic tools and implementing new and innovative tools like blood tests for dementia.

Increase capacity in current diagnostic technologies

Once new dementia treatments are approved for use on the NHS, we **urgently need to increase access to lumbar punctures** so that we can identify people who are most likely to benefit, wherever in the UK they live. The NHS needs to significantly increase capacity from 2,000 lumbar punctures a year to 20,000 a year. To achieve this, government needs to:

- Invest an initial £16m in infrastructure, equipment, and workforce training, including 50 new band 6/7 nurses or equivalent across the UK regions.
- Commit to sustained annual investment of £10m until new diagnostic tools are ready to replace lumbar punctures.

Ensure the way we diagnose and treat dementia is fit for the future

Clinical pathways – the way we diagnose and treat dementia – must be redesigned to adapt and change with the pace of new medical advances. In the short term, this means getting the NHS ready for the arrival of new, disease-modifying treatments and the increased demand for diagnosis and monitoring this will entail.

To achieve this, government should:

- Establish a cross-speciality Alzheimer's Disease Clinical Pathway Council to **develop and implement a new pathway for the way we diagnose and treat dementia.** This Council should bring together the clinical community, NHS, government and people with lived experience.
- Support and invest in the **roll-out of a UK-wide network of brain health clinics** to deliver equitable, high-quality services. These should be commissioned by regional or local health boards, such as NHS Integrated Care Boards in England, to ensure they meet local needs.
- Invest via the NHS in a **national clinical trial of blood tests** for dementia across existing brain health clinics, for example by additionally supporting a second phase of the Blood Biomarker Challenge[33] with an additional £5m in matched funding.
- **Support work to implement other innovations** such as digital cognitive tests to help manage the demand for diagnoses, and ultra-rapid MRIs to increase scanner capacity for monitoring new treatments.

TWO IN THREE

memory assessment services will need more than a year to get ready for new treatments

3. WHAT ARE NEW TREATMENTS WORTH? VALUE AND AFFORDABILITY CHALLENGES

AT A GLANCE

The challenge:

The first ever treatments that can slow cognitive decline in people with Alzheimer's disease could be approved by UK regulators in just a few months' time.

These first disease-modifying treatments won't be seen as affordable by the NHS if compared to current spend on dementia, which is just £1.7bn per year.

The impact on carers' quality of life and their ability to remain in the workforce isn't taken into consideration when assessing the affordability of new drugs.

£22.7BN
annual cost of dementia on social and informal care

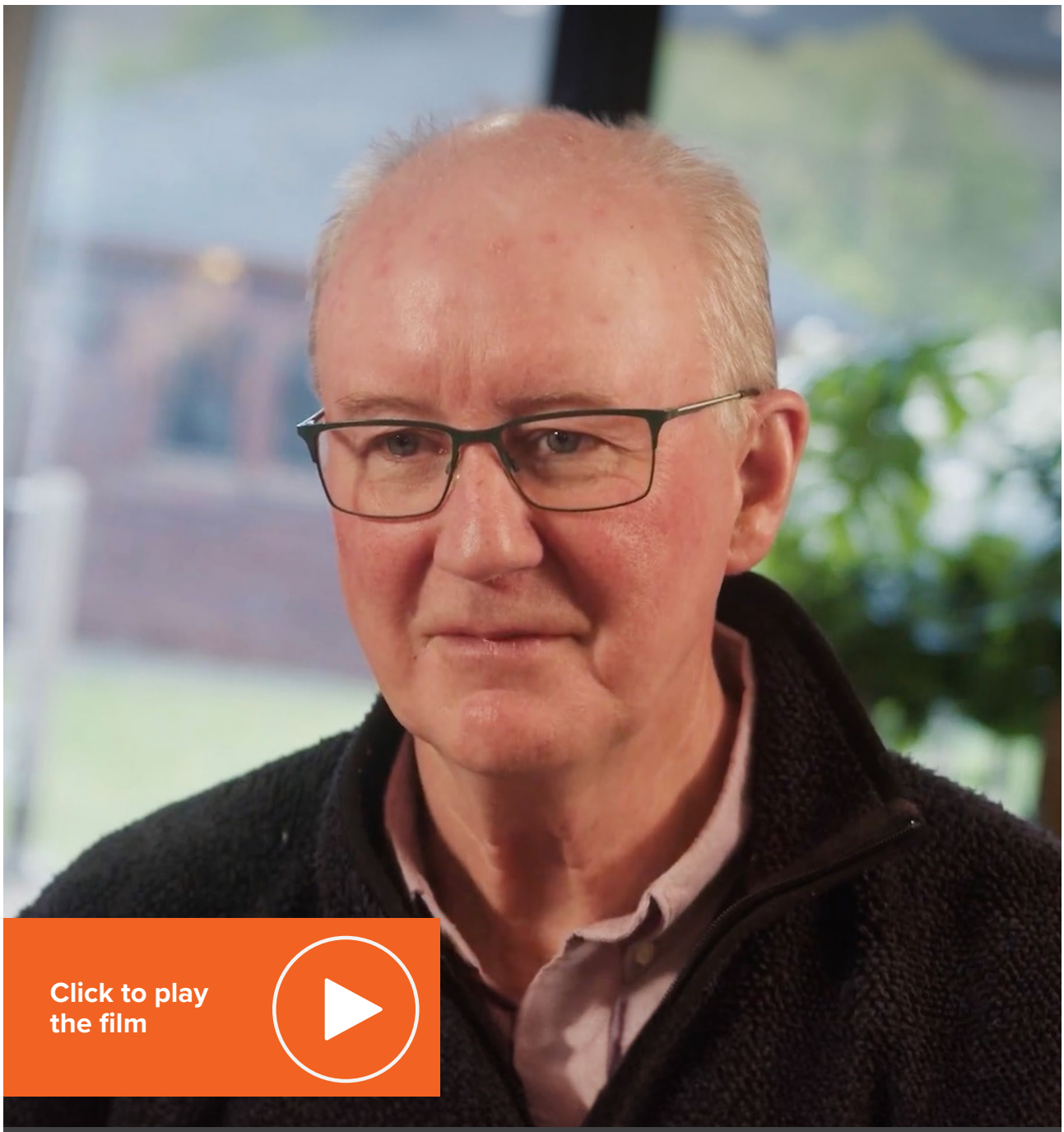
140
new dementia treatments currently in clinical trials

JAN 2024
the first new treatments for dementia could be approved for use in the UK

TWO
new disease-modifying treatments for Alzheimer's disease now available to people in the US

1.1M
25- to 49-year-olds out of work because of caring responsibilities

The solution:
Ensure **new disease-modifying treatments for dementia are available on the NHS**, by creating a world-leading regulatory and clinical adoption pathway for new treatments and considering the full benefit to society of new dementia treatments when assessing their affordability.



Des, who lives with dementia with Lewy bodies, and his wife Valli, explain why the possibility of new treatments brings hope to so many.

3.1. WHAT THE EVIDENCE SHOWS

For the first time ever, a new class of treatments for Alzheimer's disease have shown promise in late-stage clinical trials – showing modest results, slowing progression by around 30% and improving quality of life for people affected, and their carers. However, as with many new therapies, there are several challenges which need to be overcome before they can be made available on the NHS.

BOX 4: NEW TREATMENTS FOR ALZHEIMER'S DISEASE

There is a new optimism in the field of dementia in 2023. The research breakthroughs of the past few years have culminated in a new generation of treatments emerging for Alzheimer's disease, the most common cause of dementia. For the first time, we have the prospect of drugs that act on the disease processes that cause dementia, rather than helping with symptoms alone.

Anti-amyloid therapies

In the brains of people living with Alzheimer's disease, a protein called amyloid builds up into plaques. These plaques are thought to be toxic and damage the cells of the brain. Anti-amyloid therapies target the accumulation of amyloid plaques in the brain, using drugs or antibodies to either prevent the production of amyloid or promote its removal, with the goal of slowing down cognitive decline and preserving brain function in individuals affected by the disease.

Two disease-modifying treatments have already been approved in the US and one of these, **lecanemab**, is under consideration by European and UK regulators. A third, **donanemab**, is expected this year and there are over 140 further treatments currently in clinical trials.[34]

Beyond amyloid therapies

Treatments that remove amyloid from the brain are just the tip of the iceberg. Diseases like Alzheimer's are incredibly complex, with several molecular mechanisms that drive disease progression. In addition to amyloid, research shows that the brain's immune system, inflammation and the breakdown of brain cell components are important targets for drug discovery.

Click to play the film

Our animated video shows the process that potential new dementia treatments would have to go through to be made available on the NHS.

The first disease-modifying treatments for dementia will not be seen as 'affordable' by the NHS

At £1.7bn, the current cost of dementia on the NHS is minimal in comparison to other disease areas. The symptomatic treatments we have available in the UK are cheap and patients don't need routine monitoring. In contrast, new disease-modifying treatments are more expensive and due to side effects, will need careful monitoring - so as the first new treatments start arriving, an increase in NHS spend on dementia is inevitable.

There is also a significant level of uncertainty in the long-term effectiveness of new treatments for the NHS, which is an important factor in deciding whether a new treatment offers value for money. Clinical trials have only lasted 18 months so far, so we don't yet fully understand the long-term benefits these new treatments could have, how long people will need to stay on them, or how often they will need to receive the treatments.

The NICE approval process is not fit to assess the full benefit of innovative dementia treatments

When assessing a treatment, NICE (the National Institute for Health and Care Excellence) currently considers **clinical evidence** (how well the treatment works) and **economic evidence** (how much it will cost and save the NHS).

The current way NICE assesses whether a treatment should be made available on the NHS will not capture the full benefit of any new dementia treatment for two reasons:

i. The long-term nature of dementia means it could take decades to build up the evidence NICE needs to understand the long-term benefits of new treatments.

ii. The current NICE assessment process does not take into consideration the economic cost of dementia on informal care. There are similar challenges for equivalent bodies in Scotland (Scottish Medicines Consortium), Wales (the All-Wales Medicines Strategy Group) and Northern Ireland (the Regulation and Quality Improvement Authority).

As the bulk of the cost of dementia falls on social and informal care (£22.7bn per year) rather than the NHS (£1.7bn per year), any new dementia treatment is unlikely to pass the NHS value threshold and will not be approved. A dementia treatment would have far-ranging benefits for society and the economy, beyond the clear benefits for the patient, and it is essential NICE and equivalent bodies in other parts of the UK consider these throughout their assessments. The impact of treatments on carers' quality of life or their ability to stay in the workforce isn't currently considered, yet over 1.1 million 25- to 49-year-olds are out of work because of caring responsibilities and just 18% of people caring for someone with dementia are in paid work.[35] 83% of carers have felt lonely or isolated because of their caring responsibilities.[36]

£22.7BN

annual cost of dementia on social and informal care

3.2. HOW WE MAKE THINGS BETTER

Ensure the first disease-modifying treatments for dementia are available on the NHS

The NHS and drug companies must work together to explore suitable pricing and access arrangements, taking advantage of existing mechanisms like the Innovative Medicines Fund.[37] Such arrangements should allow new treatments to be available on the NHS at a reasonable price while more data can be collected on the long-term benefits of the drug.

Broaden how the value of new treatments is assessed

NICE and equivalent bodies across the UK must be ready to assess the full benefit new dementia treatments could have on society as soon as it has been deemed safe and effective by the Medicines and Healthcare products Regulatory Agency (MHRA). This means changing the way these bodies assess cost-effectiveness to ensure people living with dementia in the UK have timely access to innovative disease modifying therapies.

3.3. WHAT GOVERNMENT NEEDS TO DO

Ensure the first disease-modifying treatments for dementia are available on the NHS

The NHS and drug companies need to **agree a suitable price and explore conditional access arrangements to make sure that the first disease-modifying treatments for dementia are available on the NHS**. This would help manage affordability concerns while generating the evidence needed to assess the full benefits of new dementia treatments. The existing Innovative Medicine Fund should be used as a vehicle to fund this. Government must play a leading role in:

- Creating a world-leading, streamlined regulatory and clinical adoption pathway for rolling out new treatments as quickly as possible, by bringing together leaders in the pharmaceuticals industry, MHRA, NICE and equivalent bodies, and the NHS.

- Ensuring the NHS works with drug companies to agree a risk sharing approach around new dementia treatments, providing access to new treatments while data is collected over a longer period of time.

Broaden how the value of new treatments is assessed

NICE and equivalent bodies must be ready to **assess the full benefit that a new dementia treatment could have on society**, once they have been deemed safe and effective by the MHRA. This will ensure new dementia treatments are made available to people living with dementia in the UK without unnecessary delays. To achieve this, government should:

- Instruct NICE and equivalent bodies to ensure they consider the cost of dementia through informal care and the impact on carers, to properly evaluate the full benefit of a treatment.

4. FOR A CURE: ACCELERATING DEMENTIA RESEARCH

AT A GLANCE

The challenge:

We are on the cusp of a new era of disease-modifying treatments for dementia: a strong environment for dementia research is essential to make this a reality.

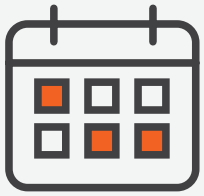
The UK is falling behind other countries when it comes to clinical trials. Investing in dementia trials now will benefit families affected by dementia and the UK economy.

People living with dementia in the UK are not offered enough opportunities to take part in research and clinical trials. Both in comparison to other countries and other health conditions.

£2.91 FOR EVERY £1
– estimated economic benefits of dementia research investment between 2020 and 2040

2%
of people with a dementia diagnosis currently registered to hear about clinical trials

£355M
– NHS income from delivering commercial clinical trials across all disease areas in 2019



7%
– UK share of current clinical trials for dementia

JAN 2024
the first new treatments for dementia could be approved for use in the UK

The solution:

Establish the **UK as a world leader in dementia research**, capitalising on initiatives such as the Dame Barbara Windsor Dementia Mission and increasing opportunities for people to participate in research across the country.

Frank, who is living with Alzheimer's, and his wife Alison, explain why they're taking part in dementia research.

4.1. WHAT THE EVIDENCE SHOWS

The UK needs to be a leading location for clinical trials but is falling behind other countries.

Investment over the last decade means we now understand more than ever about the biology behind dementia and how this can help develop new treatments. With over 140 drugs in clinical trials globally, we are now on the cusp of pioneering a new generation of dementia treatments. While continuing this work, we must now increase the UK's capacity to deliver world class dementia drug trials, ensuring UK families are among the first to benefit from potential life-changing dementia treatments and positioning the UK as a priority location for global life sciences investment.

The economic benefits of hosting clinical trials are significant: every £1 invested in dementia research is expected to generate an average of £2.91 of economic benefits in the UK between 2020 and 2040.[38] In 2019, the total estimated income for the NHS from delivering commercial clinical trials across all disease areas was £355 million, and an estimated 47,500 jobs were generated.[39] Unfortunately, the UK is falling behind other countries, averaging only a 3.6% share of global clinical trials across all disease areas in 2020 – a decline from 6.8% in 2015.[40] For later stage clinical trials, the UK ranks fifth globally[41] and has the highest percentage of missing enrolment targets (13.7%).[42]

Research is not representative of the population affected and there are too few opportunities to participate.

This is compounded by a long-standing challenge in dementia clinical research. Too often, people who are living with dementia in the UK are not offered the opportunity to take part in research and clinical trials, both in comparison to other health conditions and to other countries:

- There are currently over 4,000 dementia clinical trials registered, of which only 7% are taking place in the UK, and just over 50 of these are actively recruiting.[43]

- Lengthy study set-up times and bureaucratic procedures mean that many identified, screened, and eligible patients become ineligible to take part by the time studies start, for example, due to disease progression.

- Only 2% of those with a diagnosis are registered to hear about dementia clinical trials,[44] and far fewer will end up taking part.

- In 2021/22, just 61 participants were recruited to late-stage dementia drug trials supported by the NIHR (National Institute for Health and care Research) Clinical Research Network.[45] This is 100 times fewer than for cancer drug trials and 10 times fewer than for stroke or coronary heart disease.[46]

Research and development spending more broadly is unevenly distributed across the UK. 54% of investment is concentrated in London and the South East of England. Research and development expenditure per head in the East of England was £1,106, while the North East of England and Wales had investment of £278 and £252 per head, respectively.[47]

Dementia has been the leading cause of death for women since 2011,[48] yet women are less likely to be included in clinical trials than men.[49] People from African-Caribbean and South Asian populations and people with Down's Syndrome are also disproportionately affected,[50,51] but less likely to be included in research.[52] Meanwhile, female and black researchers are less likely to receive funding and to progress to become senior academics.[53,54]

There are tremendous opportunities to harness the power of data to increase our understanding of dementia and accelerate the development of new treatments. But current systems do not enable us to do this effectively – too little data is collected and even less is shared through the healthcare system.[55] Participation in research often does not feature as part of clinical consultations.

4.2. HOW WE MAKE THINGS BETTER

Commit to a healthcare mission approach for key societal challenges, like dementia

The COVID-19 pandemic showed the key role that government can play in tackling big healthcare challenges, bringing stakeholders together, including government, universities, drugs companies and charities, accelerating efforts to find new treatments. There is much more we can learn from the Covid Recovery trial and Vaccines Taskforce – in terms of both strategic focus and cross-government leadership – to accelerate the development and delivery of new treatments and to broaden research activity and participation, so that the economic value of research can be realised across the UK.

Develop a long-term strategic approach to dementia research funding

A growing treatment pipeline for dementia, combined with recent medicine approvals in the US, means that dementia research will see growing investment from the life sciences industry over the next few years. The UK, with its historical leadership in both dementia and clinical research, has the potential to benefit from this new wave of investment.
We need to ensure that dementia research is appropriately funded to deliver over the longer term, rather than with a short-term, piecemeal approach. A strategic and sustainable plan should enable us to further develop our understanding of the biological processes that underpin the diseases that cause dementia. It should also focus on the application of this knowledge to the development of treatments and interventions which improve health outcomes.

Embed and promote research across the UK

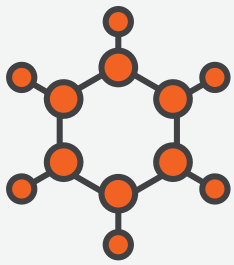
Greater diversity in our research workforce is essential, and opportunity to participate in research must be opened up across the whole population, ensuring that research is both representative of and accessible to the population affected.

More needs to be done to embed research into routine healthcare, building on the development of new service models such as brain health clinics [Box 2, pages 22, 23]. The current memory assessment service in the NHS does not always enable clinical research activity, meaning many people with dementia don't get the opportunity to participate in research.

By bringing together research and clinical practice, brain health clinics are well positioned to drive improvements, crucially through enabling more clinicians to be research active. They could also provide a promising route to addressing challenges around effective data sharing to increase understanding of dementia and accelerate the development of new treatments. Rolling out this approach across the UK could allow patients to receive the most innovative treatments and diagnostic tools, whilst furthering research progress, regardless of where they live.

TWO

new disease-modifying treatments for Alzheimer's disease are now available to people in the US.



4.3. WHAT GOVERNMENT NEEDS TO DO

Commit to retaining a healthcare mission approach to dementia

The next government must **commit to retaining an approach that brings stakeholders together to tackle dementia alongside other key healthcare "missions"**, for example through the Dame Barbara Windsor Dementia Mission[56] and the NIHR dementia clinical trials network.[57] This approach must:

- Provide a framework for increasing the UK's share of dementia trials and accelerating the development and delivery of new treatments.
- Focus on joining up key research initiatives to improve how we detect and diagnose the diseases that cause dementia, use healthcare data to speed up trials, and build innovation into trial delivery and regulation.

Develop a long-term strategic and sustainable plan for dementia research funding

Ahead of the next general election, political parties must **set out a long-term strategic and sustainable plan for dementia research funding**, spanning experimental discovery science, translational science and clinical research. This should include:

- Proactive government investment in clinical trials and data infrastructure.
- Large-scale strategic initiatives like the UK Dementia Research Institute,[58] which expand the UK's science base while making the UK more attractive for investment.

Embed and promote research across the UK

Research must be representative of the population if we are to fully understand the diseases that cause dementia and bring about a treatment that works for everyone. To achieve this requires sustained government leadership to:

- Embed and promote research across all UK regions to create equitable opportunities for participation, supporting areas which have less research activity and infrastructure.
- Roll out brain health clinics across the UK to embed research into routine healthcare.

CONCLUSION

We are beginning to turn the tide on dementia. The signs are already there. Investments in dementia research are leading to breakthroughs in the lab. Lifechanging new treatments which may slow the progression of diseases like Alzheimer's are closer than ever before. We're understanding more and more about how we can reduce our risk of dementia.

We are at a tipping point. To secure a future free from the fear, harm and heartbreak of dementia, we must keep pushing forward. We call on all political parties to **harness the outcomes of dementia research to revolutionise the way we prevent, diagnose and treat dementia**. This means committing to:

1. A **cross-governmental strategy for the prevention of ill health** to address the health and lifestyle factors that affect our brain health, reducing dementia risk whilst also improving the health and wellbeing of the population.

2. Invest in **the current diagnostic pathway to make it fit for purpose**, ensuring it has the resources it needs to meet growing demands, identifying people who could benefit from new treatments or participate in dementia research in a timely way.

3. Include savings in informal care and carers' quality of life when NICE evaluate the cost-effectiveness of new dementia treatments, **making sure viable treatments are available on the NHS** as soon as reasonably possible.

4. Establish the **UK as a world leader in dementia research**, capitalising on initiatives such as the dementia mission and increasing opportunities for people to participate in research across the country.

One theme underpins all these recommendations. **Research breakthroughs must reach the people who can benefit from them, now**. This includes improving brain health across the whole of society, helping individuals understand and reduce their own risk, and employing new innovative technologies to provide more timely diagnoses, making sure people who can benefit from new treatments do so.

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CONTACT

policy@alzheimersresearchuk.org
alzheimersresearchuk.org

Registered charity numbers
- 1077089 & SC042474

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