TOWARDS BRAIN HEALTH EQUITY.

How can governments tackle inequalities in dementia risk?

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SUMMARY
DEMENTIA RISK IS UNEQUALLY DISTRIBUTED.

40% of global dementia cases could potentially be prevented or delayed by addressing a range of modifiable risk factors throughout our lives.¹ This is partly down to individual responsibility — living a healthy life, as far as is possible.

But many dementia risk factors depend on things beyond our individual control. The quality and length of our education during childhood, the quality of the air we breathe, and the affordability of a healthy lifestyle, for example.

Exposure to risk factors is not equally distributed among society, and unfairly burdens the UK’s most deprived communities and regions with poor brain health, increased dementia risk and reduced life expectancy.

People in these groups are more likely to die from dementia, and at a younger age — because, for example, they live in areas of poor air quality, or are more likely to have high blood pressure or type 2 diabetes.

Social and economic factors such as where we live, or whether we experience discrimination, may influence our health more than our own lifestyle choices, or access to health care — these are known as social determinants of health.² This means that those who are most affected by health inequalities are often those who are least able to make healthy lifestyle changes.

These inequalities are not only profoundly unfair, they are also avoidable. Government and policy makers have a key role in addressing them.

Our recommendations for change

Alzheimer’s Research UK is calling for a cross-government strategy for the prevention of ill health, that addresses the social determinants of health and, in doing so, protects lifelong brain health. It should focus on risk factors with strong links to health inequalities and for which there is clear opportunity for action.

The strategy must:
1. Clean up our air
2. Make smoking obsolete
3. Promote healthy eating
4. Tackle high blood pressure
5. Identify & treat hearing loss
THE EVIDENCE.

DEMENTIA CAN BE PREVENTED

40% of dementia cases could be prevented or delayed by addressing a range of health and lifestyle factors that can increase a person’s risk of developing dementia.1 With dementia still one of the leading causes of death in the UK,3 there has never been a more pressing time to prioritise looking after our brain health.

BUT RISK IS UNEQUALLY DISTRIBUTED

It’s an uncomfortable truth that regional disparities, socioeconomic deprivation, and specific characteristics such as ethnicity and disability impact negatively on people’s ability to live a healthy life.4 These health inequalities – avoidable, unfair, and systematic differences in health and the ability to live a healthy lifestyle – are widening across the UK. The difference in life expectancy between the most and least deprived has increased since 2010, and healthy life expectancy is now 12 years lower on average for the most deprived areas compared with the least deprived.5 For the most deprived 50% of the population, average healthy life expectancy is lower than the State Pension age.5

Brain health is no exception when it comes to health inequalities. Dementia risk factors are disproportionately prevalent amongst those who are worst off in society, giving those with the fewest resources, who often have the least agency to improve their own health and lifestyle, an increased risk of dementia. Research in England and Wales shows that socioeconomic deprivation is linked to increased dementia mortality, younger age at death from dementia and poorer access to specialist diagnostics.7

POVERTY, ETHNICITY & BRAIN HEALTH

Compelling evidence suggests that living in poverty, or in a deprived area, or being from a minority ethnic group in the UK, is damaging to brain health.8 Primarily, this is because of increased exposure to risk factors such as poor air quality, high blood pressure, or type 2 diabetes. From analysis of medical records in East London, one in six dementia cases could be caused by being in the most deprived 20% of the population.9

The implications of this are profound: the hardship people encounter by living below the poverty line, or being exposed to systemic racism, are bad for brain health, and society is bearing the burden of this through increased prevalence of dementia. One of the many consequences of this is that Black and South Asian people living in the UK are more likely to be diagnosed at a younger age and die earlier from dementia, and dementia rates are over 20% higher among Black adults compared to the UK average.10

The solutions to these problems – lifting the poorest out of poverty, eliminating systemic racism – are complex. Addressing them will take long-term political will and resources, but they are the just course of action, with significant potential return on investment. In addition, there are more achievable steps which governments can take, now, to help move us forward and protect everybody’s brain health.
THE SOLUTIONS.

Here we summarise evidence on risk factors with the strongest links to health inequalities, providing recommendations on how the Government can help tackle them.

We’re calling for a cross-government strategy for the prevention of ill health, that addresses the social determinants of health and, in doing so, protects our brain health. This must be a priority in both Westminster and the devolved parliaments. Tackling health inequalities touches on many different aspects of society and, as such, requires a holistic response.

Key to this is equity and accountability: policies must be designed and evaluated based on their potential impact on health inequalities and brain health, with well-designed interim and long-term targets, and ministers and policymakers required to justify departmental decisions.

- **Clean up our air** by committing to reducing levels of fine particulate matter pollution across the UK to 10µg/m³ by 2030, reaching 5 µg/m³ soon after.

- **Make smoking obsolete** by fully implementing the 2022 Khan review's recommendations on tobacco control policy.

- **Promote healthy eating** by fully implementing the 2021 National Food Strategy's proposals, including reducing salt, sugar, and calorie content in processed foods.

- **Tackle high blood pressure** by implementing NICE-approved treatments that manage high blood pressure, saving over £1bn annually in dementia-related treatment and care in England alone.

- **Identify and treat hearing loss** by removing barriers to a hearing test, including integrating a hearing check into the NHS Health Check.
CLEAN UP OUR AIR.

The evidence linking air pollution exposure to cognitive decline and dementia is rapidly growing – particularly a type of pollution called fine particulate matter (known as PM2.5). Research suggests that dementia risk could increase by up to 3% for every 1 μg/m³ (microgram per cubic metre) increase in PM2.5.

Air pollution creates new health inequalities, as well as exacerbating existing ones. The most deprived neighbourhoods in England have higher concentrations of PM2.5 compared with less deprived areas, and women and children experience the greatest increase in risk of developing health conditions from exposure to pollution.

The highest levels of pollution are found in neighbourhoods where more than 20% of the population are non-white. Black, Asian and minority ethnic groups are therefore disproportionately affected.

Those most affected are also the families who can do least about it, for example by moving to another area or changing their means of transport.

The UK’s current target for fine particulate matter of 10 μg/m³ by 2040 is significantly behind that of global counterparts such as the USA and EU, who are waking up to the health consequences of air pollution.

The Government should be much more ambitious when it comes to reducing PM2.5 levels across the UK, for example by committing to reach 10 μg/m³ by 2030, and 5 μg/m³ (the current WHO recommended maximum) as soon as possible.

To achieve this, action in high pollution areas should be prioritised, with local interventions that promote a fair transition to active travel and cleaner, greener transport. Possible measures include urban traffic restrictions such as low emission zones and postponement of non-essential polluting activities, such as road cleaning, on high pollution days.
MAKE SMOKING OBSOLETE.

Up to 5% of dementia cases around the world could be prevented or delayed by tackling smoking,¹ and smoking is linked to socioeconomic disadvantage.

There are significantly higher smoking rates among social housing residents (30%) compared with adults overall (13%),¹⁵,¹⁶ for example.

With the average spend on tobacco each year at almost £2,500, smoking is a significant drain on disposable income for the 1.5 million households living in poverty which include a smoker. Quitting could increase disposable income by an average of 9%, with a greater benefit for those in regions such as the North-East.¹⁷

�CHIEVING a smokefree 2030 (a 5% or lower smoking rate) should be a priority. The UK is currently not on track to achieve this – based on current trends,¹⁸ the most deprived 10% of the population will not be smokefree by even 2050 – but a smokefree 2030 is achievable, with the right action.

The Government’s commitment in October 2023 to legislate to prevent future generations from buying tobacco products is a step in the right direction.¹⁹

The Government should follow this by implementing the remaining recommendations in the 2022 Khan review in full, including increased funding and support for people trying to quit, which could be funded through a ‘polluter pays’ levy on tobacco manufacturers.²⁰

There is overwhelming public support for this: 77% of adults in Great Britain support a polluter pays levy, for example.²¹

Supporting people to quit smoking would reduce dementia prevalence, saving money through the reduced dementia-related costs alone.²²
PROMOTE HEALTHY EATING.

Tackling type 2 diabetes and obesity could potentially prevent up to 2% of global dementia cases.¹

As well as being damaging to brain health, the two conditions also lead to cardiovascular issues such as high blood pressure – another dementia risk factor.

4.5 million people in the UK are living with type 2 diabetes, with two million more at risk, and treating diabetes accounts for 10% of the NHS budget.²³ Obesity affects almost a third of UK adults (28%), and almost two thirds (63%) are above a healthy weight.²⁴ The combined cost of this, including in lost workforce productivity, is equivalent to a 3.4% cut to the UK’s GDP, or £74 billion each year.²⁵

Both conditions are closely linked to socioeconomics and inequalities. 39% of women and 30% of men in the most deprived groups in England are living with obesity, compared with 22% for men and women in the least deprived groups.²⁶

Type 2 diabetes prevalence is nearly double among the most deprived compared to the least deprived 10% of the population, with Black and South Asian communities disproportionately impacted.²⁷

Diet is key to preventing obesity, type 2 diabetes, and high blood pressure — thereby protecting brain health. This is why, as an organisation, we champion the benefits of a healthy diet to raise public awareness, through our Think Brain Health campaign.²⁸ But a healthy diet is financially out of reach for many. The Government’s recommended healthy diet costs the poorest fifth of the UK half of their disposable income, in contrast to just 11% for the wealthiest fifth.²⁹
PROMOTE HEALTHY EATING.

Addressing these issues requires comprehensive policies promoting healthy lifestyles across society.

We recommend an ambitious food reformulation program to reduce the salt, sugar and calorie content in certain processed foods – following successful models like the soft drinks industry levy. This would make nutritious choices more accessible and affordable than unhealthier alternatives without compromising consumer choice or corporate profits.30

Reducing salt intake alone could boost the UK economy by up to £11.4 billion by 2035 if all adults meet WHO salt guidelines by 2030.31

Furthermore, the full implementation of the 2021 National Food Strategy recommendations is key to breaking the cycle of unhealthy eating and reducing diet related inequalities.

To complement these population-wide measures, targeted support for people who are overweight or obese, such as weight loss programmes, would lower their risk of both type 2 diabetes and dementia.22

For people with diabetes, interventions to better manage blood glucose levels could protect brain health.33 Again, this comes partly down to making healthier food choices more affordable and accessible.
TACKLE HIGH BLOOD PRESSURE.

Persistent high blood pressure in mid-life (45-65), which affects 15 million UK adults, is closely linked to brain health and dementia risk.\(^1\)

Shockingly, half remain untreated, with a third undiagnosed.\(^{34}\)

People from the most deprived areas in England are 30% more likely than those from the least deprived areas to have high blood pressure, and the condition disproportionately affects certain ethnic groups such as black and South Asian populations in the UK.\(^{27}\)

**Preventing, diagnosing and treating high blood pressure effectively is crucial to improving brain health, as well as preventing cardiovascular disease.**

Implementing NICE-approved antihypertensives could reduce dementia prevalence in England by 5%, leading to annual savings exceeding £1 billion in dementia-related care costs alone.\(^{22}\)

Lowering the NHS Health Check eligibility age in England to 30, and investing strategically to boost Health Check participation, particularly in underserved communities, could help more people to better manage their blood pressure.\(^{35}\)

Tailored blood pressure management is also key: healthcare professionals should agree treatment targets with patients as part of a shared management plan.\(^{36}\)
IDENTIFY & TREAT HEARING LOSS.

Hearing loss affects one in five UK adults (about 12 million people).\textsuperscript{37} Researchers are still unpicking exactly how hearing loss affects brain health, but it is estimated to be the most significant single risk factor for dementia.\textsuperscript{1}

Up to 8\% of dementia cases around the world could be prevented or delayed by tackling hearing loss in mid-life.\textsuperscript{1} Sadly, it takes people on average 10 years to seek help once symptoms appear.\textsuperscript{38}

There are regional and socioeconomic disparities in hearing health across the UK, with higher rates in the most deprived 20\% of the population and a North-South divide in England’s hearing health.\textsuperscript{39}

Additionally, there is an 11-fold variation in the referral rate for audiology assessments across the country and uptake of hearing screening and hearing aids is lower in minority ethnic groups.\textsuperscript{40,41}

\textbf{Steps to better identify and address hearing loss are urgently needed.} Hearing aids are a relatively cheap solution, and research suggests they can protect brain health.\textsuperscript{42}

Reducing barriers to hearing checks is crucial, and we recommend integrating a hearing check into NHS Health Checks as a simple way forward. The Royal National Institute for Deaf People offers a free online hearing check which could easily be incorporated.\textsuperscript{43}
CONCLUSION.

Health inequalities in the UK are damaging brain health, reducing life expectancy, and incurring significant costs – to individuals and society. **These disparities are avoidable, unjust, and on the rise.**

Vulnerable individuals face increased dementia risk due to lifelong exposure to risk factors, compounded by poverty and ethnicity. Those most affected lack the means to adopt healthier lifestyles.

The most effective and equitable way to improve people’s brain health is through interventions across the whole population, which make it easier for people to make healthier choices.

Public support for government action exceeds 80%, indicating a clear mandate for a comprehensive cross-government strategy to prevent ill health and protect brain health.

The solutions to this are not new or groundbreaking, but they are imperative. Tackling health inequalities requires coordination across government and government bodies to deliver on the above. This has been done before: a previous cross-government strategy to tackle health inequalities was associated with a reduction in geographical inequalities in life expectancy. With the right political will, it can be done again.

**We need to see action on brain health from government – starting now – to deliver on these promises.**
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Alzheimer’s Research UK is a member of the Inequalities and Health Alliance (IHA). Our recommendations are in-line with the IHA’s core principles to tackle health inequalities and consider child health in all policies.

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