Beyond dementia risk reduction: a consensus statement on Brain Health November 2021[1]

HEADLINE MESSAGES

- Brain health is a new approach to ensure the potential gains from reducing the risk of developing dementia are maximised. This reframing is vital to translate the growing evidence base into policy change, public awareness and public health interventions, that enable the realisation of these gains.
- A life-course perspective, starting in early life through to older age, is needed to integrate advice on the prevention of ill health and encourage, facilitate and maintain healthier living.
- Good brain health must be promoted throughout life for people of all ages. It is a more holistic and engaging prevention strategy to reduce the decline and disability associated with the onset of long-term conditions like dementia.
- Brain health is about more than just dementia, with modifiable risk factors shared with other non-communicable diseases and determinants of healthy ageing. Acknowledgement of this should drive joint efforts across public health initiatives and strengthen support for related policies indirectly benefiting the population's brain health.
- Government and the NHS should ensure brain health is prioritised in the new dementia and health promotion strategies and is central to wider ambitions for prevention. These policies should consider the breadth of risk factors and wider determinants of health that influence health outcomes and inequalities.
- The pursuit of better brain health should be an integral component of COVID-19 person-centred recovery plans to enable people to live longer, more independent and resilient lives.

BACKGROUND

1. Dementia is one of the biggest global health crises society faces. In the UK alone, nearly 1 million people live with the diseases that cause dementia.[2] Dementia rates are rising steeply due to a growing and ageing population, and in the current absence of disease-modifying treatments in the UK to prevent, stop or slow the underlying causes of dementia, now is the time for urgent action on prevention.[3] It is important to explore non-pharmacological and low-cost interventions to mitigate the projected growth in dementia prevalence. The challenge for dementia prevention in the UK is that despite varying policy actions in recent years, there continues to be limited awareness of dementia risk factors and of the potential and value of risk reduction.[4] In parallel, understanding of dementia has seen considerable strides. The diseases that cause dementia are due to a complex mix of genetics, age, lifestyle and environmental factors. More is known about how deprivation, inequality and the wider determinants of health may also influence dementia risk, morbidity and mortality.[5] While much of the focus of risk reduction to date has been on cardiovascular health, recent evidence points to the need for a broader approach. There is a need to educate health professionals as well as communicate to the general public about the relevance of brain health to lowering the risk of developing conditions such as dementia and promoting healthy ageing.

2. In May 2021, Alzheimer's Research UK hosted a virtual roundtable to amplify the brain health conversation and develop a shared understanding of the concept and its potential impact. The event brought together researchers, policy makers, health professionals and people with lived experience of dementia, as well as other participants working in the fields of dementia, prevention and public health.

[1] To note this document was updated in June 2022 to take account of new signatories. The content has otherwise not changed.
[2] Prince M, et al. (2014). Dementia UK: Update – Second edition. Available at https://www.alzheimers.org.uk/sites/default/files/migrate/downloads/dementia_uk_update.pdf (last accessed 04 November 2021).
[3] Alzheimer's Association (2021). Global Dementia Cases Forecasted to Triple by 2050. Available at https://alz.org/aaic/releases_2021/global-prevalence.asp (last accessed 04 November 2021).
[4] Alzheimer's Research UK (2018). Dementia Attitudes Monitor: Wave 1. Available at https://www.dementiastatistics.org/wp-content/uploads/2019/02/Dementia-Attitudes-Monitor-Wave-1-Report.pdf (last accessed 04 November 2021).
[5] Jitlal M, et al. The Influence of Socioeconomic Deprivation on Dementia Mortality, Age at Death, and Quality of Diagnosis: A Nationwide Death Records Study in England and Wales 2001–2017. *Journal of Alzheimer's Disease*. 2021;81(1):321-328. https://doi.org/10.3233/jad-210089.

This consensus statement outlines the authors' and signatories' support for the concept of brain health and the potential it has to offer.

CONTEXT

3. The latest evidence indicates that 40% of global dementia cases could be potentially attributable to 12 modifiable risk factors.[6] These include less education, hearing loss, traumatic brain injury, hypertension, excessive alcohol consumption, obesity, smoking, depression, social isolation, physical inactivity, air pollution and diabetes.

4. The most recent evidence also calls for a life-course model of dementia risk reduction; it is never too early and never too late for preventive action on dementia, including in earlier stages of cognitive decline. This way forward would help to redress misconceptions about dementia being an inevitable part of ageing and support efforts to intervene earlier when measures to address modifiable risk factors are most likely to have an impact.

5. 'Brain health' has potential to be a novel and positive reframing of the behaviour change narrative. National research suggests that among the different ways the public interprets the term, some of the most popular definitions were about keeping the brain working properly and reducing risks of developing diseases that could affect the brain. In contrast with messaging on dementia risk reduction, brain health may be more accessible, positive and likely to stimulate discussion. The concept appears to resonate with individuals of all age groups.[7] Recent research also suggests more people believe they can influence their brain health than believe they can affect dementia risk.[8,9] The Dementia Attitudes Monitor found 75% of people believe they can influence their brain health. In contrast, just 33% think it's possible to reduce their risk of dementia.

PRINCIPLES FOR BRAIN HEALTH

6. Brain health has the potential to offer a holistic, integrated and individualised approach to health and cognitive impairment. However, the scope and potential application of brain health is broader than dementia prevention. There is considerable overlap between risk factors for dementia and for other disease areas (e.g. non-communicable diseases) and health concepts (e.g. healthy ageing). This suggests that greater benefits could be achieved by a systems-based and disease-agnostic framework, instead of thinking of dementia in isolation.

7. Dementia risk reduction messaging and policies need to expand beyond just cardiovascular health. While the adage 'what is good for the heart is good for the brain' remains valid, it no longer encapsulates the breadth of known risk factors.

8. Public health strategies for brain health should be centred on optimising brain health throughout the life-course, by keeping the brain engaged and prolonging the years spent with good brain health. These can potentially prevent or delay the onset of dementia and other long-term conditions, as well as improve the management of their effects. Implementing and promoting good brain health can improve individuals' overall health and also their wellbeing.

9. The meaning of brain health will vary from one individual to another. It should be flexible and pragmatic. It may be informed by circumstances unique to an individual, such as competing health priorities and access to resources. This flexibility should be balanced with the need for urgent action on prevention and the emerging nature of the brain health concept. Instead of adopting a rigid and universal definition, the opportunity is rather for individuals to interpret and take away from brain health what is most appropriate for them.

10. Communication on brain health should focus on the benefits of maintaining good brain health and encourage positive protective behaviours that may be fun or enjoyable. Using a life-course model of

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[6] Livingston G, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *Lancet*. 2020;396(10248):413-446. https://doi.org/10.1016/S0140-6736(20)30367-6.

[7] Alzheimer's Research UK (2021). Brain Health: A new way to think about dementia risk reduction. Available at https://www.alzheimersresearchuk.org/about-us/our-influence/policy-work/reports/brain-health-a-new-way-to-think-about-dementia-risk-reduction/ (last accessed 04 November 2021).

[8] Alzheimer's Research UK (2021). Dementia Attitudes Monitor: Wave 2. Available at https://www.dementiastatistics.org/wp-content/uploads/2021/09/ALZ_DAM_long-Report_21_LR_WEB_FINAL2.pdf (last accessed 04 November 2021).

[9] Vaportzis E and Gow AJ. People's Beliefs and Expectations About How Cognitive Skills Change with Age: Evidence From a U.K.-Wide Aging Survey. *The American Journal of Geriatric Psychiatry*. 2018;26(7):797-805. https://doi.org/10.1016/j.jagp.2018.03.016.

brain health is not just about reducing certain behaviours in earlier life. It is also about helping older adults pick up and hold onto healthier habits.

11. Brain health cuts across different policy narratives and is well placed to support a recovery towards a future that enables healthy ageing through optimisation of wellbeing and decreasing of risk. COVID-19 highlighted the poor underlying health of the population and the disparities between communities. The role of factors such as age, ethnicity and long-term conditions were also evident. Most deaths in 2020 due to COVID-19 in England and Wales had up to two pre-existing conditions, the most common of which was classified as dementia and Alzheimer's disease.[10] The lockdown measures had detrimental consequences for mental health, physical health and sense of social wellbeing, all of which are integral to good brain health. Enabling health-conscious behaviour for relevant risk factors implies that building and rebuilding communities are vital components of the wider societal direction outlined here for brain health. This vision is intricately tied to other agendas that contribute to preventing ill health, from extending healthy life expectancy to reducing health disparities.

[10] Office for National Statistics (2021). Deaths due to COVID-19, registered in England and Wales: 2020. Available at https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/deathsregisteredduetocovid19/2020 (last accessed 04 November 2021).

KEY POLICY RECOMMENDATIONS FOR A BRAIN HEALTH FRAMEWORK

12. Brain health should form part of wider national, regional and local public health approaches to prevention and healthy ageing. An important opportunity for the development and promotion of good brain health at national level is the upcoming publication of the revised dementia strategy reflecting the specific need for new messaging in this area. There are also related policies (e.g. for tobacco control, obesity and air pollution) which would benefit brain health and this should leverage greater support for their implementation.

13. Strategies promoting good brain health need to be multifaceted, addressing fundamental structures that influence health outcomes and facilitate lifestyle modification. Government policies are needed to:

- tackle risk factors and wider determinants of health that individuals have little control over, such as air pollution.
- shape the wider environment and target underlying elements of socioeconomic deprivation, which can impact on mortality and multimorbidity.
- raise general awareness of the value of good brain health and the breadth of related risk factors through public health advice.
- provide tailored messaging for target groups and personalised prevention for individuals, to accommodate differing needs and address health inequalities. Risk isn't the same for every population group and the potential for gains from risk reduction may be greater in some more vulnerable populations (e.g. minority groups in which certain risk factors are more common).[11]

These measures should be seen as complementary and aimed towards providing options to empower individuals and enable them to self-select the behaviour changes that resonate most with them.

14. In addition to government intervention and individual action, improving the response to good brain health at the national level will require engaged professionals and organisations who can advocate for the concept in local population health and wellbeing strategies. Such existing strategies should be reviewed with a brain health lens to ensure they have embedded the latest evidence.

15. Cross-governmental and whole-of-society approaches are necessary to match the scale of the challenge. The scope of brain health is intertwined with many other disciplines outside of the immediate remit of the public health community. Greater collaboration between stakeholders, including health professionals, employers, educators, sports and leisure practitioners and community representatives, is needed to raise awareness, advocate for policy changes and support behaviour change. The proposed cross-government ministerial board on prevention should also consider incorporating and coordinating action on brain health related risk factors.

16. Investment is needed to implement evidence-based interventions that support good brain health. Recent research has identified, for selected risk factors, cost-effective interventions at individual level that may potentially lead to reductions in dementia prevalence in the UK.[12] Additional research should investigate the potential savings, health benefits and other possible returns on investment to be gained from implementing both individual and population-level interventions that promote good brain health.

[11] Public Health England (2015). Prevalence of dementia in population groups by protected characteristics: A systematic review of the literature. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/465274/Dementia_Equalities_Literature_Review_Matrix_Report_-_Final_for_web_-_01102015.pdf (last accessed 04 November 2021). Office for National Statistics (2020). Dementia and Alzheimer's disease deaths including comorbidities, England and Wales: 2019 registrations. Available at https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/dementiaandalzheimersdiseasedeathsincludingcomorbiditiesenglandandwales/2019registrations (last accessed 04 November 2021).

[12] Mukadam N, et al. Effective interventions for potentially modifiable risk factors for late-onset dementia: a costs and cost-effectiveness modelling study. *Lancet Healthy Longevity*. 2020;1(1):e13-20. https://doi.org/10.1016/S2666-7568(20)30004-0.

WIDER ACTIONS NEEDED TO SUPPORT IMPROVEMENTS IN BRAIN HEALTH

17. The new dementia strategy should serve as the entry point for brain health into the policy landscape. As the concept matures and its implementation grows, brain health related policy should expand further into newer areas. These should reflect the range of risk factors and health priorities associated with the concept. Ultimately, brain health should be guiding action across aspects of prevention, diagnosis and treatment.

18. Beyond a brain health framework, more awareness raising and advocacy work is needed on dementia specific messaging challenges. This work should counter the stigma, fear and misconceptions around dementia, which can hinder open conversation and individuals accessing care. Communication is also needed to raise awareness that risk reduction is possible and why it may be relevant to more segments of the population, for example not just to those concerned about poor memory. Prevention advice should be balanced, acknowledge that risk reduction is just one part of the equation and avoid inducing feelings of perceived guilt over potentially developing dementia or other long-term conditions.

19. Ensuring brain health is adequately embedded within a health system that can deliver on these ambitions will likely require greater support for practitioners. Workforce capacity challenges in primary and specialist care need to be tackled to address issues stemming from staff shortages, level of patient demand and the expanding risk factor profile for dementia. Existing guidance and health professional training will also need to adapt to reflect the evolving evidence landscape and enable practitioners to offer the best treatment and support. Investing in preventive measures to raise individuals' level of brain health and maintain it will help alleviate demand and the burden of modifiable risk factors on the NHS.

20. Current patient services, especially those for people with long-term conditions, should look to incorporate the widening scope of dementia risk reduction. In the longer term, modified care pathways may be needed to coordinate and support a holistic approach to individual brain health. Consistent with a lifelong model of prevention, the aim should be to support more proactive preventive healthcare for everyone. This could be, for example, by checking-in with people not just when they are ill but also at key life transition points or at 'touch points' with healthcare.

21. Understanding of dementia and its causes continues to evolve rapidly. It has grown considerably in recent years and the state of play reflected in this statement is based on the best available evidence. To reap even further gains than the current evidence suggests is possible, more research needs to strengthen the evidence base for the many potential influences on risk. Advice on diet and sleep, for example, is often given because although it may be unclear how they influence dementia risk, they are generally thought to lead to health and wellbeing benefits without causing undue harm. Other potential risk factors continue to be the subject of debate and investigation.

22. Further evidence, investment and action are necessary to complete the transition of brain health from concept into practice. Priority areas for research include the potential, scope and applicability of brain health, as well as how to best communicate at both population-wide and target group level. Relevant metrics, tools and methods of assessment should be developed to support greater understanding, definition and implementation of the concept.

The following organisations and individuals have signed in support:

- Action on Smoking and Health
- Alzheimer's Research UK
- Alzheimer's Society
- American Association of Retired Persons (AARP)
- British Geriatrics Society
- Deep Dementia Phenotyping (DEMON) Network
- Dementia United, Greater Manchester Health & Social Care Partnership
- Lincolnshire Partnership NHS Foundation Trust (LPFT)
- Preventive Neurology Unit, Wolfson Institute of Population Health, Queen Mary University of London
- Race Equality Foundation

- Royal Society for Public Health
- Stroke Association
- Think Brain Health Global
- UK Faculty of Public Health

- Debbie Abrahams, Member of Parliament
- Dr Joanne Allen, Consultant Clinical Psychologist
- Dr Julia Cook, Principal Clinical Neuropsychologist, Lead for Psychological Interventions for People Living with Dementia, Herefordshire & Worcestershire Health and Care NHS Trust, Dementia Services
- Dr Liz Coulthard, Associate Professor in Dementia Neurology, University of Bristol and North Bristol NHS Trust
- Dr Ross A. Dunne, Consultant Old Age Psychiatrist, GMMH; Honorary Senior Lecturer, Geoffrey Jefferson Brain Science Centre, University of Manchester
- Robert Ede, Head of Health and Social Care, Policy Exchange
- Isabelle Foote, Registered nurse & PhD Student, Unit for Psychological Medicine & Preventive Neurology Unit, Queen Mary University of London
- Professor Charlie Foster OBE, Professor of Physical Activity and Public Health, University of Bristol
- Professor Alan Gow, Professor in Psychology, Heriot-Watt University
- Baroness Greengross, member of the House of Lords
- Dr Sara Humphrey, GPwSI Older People, Clinical Lead Dementia and OPMH Yorkshire & Humber Clinical Network
- Dr Chris Kalafatis, MRCPsych, Consultant in Old Age Psychiatry, South London and Maudsley NHS Foundation Trust, Kings College London
- Professor David Llewellyn, University of Exeter and Alan Turing Institute
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- Dr Naaheed Mukadam, Principal Clinical Research Fellow Consultant, University College London
- Dr Catherine Mummery, PhD FRCP, Head of clinical trials in dementia and lead for dementia service, Consultant Neurologist National hospital for Neurology and Neurosurgery, UCLH, Honorary Associate Professor, Dementia Research Centre, University College London
- Dr Graciela Muniz-Terrera, Edinburgh Dementia Prevention, University of Edinburgh
- Dr Alastair Noyce, Reader in Neurology and Neuroepidemiology, Wolfson Institute of Population Health. Consultant Neurologist, Barts Health NHS Trust
- Dr Janice Ranson, Research Fellow in Dementia Prevention and Diagnostics, University of Exeter; Deputy Director, Deep Dementia Phenotyping (DEMON) Network
- Dr Jill Rasmussen, Royal College of General Practitioners Clinical Representative Dementia
- Professor Marcus Richards, Professor of Psychology in Epidemiology, University College London; Programme Leader, UK Medical Research Council
- Professor Jonathan Schott, Professor of Neurology, University College London; Chief Medical Officer, Alzheimer's Research UK
- Professor A. David Smith FMedSci, Professor Emeritus of Pharmacology, University of Oxford, Founding Director, Oxford Project to Investigate Memory and Ageing (OPTIMA), Hon. Research Fellow, Alzheimer's Research UK
- Professor Blossom Stephan, Professor in Neuroepidemiology and Global Ageing, University of Nottingham
- Chris Thomas, Senior Research Fellow, Institute for Public Policy Research (IPPR)
- Dr Michele Veldsman, Senior postdoctoral research scientist in Cognitive Neurology, University of Oxford
- Dr Charlotte Warren-Gash, Associate Professor/Wellcome Intermediate Clinical Fellow, Epidemiology and Public Health, London School of Hygiene & Tropical Medicine
- Professor Lawrence Whalley, Professor Emeritus of Mental Health, University of Aberdeen
- Dr Laura Winchester, Alzheimer's Research UK Junior Fellow, Department of Psychiatry, Oxford University

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