



Blackfriars Consensus on promoting brain health:

Reducing risks for dementia in the population

1. Following a meeting of public health practitioners, policy makers, voluntary and community representatives, and researchers hosted by the UK Health Forum and Public Health England in London on 30 January 2014, consensus was reached on the potential for incorporation of dementia risk reduction into current approaches for non-communicable diseases (NCDs). Some components of dementia now appear to share common causal links with other non-communicable diseases. However, despite the apparent and emerging associations, current NCD policies and prevention strategies focusing on risk factors do not incorporate their added potential to brain health, and the possibility of reduction for dementia has been largely absent from many dementia policies. Furthermore, clear messages about risks for dementia resulting from known factors such as head injury and alcohol receive scant attention.

HEADLINE CONSENSUS MESSAGE

2. Dementia is a common syndrome closely associated with ageing, with some known underlying causes and others which are less well understood. Recent evidence suggests that risk in the population might be reduced so that fewer people at particular ages develop dementia. The scientific evidence is evolving rapidly and sufficient to justify considered action and further research on dementia risk reduction, both by reducing the modifiable risk factors and improving the recognised protective factors.

CONTEXT

3. Public health measures to modify vascular risk factors have contributed to a large decline in deaths from heart disease and stroke over the past 50 years, and more can still be done to build on these gains and accelerate health impact. There is some evidence that the same primary prevention approach might have led to a reduction in age-specific dementia prevalence in some countries.¹
4. The most common clinical diagnosis of subtype of dementia is Alzheimer's disease. Most people with dementia have a mixture of pathologies including Alzheimer's type and vascular. Vascular risk factors have been estimated to contribute to a substantial proportion of dementia cases worldwide (between 3% and 20% of predicted new cases in 20 years).^{2,3} A further small but important group of dementias are

¹ Matthews FE, Arthur A, Barnes LE, Bond J, Jagger C, Robinson L, Brayne C; Medical Research Council Cognitive Function and Ageing Collaboration. A two-decade comparison of prevalence of dementia in individuals aged 65 years and older from three geographical areas of England: results of the Cognitive Function and Ageing Study I and II. *Lancet*. 2013 Oct 26;382(9902):1405-12

² WHO and Alzheimer's Disease International. 2012. Dementia: a public health priority. Geneva: World Health Organization

³ Smith AD. and Yaffe K. 2014. Letter: Dementia (Including Alzheimer's Disease) can be Prevented: Statement Supported by International Experts. *Journal of Alzheimer's Disease* 38: 699–703 DOI 10.3233/JAD-132372

preventable; those caused by factors such as head injury and excessive alcohol intake. There is also evidence of the role of protective factors in the presence of Alzheimer and vascular changes in the brain and these too merit attention in any preventive approaches.

5. Given the evidence that there may be a vascular component to many dementias, interventions to address vascular risk factors (such as tobacco, poor diet, physical inactivity and alcohol; and intermediate disease precursors such as raised blood pressure, raised blood cholesterol, obesity and diabetes which arise from behavioural and other factors) should also help reduce the risk, progression, and severity of dementia. Protective factors also play a part and these include education and intellectual and social engagement.
6. For some risk factors there is indirect evidence beyond observation studies, such as randomised control trials of physical activity and cognition (not dementia) and imaging (areas of the brain associated with memory) but these remain limited and need urgent attention to evaluate their potential contribution.⁴
7. Costs from dementia to the UK economy are currently estimated to be £23 billion and the global costs are estimated at US\$604 billion or £356 billion (equivalent to 1% of global GDP). These costs may rise in future if life expectancy continues to extend despite worsening trends in obesity, diabetes, physical inactivity and heavy drinking.⁵ Coping with dementia in the population will continue to present significant social and economic costs.
8. Recognising the necessary timescales and lag in benefit from preventive strategies aimed at current younger populations at future risk, there is a compelling need to take immediate, targeted action on the emerging and known risk factors such as physical inactivity (including upstream policy measures). The precautionary principle also requires that, even for those risk factors for which the evidence is less robust, we should recommend actions that could reasonably be presumed to reduce the risk of some types of dementia at least, whilst at the same time carrying out scientific evaluations of their effects. We should also facilitate further research into links between these risk factors and dementia (see 21b below).
9. Given the emerging evidence that some types of dementia and many NCDs appear to share common risk and protective factors, future primary prevention policies for NCDs could be greatly strengthened if framed within a broad approach to health and wellbeing that explicitly supports the promotion of good brain health throughout life. Such an approach could combine policies and interventions which tackle the known risk factors for NCDs with those which promote the range of factors that are increasingly being shown to be protective against dementia.
10. Adopting an integrated health and wellbeing approach to NCD prevention, which is inclusive of the emerging opportunities for dementia risk reduction, would not cause any harm. Indeed this may offer an opportunity to strengthen and expand existing prevention programmes and research in these areas with potential benefits to both conditions and beyond.

⁴ Vyara Valkanova, Rocio Eguia Rodriguez and Klaus P. Ebmeier. Mind over matter – what do we know about neuroplasticity in adults? *International Psychogeriatrics*, available on CJO2014. doi:10.1017/S1041610213002482.

⁵ Banerjee S (2013). Good news on dementia prevalence – we can make a difference. *Lancet*. Published online July 16, 2013. [http://dx.doi.org/10.1016/S0140-6736\(13\)61579-2](http://dx.doi.org/10.1016/S0140-6736(13)61579-2)

POLICY

11. As the evidence on risk reduction and protection for dementia grows, we should ensure national approaches to dementia include greater emphasis within prevention programmes of the potential for associated improved brain health. Population level measures should improve protective factors and reduce behavioural and intermediate risk factors linked, for example, to physical inactivity, tobacco, alcohol use and poor diet.
12. As with so many other diseases, the impact that dementia has on people's function and their lives, depends on their overall state of health and the balance between protective and risk factors across the life course. There are a number of unique risk and protective factors for dementia which are amenable to change such as social isolation; cognitive reserve; cognitive stimulation; prompt treatment of infection, and depression. Both policy and research agendas should maintain a focus on these as well as on factors shared with NCDs.
13. The evidence also suggests that the prevalence of dementia and/or its effects may be affected by protective factors such as educational attainment; improved workplace health in mid-life; supporting social interactions and lifelong learning and stimulation in later life, and supportive care from services and from carers/families. Many of these may be amenable to targeted action to tackle the upstream social, economic, and environmental factors that determine them.⁶
14. Other actions which may reduce risks for dementia more directly could include known factors such as reducing alcohol and substance abuse and preventing head injuries particularly in young people. The impact in early life of these and other risk factors (including maternal health and behaviours and parental skills, physical activity levels etc.) and protective factors (including educational attainment) should be urgently examined from a policy and research perspective.
15. Dementia risk reduction should begin to be incorporated into both national and global policies to tackle NCDs, beginning with the interventions where the evidence is most robust, but recognising that this will be likely to evolve rapidly. There are already examples where this integration is occurring and lessons may be learned from the Finnish and Welsh national approaches to promoting brain and heart health.
16. Stronger collaboration between clinical practitioners, public health and prevention experts, researchers and policy makers concerned with dementia or with other NCDs is needed to support better integration of policy development and more effective programme implementation and evaluation. There is also an urgent need for research in implementation science to inform such approaches.
17. Policies for dementia prevention should include upstream population level actions as well as community and individual level interventions. Personalised interventions to encourage behaviour change, such as education and awareness campaigns, would need to be supported by upstream policies such as regulating and taxing health damaging products.
18. Any new policies, strategies and interventions to reduce the risk of dementia and NCDs should carefully assess the potential impact on health inequalities and not

⁶ Foresight Mental Capital and Wellbeing Project (2008). Final Project report. The Government Office for Science, London.

widen health inequalities. Population-wide policies might reasonably be expected not to widen inequalities. However, these will need to be combined with targeted interventions in marginalised or socially excluded communities at particularly high risk.

19. National policy guidelines aimed at translating evidence on preventing and reducing the risk of NCDs and dementia into practice will aid implementation as would the use of tools such as audit, standards and kite marks to facilitate increased awareness and practice change amongst professionals.

RESEARCH

20. There is relatively little research funding for primary prevention of dementia through reduction of its known risk factors in the UK, which is significantly disproportionate to its societal impact.
21. Dementia research is largely focused on areas in which those investing have judged that there will be greatest return on that investment and high impact. However, a parallel strategy is needed to this societal problem. A new approach tackling other dimensions is required including: a) identifying new risk factors for dementia through research into the mechanisms for the development and progression of dementia; b) epidemiological studies to understand the importance of risk factors in the development of dementia, particularly in early and mid-life; c) epidemiological and modelling studies to help describe and predict the burdens of dementia in the UK population and the potential returns on investment that will accrue from prevention policies; d) follow up of existing trials and cohort studies - such as those for diabetes and cardiovascular disease - to examine long term implications on dementia outcomes, and e) better ways to achieve early diagnosis, and prevent deterioration using different models of provision and support. There is positive movement towards these ends in initiatives such as the UK Dementia Platform and the EU Joint Programme on Neurodegenerative Disorders.
22. Good evidence underpinning sound risk reduction strategies comes from a variety of sources. Randomised Controlled Trials are important to test the role of risk and protective factors, but need to be urgently complemented by other approaches as illustrated by emerging evidence on the role of physical activity.
23. Consideration should be given to ensuring national health and population surveys are designed to be able to detect trends in dementia disease prevalence and incidence in a way which can be related to changes in behavioural risk factors and protective factors, and which are able to provide information to inform action at national and local level. Population surveys should also improve recruitment and data collection among the oldest age groups in whom most dementia is found, including people in care settings.
24. Research is needed into the nature and extent of social inequalities in dementia risk. This should include studies on the social patterning of dementia, how it has changed in the last 20 years, and which individuals and groups bear the biggest burden in society.

COMMUNICATION

25. The general public, health professionals and policy makers are increasingly aware of the links between behavioural risk factors and non-communicable diseases (such as tobacco and lung cancer or diet and cardiovascular disease). But few people are

aware that many of the same risk factors could impact on the risk of dementia. It is therefore important to communicate more clearly the emerging evidence about dementia risks, protective factors and preventive actions to the public and relevant health and care professionals and policy makers. Further population-based work on the impact of dementia awareness and risk messaging is important in order to assess its contribution to perceptions of stigma and fear, as well as potential to change behaviour at the individual level. This will influence the balance of preventive strategies.

26. Communications must be informed by existing evidence from behavioural science and insights in order to maximise impact at all opportunities across the life course.
27. The emerging evidence suggests that the risk of developing dementia can be reduced but it cannot be eliminated. Communications should continue to tackle the myths and misinformation about dementia and to reduce stigma, and should be carefully framed to avoid the impression that individuals who develop dementia are to blame through insufficient adherence to perceived preventive behaviours. Lessons learned from the experience of communicating the risks of other NCDs such as cancer may be valuable.
28. Communications on reducing dementia risk should be fully aligned with those on living well with dementia, ensuring that the public receive balanced messages that enable them to respond and plan appropriately.

PROFESSIONAL DEVELOPMENT

29. The rapidly evolving potential for dementia prevention and risk reduction should be incorporated into the training and development of the wider public health, health care and social care workforces. This may be most efficient when integrated into existing training programmes on NCD prevention. However, given the pace of change in this field, bespoke awareness and training programmes on the opportunities to reduce population risk for dementia will need increasingly specialised focus.

The following 29 national organisations, UK ministers and 32 dementia and public health specialists have signed in support:

- Action on Sugar
- AgeTrust
- Alcohol Concern
- Alcohol Health Alliance UK
- Alzheimer's Disease International
- Alzheimer's Research UK
- Alzheimer's Society
- Association of Directors of Public Health
- Association for the Study of Obesity
- Blood Pressure UK
- British Dietetic Association
- British Heart Foundation
- Consensus Action on Salt and Health
- Faculty of Old Age Psychiatry, Royal College of Psychiatrists
- Greater London Authority
- Health Equalities Group

- International Longevity Centre – UK
 - Mental Health Foundation
 - Mental Health Provider Forum
 - National Institute for Health and Care Excellence (NICE)
 - NHS England
 - Northern Ireland Chest Heart and Stroke
 - Public Health England
 - Strategic Dementia Advisory Group of the East of England, NHS
 - Stroke Association
 - UCLPartners
 - UK Faculty of Public Health
 - UK Health Forum
 - Wales Mental Health in Primary Care (WaMH in PC)
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- Rt Hon Jeremy Hunt MP, Secretary of State for Health, England
 - Norman Lamb MP, Minister of State for Care and Support, England
 - Alex Neil MSP, Cabinet Secretary for Health and Well-being, Scotland
 - Mark Drakeford AM, Minister for Health and Social Services, Wales
 - Edwin Poots MLA, Minister for Health, Social Services and Public Safety, Northern Ireland
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- Dr Fiona Adshead, Trustee, UK Health Forum
 - Dr Shahed Ahmad, Director of Public Health, London Borough of Enfield
 - Dr Charles Alessi, Lead Prevention of Dementia, Public Health England
 - Dr Sube Banerjee, Professor of Dementia & Associate Dean, Centre for Dementia Studies, Brighton and Sussex Medical School
 - Professor Carol Brayne, Professor of Public Health Medicine in the Department of Public Health and Primary Care, University of Cambridge
 - Professor Alistair Burns, National Clinical Director for Dementia, NHS England
 - Professor Simon Capewell, Professor of Clinical Epidemiology, University of Liverpool
 - Professor John Deanfield, Consultant Cardiologist and Director of Cardiovascular Prevention, UCLPartners
 - Dr Maria Duggan, Director, Public Service Works
 - Professor Kevin Fenton, National Director of Health and Wellbeing, Public Health England
 - Dr Charlie Foster, University Research Lecturer and Programme Leader, British Heart Foundation Centre on Population Approaches for Non-Communicable Disease Prevention and WHO Collaborating Centre on Population Approaches to Non-Communicable Disease Prevention, University of Oxford
 - Professor Sir Ian Gilmore, Chair, Alcohol Health Alliance UK
 - Professor Huon Gray, National Clinical Director for Heart Disease, NHS England
 - Professor Vladimir Hachinski, Department of Clinical Neurological Sciences, University of Western Ontario
 - Robin Ireland, Chief Executive, Health Equalities Group
 - Dr Christopher Kipps, Clinical Director of Wessex Strategic Clinical Network (Mental Health, Dementia and Neurological Conditions), NHS
 - Dr Miia Kivipelto, Professor of Clinical Geriatric Epidemiology, Karolinska Institute, Sweden
 - Paul Lincoln, Chief Executive Officer, UK Health Forum
 - Dr David J. Llewellyn, University of Exeter Medical School
 - Professor Alan Maryon-Davis, Honorary Professor in Public Health, King's College London
 - Professor Klim McPherson, Chair, UK Health Forum and Visiting Professor of Public Health Epidemiology, University of Oxford

- Dr Oliver Mytton, Honorary Specialty Registrar, Centre for Diet and Activity Research (CEDAR), University of Cambridge
- John Wyn Owen, Vice Chair, UK Health Forum
- Dr Kiran Patel, Medical Director, NHS England Area Team (Birmingham, Solihull & Black Country and Consultant Cardiologist, Heart of England NHS Trust
- Dr Ruth Peters, Imperial Clinical Trials Unit, School of Public Health, Faculty of Medicine, Imperial College London
- Dr Mark Pietroni, Interim Director of Public Health of South Gloucestershire
- Dr Craig Ritchie, Senior Lecturer, Centre for Mental Health, Imperial College London
- Paul Sanderson, Health and Wellbeing Programme Lead, West Midlands Centre, Public Health England
- Paul Springer, Consulting Chief Executive Officer, Agetrust
- Professor David Smith, Professor Emeritus of Pharmacology, University of Oxford
- Professor Lawrence Whalley, Emeritus Professor of Mental Health, University of Aberdeen
- Dr James Warner, Chair, Faculty of Old Age Psychiatry, Royal College of Psychiatrists