**Supplementary Table 1A**. Searching strategy and Boolean terms for literature searches for identifying guidance, recommendations and evaluation of policies within databases

|  |  |  |
| --- | --- | --- |
|  | **Search Term Category** | **Pseudonyms & Boolean Terms** |
| **1** | **Dementia** | Dement\*tw |
| **2** | Alzheimer\* tw |
| **3** | lewy\*tw |
| **4** | Huntington\*tw |
| **5** | Creutzfeldt\* tw |
| **6** | cjd\* tw |
| **7** | Korsakoff\* tw |
| **8** | Wernicke\* tw |
| **9** | Aphasia\* tw |
| **10** | 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 |
| **11** | **Risk factors** | Risk tw |
| **12** | Factor tw |
| **13** | Prevent\* tw |
| **14** | 11 OR 12 OR 13 |
| **15** | **Guidance, recommendations and evaluation** | Polic\* tw |
| **16** | Decision\* tw |
| **17** | Plan\* tw |
| **18** | “Best practice” tw |
| **19** | Practice tw |
| **20** | Guid\* tw |
| **22** | Health check\* tw |
| **23** | “Primary healthcare” tw |
| **24** | “Primary health care” tw |
| **25** | “General practice” |
| **26** | Evalu\* tw |
| **27** | Implement\* tw |
| **28** | Recommend\* tw |
| **29** | 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 |
| **30** |  | Engl\* |
| **31** | United Kingdom |
| **32** | UK |
| **33** | 30 OR 31 OR 32 |
| **34** | To determine how England guidance, recommendations or evaluation of dementia prevention implementation at the clinical level. | 10 AND 14 AND 29 AND 33 |

**Supplementary Table 1B**. Websites and electronic databases used for primary and grey literature for identifying policies, strategies, evaluation reports, guidance, recommendations and evaluation of policies

|  |  |
| --- | --- |
| **Document Type** | **Databases** |
| Policies, strategies and plans | Google search: UK Government (http://www.gov.uk)  NHS (http://www.england.nhs.uk); Public Health England (PHE) (http://www.gov.uk/government/organisations/public-health-england)  The Kings Fund (http://www.kingsfund.org.uk/)  Local Government Association (http:/www.local.gov.uk/))  Individual websites of each identified Sustainablility and Transformation Partnership, Clinical Commissioning Group (CCG), local authority and Joint Health and Wellbeing Board (JHWB). |
| Evaluation reports, guidance, recommendations and evaluation of policies | MEDLINE using the UK filter (Ayiku et al., 2017) (Ovid)  EMBASE (Ovid)  PsycINFO (Ovid)  CINAHL (EBSCO host)  Social Policy and Practice (Ovid)  Health Technology Assessments (HTA) database (http://www.crd.york.ac.uk/CRDWeb/Homepage.asp)  NICE Evidence (http://www.evidence.nhs.uk/)  British Library (http://www.bl.uk)  Campbell Collaborations (http://www.campbellcollaboration.org/)  Shelcat (Scottish Health Libraries Catalogue – Dementia Services Development Centre) (http://www.knowledge.scot.nhs.uk/home/library-search.aspx)  Open Grey (http://www.opengrey.eu)  Health evidence (healthevidence.org)  NIHR Dissemination Centre (http://www.dc.nihr.ac.uk/)  Public Health Observatories (http://www.apho.org.uk)  NHS Networks (http://www.networks.nhs.uk/)  Health Evidence Canada (http://www.healthevidence.org)  Nuffield Trust (http://www.nuffieldtrust.org.uk)  Alzheimer’s Society (http://www.alzheimers.org.uk)  UK Health Forum (http://www.ukhealthforum.org.uk/)  The Dementia Evidence Toolkit (http://toolkit.modem-dementia.org.uk/).  We also searched specific national, regional and local government reports, Health and Wellbeing Board reports and board meetings, CCG annual reports, Director of Public Health Annual reports, and Healthwatch reports (http://www.healthwatch.co.uk/). |

**Supplementary Table 2.** England’s national health policies highlighting the inclusion of dementia prevention. Only policies which refer to dementia prevention are included.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Area of Health Care** | **Policy/Strategy** | **Reducing Dementia Risk through Modifiable Factors** | | |
|  |  | **Specific modifiable risks/prevention stated** | **Specific Action Points stated** | **Provides an implementation strategy** |
| **General & Public Health** | Healthy Lives, Healthy People: Our strategy for public health in England (2010) | Prevention: Changing adults’ behavior, improving diet and lifestyle | ✓ | - |
| PHE From evidence into action: opportunities to protect and improve the nation’s health (2014) | Prevention: Healthier lifestyle,  managing pre-existing conditions, e.g., depression or diabetes | ✓✓ | ✓✓ |
| NHS 5 Year Forward View (2014) | None stated | Supports the PHE (2014) strategy | - |
| PHE Strategy - Better outcomes 2020 (2016) | None stated | ✓✓ | ✓✓ |
| **Dementia Specific** | Living well with dementia: A National Dementia Strategy. Putting People First (2009) | None stated | ✓✓ | ✓ |
| Prime Minister’s challenge on dementia  Delivering major improvements in dementia care and research by 2015 (2012) | None stated | \* | \* |
| Prime Minister’s challenge on dementia  Delivering major improvements in dementia care and research by 2020 (2015) | Prevention: Healthy lifestyle  Risks: Smoking, obesity | ✓✓ | ✓  (Links to PHE strategy) |
| Prime Minister’s Challenge on Dementia 2020 Implementation Plan (2015) | Risks: smoking, excessive drinking, high blood pressure, lack of physical activity and diabetes | ✓✓ | ✓ |

\*States increasing funding and research focusing on dementia prevention but no details of practical action or implementation

✓ Links to modifiable dementia risks or prevention were included, regardless of level of detail

✓✓ Links to modifiable dementia risks or prevention were included and considered a priority with key action points

None stated –dementia prevention is stated within the strategy but specific details on what are risk factors or methods of prevention is lacking

**Supplementary Table 3.** Sustainability and transformation partnership plans (STPs) thatinclude dementia prevention and associated modifiable risks

|  |  |  |
| --- | --- | --- |
| **Sustainability and transformation partnerships** | **Prevention methods or Modifiable risks specified** | **Action Points** |
| Birmingham & Solihull | None stated | No |
| Cheshire and Merseyside | None stated | Follow prioritizes set out Prime Ministers challenge on dementia (2015) |
| Greater Manchester | None stated | NHS Health Checks to prevent vascular dementia |
| Lincolnshire | Physical Activity | No |
| Norfolk & Waveney | Under 'Prevention & wellbeing' generic lifestyle factors but not dementia specific | NHS Health Checks; access to more advice/ support to aid prevention |
| North London Partners - Working together for  better health and care: our sustainability and  transformation plan | None stated | Investing in a dementia  friendly North London including dementia prevention |
| Northumberland, Tyne and Wear and North Durham | Prevention: Physical activity, good diet, alcohol “What's good for your heart is good for your head” | Scaling up prevention, health and well being |
| Somerset | Prevention: Physical activity, healthy eating, weight management  Risks: Smoking; excess alcohol | Fully detailed & costed prevention plan in place, develop a prevention charter |
| South East London | None stated | No |

NHS, National Health Service

None stated –dementia prevention is stated within the strategy but specific details on what are risk factors or methods of prevention is lacking

**Supplementary Table 4A.** The local statutory and non-statutory strategies which included dementia prevention, highlighting stated modifiable risks. Only strategies which included dementia prevention are presented

|  | **Strategy** | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Governing Body** | **Statutory** | **Non-Statutory** | | | | |
| **Joint Health & Wellbeing Board Or Local Authority** | **Joint Health and Wellbeing Strategy** | **Dementia** | **Mental Health** | **General Prevention/**  **Healthy Living** | **Public Health** | **Aging Well/ Older people** | |
| Barking and Dagenham | - | - | - | Prevention: Healthy weight | - | - | |
| Barnet | Prevention: Physical activity | - | - | - | - | - | |
| Bath and North East Somerset | - | - | - | Prevention: (1) Physical activity; (2) Healthy weight | - | - | |
| Bedford | - | Risks: Alcohol, diet, physical inactivity, smoking, HBP, diabetes, obesity, cholesterol | - | - | - | - | |
| Bexley | Risks: Vascular risks | - | - | - | - | - | |
| Birmingham | - | \* Risks: Diabetes mellitus, cardiovascular disease, stroke, Transient Ischemic Attack (TIA), Parkinson’s disease, HBP, alcohol | - | - | - | - | |
| Blackburn with Darwen | - | - | - | Prevention: Healthy lifestyle | - | - | |
| Bolton | - | Risks: HPB, lack of physical exercise, smoking | - | - | - | - | |
| Bracknell Forest | - | Prevention: Physical activity, improve diet, not obese, mental wellbeing  Risks: Drug and alcohol misuse, smoking | - | - | - | - | |
| Bradford | - | Prevention: Not smoking, reducing CVD risk, increased early life education | - | - | - | - | |
| Brighton and Hove | - | Risks: Smoking, obesity, physical inactivity, alcohol, diabetes, loneliness | - | - | - | - | |
| Bristol | - | Risks: HBP, heart problems, high cholesterol, diabetes | - | - | - | - | |
| Buckinghamshire | Prevention: Healthy lifestyle | Prevention: Healthy lifestyle | - | - | - | - | |
| Bury | Risks: Smoking, poor diet, physical inactivity, alcohol and drug misuse Prevention: Healthy lifestyle | - | - | - | -- | - | |
| Cambridgeshire | - | Risks: Smoking, excess weight, physical inactivity | - | - | - | - | |
| Camden | - | None Stated | - | - | - | - | |
| Cheshire East | - | Prevention: Lifestyle factors | - | - | - | - | |
| Cheshire West and Chester | - | Risks: Sedentary lifestyle, alcohol, diet/obesity  Prevention: Stop smoking, be more active, reduce alcohol consumption, Improve diet, healthy weight. Keeping the brain active and challenged, improving social connectedness, being socially active, improving mood, relieving stress, reducing depression, reducing loneliness | - | - | - | - | |
| City of London | - | Prevention: Healthy lifestyle choices | - | - | - | - | |
| Cornwall (joint with Isles of Scilly) | - | Risks: Diet, smoking, alcohol intake  Prevention: Exercise, weight loss, looking after mental health, sleep | - | - | - | - | |
| County Durham | - | Risks: Smoking, obesity  Prevention: Healthy lifestyle | - | - | - | - | |
| Coventry | - | Prevention: Healthy lifestyle | - | - | - | - | |
| Croydon | - | Risks: Poor heart health, smoking, HBP, high cholesterol, excessive alcohol | - | - | - | - | |
| Derby | - | Risks: HBP, diabetes, stroke, heart diseases | - | Prevention: Physical activity | - | - | |
| Derbyshire | - | Prevention: Healthy diet, healthy weight, physical activity \* | - | - | - | None Stated | |
| Doncaster | None Stated | Risks: Smoking, excess alcohol, unhealthy diet, obese, physical inactivity, mind not active | - | - | - | - | |
| Dorset (Dorset, Bournemouth & Poole | - | None Stated | - | - | - | - | |
| Dudley | - | Prevention: Not smoking, reduce alcohol consumption, sleep well, protect head (head injury awareness), good diet, healthy weight, physical activity, being socially active, education, cognitive stimulation | - | - | - | - | |
| Ealing | None Stated | Risks: Vascular factors | - | - | - | - | |
| East Riding of Yorkshire |  | Risks: Smoking, poor diet, excessive alcohol intake, drug use, sexually transmitted  diseases, HBP, diabetes, obesity | Prevention: Healthier lifestyle | - | - | - | |
| Enfield | - | Prevention: Healthy lifestyle | - | - | - | - | |
| Gloucestershire | - | Prevention:  Healthy lifestyle | - | - | - | - | |
| Halton | Prevention: Physical activity, healthy eating, reduction in alcohol | Prevention: Healthy lifestyle (mid-life)  Risks: Midlife hypertension, poor educational attainment, diabetes, obesity, smoking, physical inactivity, depression | - | - | - | - | |
| Hammersmith and Fulham | - | - | - | Risks: Social isolation, loneliness |  |  | |
| Havering | - | Prevention: Healthy lifestyle factors similar for CVD and diabetes | - | - | - | - | |
| Hertfordshire | - | Risks: Social isolation and loneliness  Prevention: Healthy lifestyle ‘What is good for your heart is also good for your head’\* | - | - | - | - | |
| Kensington and Chelsea | - | Risks: Living alone | - | - | - | - | |
| Kingston upon Thames | - | Risks: Smoking, physical inactivity, HPB, diabetes | - | - | - | - | |
| Kirklees | - | \*Prevention: Healthy lifestyle | - | - | - | - | |
| Lancashire | - | \*Risks: Type 2 diabetes, HBP, high cholesterol, obesity, drug and alcohol use, air pollution, social isolation and loneliness  Prevention: Weight management, physical activity | - | - | - | - | |
| Leeds | - | Risks: HBP, diabetes, heart disease | - | - | - | - | |
| Leicester | - | None stated | - | - | - | - | |
| Liverpool | - | - | - | Prevention: Physical activity | - | - | |
| Luton | - | Risks: diabetes, drinking, cholesterol, depression, hypertension, low educational attainment, obesity, inactivity, smoking. Prevention: ‘What is good for your heart is also good for your head’, reduce smoking | - | Prevention: Physical activity | - | - | |
| Manchester (Greater Manchester Combined Authority) | - | None Stated | - | - | - | - | |
| Milton Keynes | - | Prevention: Not smoking, balanced diet, physical activity, moderate alcohol consumption, reducing social isolation, maintaining good emotional health | - | - | - | - | |
| Newham | \_ | \*Prevention: Healthy lifestyle especially in midlife | - | - | - | - | |
| Norfolk | - | - | - | - | Risks: smoking, drinking alcohol, physical inactivity, poor diet | - | |
| North Lincolnshire | - | None Stated | - | - | - | - | |
| North Somerset (North Somerset People and Communities Board) | - | - | - | - | None Stated | - | |
| North Tyneside | - | - | Risks: Loneliness, physical inactivity, diabetes, HBP, smoking, high cholesterol | - | - | - | |
| North Yorkshire | - | Risks: Smoking, physical inactivity, inactive lifestyle, excess alcohol, poor diet with high fat and sugar | - | - | - | - | |
| Northamptonshire | - | Risks: Lifestyle factors associated with CVD, head injuries, | - | - | - | - | |
| Northumberland | - | Prevention: ‘What is good for your heart is good for your head' | - | - | - | - | |
| Nottinghamshire | - | Prevention: Not smoking, eating healthily, physically active, reducing alcohol consumption | - | - | - | - | |
| Reading | Prevention: Reducing HBP and cholesterol | - | - | - | - | - | |
| Redbridge | Prevention: Healthy lifestyle | Risks: HBP, diabetes, stroke, heart disease | - | - | - | - | |
| Richmond upon Thames | Risks: Smoking, alcohol misuse, poor diet, physical inactivity, poor emotional and mental wellbeing,  (causal - loneliness, social isolation) | Prevention: Healthy lifestyle, avoidance of tobacco, reduced alcohol, Live Well Stay Well  Risks: Poor diet, physical inactivity | - | - | - | - | |
| Salford | Risks: Linked to CVD | - | - | - | - | - | |
| Sefton | - | -None Stated | - | - | - | - | |
| Shropshire | Prevention: Healthy lifestyle | Risks: Smoking, obesity, physical inactivity, diabetes | - | - | - | - | |
| Shropshire and surrounds | - | Risks: Obesity, diabetes, excessive alcohol consumption | - | - | - | - | |
| Somerset | - | \* Risks: (Midlife) CVD, type 2 diabetes, HBP, obesity, high cholesterol, smoking, obesity  Prevention: healthy lifestyle, physical activity | - | - | - | - | |
| South Gloucestershire | - | Prevention: Healthy lifestyle (mid-life) | - | - | - | - | |
| Staffordshire | - | Risks: Vascular problems, HBP, diabetes, smoking, poor diet, excessive alcohol | - | - | - | - | |
| Southend-on-Sea | - | \*Prevention: Healthy and active lifestyles, physical fitness, diet, not smoking, low cholesterol and blood sugar | - | - | - | - | |
| Stockport | - | \*Risks: Smoking, physical inactivity, excess alcohol, poor diet, obesity, loneliness, social isolation, depression  Prevention: Higher educational attainment, ‘What is good for your heart is also good for your brain’ | - | - | - | - | |
| Stoke-on-Trent | - | Risks: HBP, smoking, excessive alcohol, obesity, diabetes  Prevention: Reduce vascular factors | - | - | - | - | |
| Suffolk | - | Risks: CVD risk factors, loneliness, isolation  Prevention: Not smoking, physically active, reduce alcohol, eat healthily, maintain healthy weight | - | - | - | - | |
| Surrey (Surrey Heath) | - | Risks: HBP, smoking, excess drinking, obesity, physical inactivity, loneliness, isolation, depression | - | - | - | - | |
| Surrey (Surrey Heartlands and East Surrey) |  | Risks: Smoking, physical inactivity, HBP, diabetes  Prevention: ‘What’s good for your heart is good for your head’, diet, physical activity |  |  |  |  | |
| Swindon | Prevention: Healthy lifestyle,  stopping smoking, eating and drinking  healthily, physical activity | Risks: Stroke, HBP, diabetes, high cholesterol, smoking, excess alcohol, obesity, socially isolated | - | - | - | - | |
| Telford and Wrekin | - | Risks: Smoking, obesity, physical inactivity | - | - | - | - | |
| Tower Hamlets | - | - | Risks: Alcohol | - | - | - | |
| Wakefield | - | - | - | Prevention: Physical Activity | - | - | |
| Waltham Forest | None Stated (NHS Health Checks to help prevention) | Risks: HBP, smoking, high cholesterol,  Diabetes  Prevention:  Good diet, physical activity | - | - | - | - | |
| Warwickshire | - | Prevention: Healthy lifestyle, eating well, physical activity, reducing alcohol, not smoking | - | - | - | - | |
| West Sussex | - | Prevention:  Healthy lifestyle, good physical and mental health and well-being | - | - | - | - | |
| Westminster | \*Risks: Housing, social isolation, alcohol or substance misuse, diet, physical inactivity | - | - | - | - | - | |
| Wiltshire | - | Risks: CVD, stroke, smoking, excessive alcohol | - | - | - | - | |
| Wolverhampton | Risks: Alcohol | Risks: Obesity, smoking, inactivity, excessive alcohol | - | Prevention: Physical Activity | - | - | |
| Worcestershire | Prevention: Physical activity | Prevention: Healthy lifestyles, weight loss, limited alcohol, health checks, heart MOTs; ‘What is good for the heart is good for the brain’ | - | - | - | - | |

Note: Cells indicate the presence of a strategy which included dementia prevention, regardless of how significant, and which risk factors were included.

\* indicates a strategy considered as a good example because it includes dementia prevention, risk factors and/or prevention methods with detailed action points.

CVD, cardiovascular disease; HBP, high blood pressure/hypertension

None stated –dementia prevention is stated within the strategy but specific details on what are risk factors or methods of prevention is lacking

**Supplementary Table 4B.** The Clinical Commissioning Group (CCG) strategies and plans which included dementia prevention, highlighting stated modifiable risks. Only strategies which included dementia prevention are presented

|  |  |  |  |
| --- | --- | --- | --- |
| **Clinical Commissioning Group** |  |  | |
|  | **Strategy/Operational Plan** | | **Dementia** |
| **NHS Bassetlaw CCG** | None stated | | - |
| **NHS Bolton CCG** | None stated | | - |
| **NHS East and North Hertfordshire CCG** | None stated | | - |
| **NHS Coastal West Sussex CCG** | Risks: Cardiovascular health problems | | - |
| **NHS Crawley CCG** | None stated | | - |
| **NHS Fareham & Gosport CCG** | Prevention: Better lifestyles (No details) | | - |
| **NHS Gloucestershire CCG** | Risks: CVD | | - |
| **NHS Guildford and Waverley CCG** | Risks: Strokes, HBP, tobacco smoking, hypertension, high BMI, physical inactivity, high alcohol consumption | | - |
| **NHS Harrogate and Rural District CCG** | Prevention: Reducing smoking, increasing physical activity, reducing alcohol | | - |
| **NHS Herts Valleys CCG** | None stated | | - |
| **NHS Horsham and Mid Sussex CCG** | None stated | | - |
| **NHS Isle of Wight CCG** | - | | Prevention: Healthy living, physical activity |
| **NHS Lambeth CCG** | Risks: CVD | | - |
| **NHS Liverpool CCG** | Prevention: Physical activity  Risks: Loneliness | | Prevention: Controlling HBP, cholesterol & diabetes, not being obese, stop smoking |
| **NHS Medway CCG** | None stated | | - |
| **NHS Nene CCG** | Prevention: Alcohol reduction, smoking cessation, weight management, exercise (e.g., through social prescribing), reducing social isolation | | - |
| **NHS North Kirklees CCG** | None stated | | - |
| **NHS North Norfolk CCG** | - | | None stated |
| **NHS Rotherham CCG** | - | | None stated |
| **NHS Sheffield CCG** | None stated | | - |
| **NHS Somerset CCG** | Prevention: Physical activity, healthy eating behaviors, weight management, reducing smoking, reduce alcohol intake | | - |
| **NHS South Eastern Hampshire CCG** | Prevention: Improved lifestyles (does not specify) | | - |
| **NHS Southend CCG** | Risks: Lifestyle factors (does not specify) may increase the risk, isolation, loneliness, depression | | - |
| **NHS Surrey Downs CCG** | Risks: Stroke, HBP | | - |
| **NHS Swale CCG** | None stated | | - |
| **NHS Tower Hamlets CCG** | None stated | | - |
| **NHS West Lancashire CCG** | Prevention: Reduce alcohol, diet, physical activity, not smoking, general wellbeing (does not specify) | | - |

Note: Cells indicate the presence of a strategy which included dementia prevention, regardless of how significant, and which risk factors were included.

BMI, body mass index; CVD, cardiovascular disease; HBP, high blood pressure/hypertension

None stated –dementia prevention is stated within the strategy but specific details on what are risk factors or methods of prevention is lacking