Evidence-to-Decision Table

Problem Is the problem a priority?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know	Worldwide ageing of populations is strongly associated with dementia, causing major health, economic and social burdens. In 2015, it has been estimated that there were 50 million people with dementia in the world, and the number is predicted to double every 20 years, reaching 82 million in 2030 and 152 million in 2050.[1] Since no cure is available for Alzheimer's disease, the main cause of dementia, prevention could be crucial in halting the rapid increase in the prevalence of this condition and international experts have called upon world-wide governments to make prevention of dementia one of their key health priorities.	
Desirable Effects How substantial are the desirable anticipated effects?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Trivial ○ Small ○ Moderate ○ Large ○ Varies ● Don't know	The present systematic search did not identify any systematic review nor single study aimed at investigating the effect of tobacco cessation intervention on the risk of dementia and/or cognitive decline. However, there is a large and consistent body of observational evidence demonstrating the association between tobacco smoking (including in mid-life) and dementia, or cognitive decline, in later life.	-no trials carried out, but there is substantial evidence from observational studies that smoking increases the risk of dementia/cognitive decline -high attributable risk globally[2]
Undesirable Effects How substantial are the undesirable anticipated effects?		

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Large ○ Moderate ○ Small ● Trivial ○ Varies ○ Don't know	Dizziness, dyspnoea, nausea, heart rate increased, and tremor are the most common adverse events reported for pharmacological treatment for tobacco cessation.[26] Lifestyle interventions are mostly based on cognitive/behavioural interventions and no evidence of adverse events (apart from those related to withdrawal syndrome) have been identified.	
Certainty of evidence What is the overall certainty of the evidence of effects?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Very low ○ Low ○ Moderate ○ High ● No included studies	Evidence related to the desirable effect are based on a large body of observational evidence, mostly systematic reviews of longitudinal cohort studies.	- strong evidence from observational studies, including evidence from current/previous/non-smokers.
Values Is there important uncertainty about or variability in how much people value the main outcomes?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Important uncertainty or variability ○ Possibly important uncertainty or variability ○ Probably no important uncertainty or variability ● No important uncertainty or variability	Cognitive impairment and dementia can have a major impact in the life not only of the person affected but also of the close network of family and friends, as well as caregivers and health professional in general.[27,28] Functional ability and dependency are playing are the major component of this effect. Furthermore, dementia, the main cause of disability and institutionalization among older adults[1], therefore reducing or delaying the onset of dementia could results in lower costs for public healthcare services. Patients, caregivers, and policy makers are likely to be the people who will value these recommendations the most.	
Balance of effects Does the balance between desirable and undesirable effects favour the intervention or the comparison?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**

○ Favours the comparison ○ Probably favours the comparison ○ Does not favour either the intervention or the comparison ○ Probably favours the intervention ● Favours the intervention ○ Varies ○ Don't know	Only limited adverse events have been reported and only for pharmacological interventions. A substantial body of observational evidence associates tobacco smoking with an increased risk of dementia and cognitive decline. Therefore, any type of intervention aimed at tobacco cessation is likely to be more beneficial than detrimental.	- No evidence for cognition, but large body of evidence of tobacco use on other health-related adverse outcomes -substantial established harm
Resources required How large are the resource requirements (costs)?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Large costs ○ Moderate costs ○ Negligible costs and savings ○ Moderate savings ○ Large savings ● Varies ○ Don't know	Cost can vary significantly based on the strategy applied. For lifestyle intervention the main costs are represented by the qualified healthcare professional that delivers the intervention. Data from Australia[29] have estimate the overall costs of different interventions on tobacco cessation: physician advice ($3,800AUD); telephone counselling ($3,029); NRT with counselling ($41,163); bupropion with counselling ($35,258); and NRT + bupropion with counselling ($69,842). More recently, Cost-effectiveness analysis of smoking cessation interventions using cell phones in a low-income population,[30] showed that Cell phone interventions for low socioeconomic groups are a cost-effective use of healthcare resources. Cost-effectiveness can vary a lot between interventions at individual level and community-based ones, generally in favour of interventions on a larger scale.[31,32]	The World Health Assembly has endorsed a set of WHO "best buys" and other recommended interventions for governments to implement for the prevention and control of noncommunicable diseases. Tobacco and CVD control feature prominently among these "best buys", as proven, cost-effective measures that can be scaled up in countries. The MPOWER measures feature prominently in the "best buys" [MPOWER package: M-onitor tobacco use and prevention policies, P-rotect people from tobacco smoke, O-ffer help to quit tobacco use, W-arn about the dangers of tobacco, E-nforce bans on advertising, R-aise taxes on tobacco. This technical package is intended to assist in reducing the demand for tobacco products at country level]
Certainty of evidence of required resources What is the certainty of the evidence of resource requirements (costs)?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Very low ○ Low ○ Moderate ● High ○ No included studies	Resources requirements for different types of tobacco cessation interventions (at individual level or population based) are clearly reported.[30-32]	See above. Evidence of cost of intervention is well documented in the report.

Cost effectiveness Does the cost-effectiveness of the intervention favour the intervention or the comparison?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Favours the comparison ○ Probably favours the comparison ○ Does not favour either the intervention or the comparison ○ Probably favours the intervention ○ Favours the intervention ○ Varies ● No included studies	In general interventions to reduce smoking are resource-intensive as they may require professional guidance and supervision. The systematic review and meta-analyses by Ali et al. (2018)[33] comparing cost effectiveness of all types of treatments for smokers who are not ready to quit (over 30% of current smokers) showed that behavioural interventions were the most cost effective and pharmacological interventions the least. However, pharmacological interventions were the most effective, whereas behavioural interventions were the least effective. The average cost of pharmacological interventions was driven up by high costs of nicotine replacement therapy and bupropion interventions. Among pharmacological interventions, varenicline was the most cost effective and was slightly more cost effective than the pooled behavioural intervention estimate. The prevention of fatal diseases by reducing smoking rates is of great value for improving population health and the prevention of fatal diseases can reduce health-care spending over the medium term of around 15 years. However, the decrease in costs may be illusionary, because over the longer term, there may be increase in both health-care spending and a worsening of government finances.[34] Group-based guidance and e-interventions are probably a way to reduce costs	
Equity What would be the impact on health equity?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Reduced ○ Probably reduced ○ Probably no impact ● Probably increased ○ Increased ○ Varies ○ Don't know	Lower socioeconomic groups are more likely to have earlier onset of dementia than higher socioeconomic groups. Older people from lower socioeconomic backgrounds are also more likely to experience cognitive dysfunction at earlier stages of cognitive decline and cognitive impairment, and will have fewer resources to cope with the symptoms than their counterparts from higher socioeconomic groups People from lower socioeconomic groups are more likely to live, work and age in physical and economic environments that do not support social connectedness, physical activity or mental stimulation. this can increase the risk of cognitive impairment and dementia in later life.[35] Based on this it is believed that interventions to reduce risk of cognitive decline and dementia will increase equity in health.	

	Furthermore, women are disproportionally affected with AD. The larger proportion of older women who have AD and other dementias is explained primarily by the fact that women live longer, on average, than men.[36]	
Acceptability Is the intervention acceptable to key stakeholders?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ No ○ Probably no ● Probably yes ○ Yes ○ Varies ○ Don't know	Very scarce evidence is available on acceptability of tobacco cessation interventions in older adults or in relevant population. A study on Acceptability of an Internet-based contingency management intervention for tobacco cessation, showed that this is an acceptable method to support people in tobacco cessation.[37] Acceptability probably varies between pharmacological and non-pharmacological interventions.	
Feasibility Is the intervention feasible to implement?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ No ○ Probably no ● Probably yes ○ Yes ○ Varies ○ Don't know	Interventions aimed at smoking cessation can be based on behavioural/psychological and/or pharmacological strategies. Key barriers are costs and lack of motivation.	-population/political level versus individual level