Supplementary File - Table S1: References to studies included in this overview

Systematic Reviews (SR)

Study ID	Reference
SR1	Lindson-Hawley, N., Thompson Tom, P. & Begh, R. 2015. Motivational interviewing for smoking cessation. Cochrane Database of Systematic Reviews [Online], 3. Available: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006936.pub3/abstract
SR2	Bully, P., Sanchez, A., Zabaleta-del-Olmo, E., Pombo, H. & Grandes, G. 2015. Evidence from interventions based on theoretical models for lifestyle modification (physical activity, diet, alcohol and tobacco use) in primary care settings: a systematic review. Preventive Medicine, 76 Suppl, S76-93.
SR3	Angus, C., Latimer, N., Preston, L., Li, J. & Purshouse, R. 2014. What are the implications for policy makers? A systematic review of the cost-effectiveness of screening and brief interventions for alcohol misuse in primary care. Frontiers in Psychiatry, 5, 114.
SR4	Morton, K., Beauchamp, M., Prothero, A., Joyce, L., Saunders, L., Spencer-Bowdage, S., Dancy, B. & Pedlar, C. 2015. The effectiveness of motivational interviewing for health behaviour change in primary care settings: a systematic review. *Health Psychology Review,* 9**,** 205-23.
SR5	Gebara, C. F. D., Bhona, F. M. D., Ronzani, T. M., Lourenco, L. M. & Noto, A. R. 2013. Brief intervention and decrease of alcohol consumption among women: a systematic review. *Substance Abuse Treatment Prevention and Policy,* 8**,** 8.
SR6	Rice, V. H., Hartmann-Boyce, J. & Stead, L. F. 2013. Nursing interventions for smoking cessation. *Cochrane Database of Systematic Reviews,* 8**,** CD001188.
SR7	VanBuskirk, K. A. & Wetherell, J. L. 2013. Motivational interviewing with primary care populations: a systematic review and meta-analysis. *Journal of Behavioral Medicine,* 37**,** 768-780.
SR8	Stead, L. F., Buitrago, D., Preciado, N., Sanchez, G., Hartmann-Boyce, J. & Lancaster, T. 2013. Physician advice for smoking cessation. *Cochrane Database of Systematic Reviews,* 5**,** CD000165.
SR9	Noordman, J., van der Weijden, T. & van Dulmen, S. 2012. Communication-related behavior change techniques used in face-to-face lifestyle interventions in primary care: a systematic review of the literature. *Patient Education and Counseling,* 89**,** 227-244.
SR10	Willis, A., Davies, M., Yates, T. & Khunti, K. 2012. Primary prevention of cardiovascular disease using validated risk scores: a systematic review. *Journal of the Royal Society of Medicine,* 105**,** 348-356.
SR11	Jonas, D. E., Garbutt, J. C., Brown, J. M., Amick, H. R., Brownley, K. A., Council, C. L., Viera, A. J., Wilkins, T. M., Schwartz, C. J., Richmond, E. M., Yeatts, J., Swinson, E. T., Wood, S. D. & Harris, R. P. 2012. Screening, behavioral counseling, and referral in primary care to reduce alcohol misuse. *Comparative Effectiveness Review No. 64.* Rockville, MD: Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services.
SR12	Carr, A. B. & Ebbert, J. 2012. Interventions for tobacco cessation in the dental setting. *Cochrane Database of Systematic Reviews,* 6**,** CD005084.
SR13	Taggart, J., Williams, A., Dennis, S., Newall, A., Shortus, T., Zwar, N., Denney-Wilson, E. & Harris, M. F. 2012. A systematic review of interventions in primary care to improve health literacy for chronic disease behavioral risk factors. *BioMed Central Family Practice,* 13**,** 49.
SR14	Brown, D., Portlock, J. & Rutter, P. 2012. Review of services provided by pharmacies that promote healthy living. *International Journal of Clinical Pharmacy,* 34**,** 399-409.
SR15	Zbikowski, S. M., Magnusson, B., Pockey, J. R., Tindle, H. A. & Weaver, K. E. 2012. A review of smoking cessation interventions for smokers aged 50 and older. *Maturitas,* 71**,** 131-41.
SR16	Cahill, K., Lancaster, T. & Green, N. 2010. Stage-based interventions for smoking cessation. *Cochrane Database of Systematic Reviews,* 11.

SR17	Kaner, E. F. S., Dickinson, H. O., Beyer, F. R., Campbell, F., Schlesinger, C., Heather, N., Saunders, J. B., Burnand, B. & Pienaar, E. D. 2009. Effectiveness of brief alcohol interventions in primary care populations. *Cochrane Database of Systematic Reviews,* 4**,** CD004148.
SR18	Halcomb, E., Moujalli, S., Griffiths, R. & Davidson, P. 2007. Effectiveness of general practice nurse interventions in cardiac risk factor reduction among adults. *International Journal of Evidence-Based Healthcare,* 5**,** 269-95.
SR19	Wilhelmsson, S. & Lindberg, M. 2007. Prevention and health promotion and evidence-based fields of nursing - a literature review. *International Journal of Nursing Practice,* 13**,** 254-65.
SR20	Huibers, M. J., Beurskens, A. J., Bleijenberg, G. & van Schayck, C. P. 2007. Psychosocial interventions by general practitioners. *Cochrane Database of Systematic Reviews***,** CD003494.
SR21	Hyman, Z. 2006. Brief interventions for high-risk drinkers. *Journal of Clinical Nursing,* 15**,** 1383-96.
SR22	Bertholet, N., Daeppen, J. B., Wietlisbach, V., Fleming, M. & Burnand, B. 2005. Reduction of alcohol consumption by brief alcohol intervention in primary care: systematic review and meta-analysis. *Archives of Internal Medicine,* 165**,** 986-95.
SR23	Gorin, S. S. & Heck, J. E. 2004. Meta-analysis of the efficacy of tobacco counseling by health care providers. *Cancer Epidemiology, Biomarkers and Prevention,* 13**,** 2012-22.
SR24	van Sluijs, E. M. F., van Poppel, M. N. M. & van Mechelen, W. 2004. Stage-based lifestyle interventions in primary care - are they effective? *American Journal of Preventive Medicine,* 26**,** 330-343.
SR25	Whitlock, E. P., Polen, M. R., Green, C. A., Orleans, T. & Klein, J. 2004. Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine,* 140**,** 557-68.
SR26	Ballesteros, J., Duffy, J. C., Querejeta, I., Ariño, J. & González-Pinto, A. 2004. Efficacy of brief interventions for hazardous drinkers in primary care: Systematic review and meta-analyses. *Alcoholism: Clinical and Experimental Research,* 28**,** 608-618.
SR27	Sinclair, H. K., Bond, C. M. & Stead, L. F. 2004. Community pharmacy personnel interventions for smoking cessation. *Cochrane Database of Systematic Reviews,* 1.
SR28	Blenkinsopp, A., Anderson, C. & Armstrong, M. 2003. Systematic review of the effectiveness of community pharmacy-based interventions to reduce risk behaviours and risk factors for coronary heart disease. *Journal of Public Health Medicine,* 25**,** 144-153.
SR29	Poikolainen, K. 1999. Effectiveness of brief interventions to reduce alcohol intake in primary health care populations: a meta-analysis. *Preventive Medicine,* 28**,** 503-9.
SR30	Ashenden, R., Silagy, C. & Weller, D. 1997. A systematic review of the effectiveness of promoting lifestyle change in general practice. *Family Practice,* 14**,** 160-76.
SR31	Kahan, M., Wilson, L. & Becker, L. 1995. Effectiveness of physician-based interventions with problem drinkers: a review. *Canadian Medical Association Journal,* 152**,** 851.

Clinical Guidelines (CG)

Guideline ID	Reference
CG1	Kottke, T., Wilkinson, J., Baechler, C., Danner, C., Erickson, K., O'Connor, P., Sanford, M. & Straub, R. 2016. Healthy lifestyles. Updated January 2016. *Institute for Clinical Systems Improvement: Bloomington, MN.*
CG2	Piepoli, M. F., Hoes, A. W., Agewall, S., Albus, C., Brotons, C., Catapano, A. L., Cooney, M.-T., Corrà, U., Cosyns, B., Deaton, C., Graham, I., Hall, M. S., Hobbs, F. D. R., Løchen, M.-L., Löllgen, H., Marques-Vidal, P., Perk, J., Prescott, E., Redon, J., Richter, D. J., Sattar, N., Smulders, Y., Tiberi, M., van der Worp, H. B., van Dis, I., Verschuren, W. M. M. & Authors/Task Force, M. 2016. 2016 European Guidelines on cardiovascular disease prevention in clinical practice: The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts) Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation (EACPR). *European Heart Journal,* 37**,** 2315-2381.
CG3	RACGP 2016. Guidelines for preventive activities in general practice. 9th edition. 9th ed. East Melbourne, Vic, Australia: The Royal Australian College of General Practitioners.
CG4	RACGP 2015. Smoking, nutrition, alcohol, physical activity (SNAP): A population health guide to behavioural risk factors in general practice, 2nd edn. Melbourne, Australia: The Royal Australian College of General Practitioners.
CG5	Siu, A. L. 2015. Behavioral and pharmacotherapy interventions for tobacco smoking cessation in adults, including pregnant women: US Preventive Services Task Force recommendation statement. *Annals of Internal Medicine,* 163**,** 622-634.
CG6	NICE 2015. Oral health promotion: general dental practice. NICE guideline (NG30). London: National Institute for Clinical Excellence Pathways.
CG7	Kralikova, E., Ceska, R., Pankova, A., Stepankova, L., Zvolska, K., Felbrova, V., Kulovana, S. & Zvolsky, M. 2015. Doporučení pro léčbu závislosti [Tobacco dependence treatment guidelines]. *Vnitrni Lekarstvi,* 61 Suppl 1**,** 1S4-15.
CG8	PHE 2014a. Delivering better oral health: an evidence-based toolkit for prevention. Third edition. London: Public Health England.
CG9	PHE 2014b. Smokefree and Smiling: helping dental patients to quit tobacco. Second edition. London: Public Health England.
CG10	CDC 2014. Planning and implementing screening and brief intervention for risky alcohol use: a step-by-step guide for primary care practices. *National Center on Birth Defects and Developmental Disabilities.* Atlanta, GA: Center for Disease Control and Prevention.
CG11	SDCEP 2014. Prevention and treatment of periodontal diseases in primary care: Dental Clinical Guidance. Dundee: Scottish Dental Clinical Effectiveness Programme. *Evidence-based dentistry,* 15**,** 1-116.
CG12	New Zealand Health 2014. The New Zealand guidelines for helping people to stop smoking. Available: www.health.govt.nz. Wellington: Ministry of Health.
CG13	Zwar, N., Mendelsohn, C. & Richmond, R. 2014. Tobacco smoking: options for helping smokers to quit. *Australian Family Physician,* 43**,** 348-354.
CG14	NICE 2014. Behaviour change: individual approaches. Public Health guideline (PH49). England: National Institute for Health and Clinical Excellence.
CG15	Moyer, V. A. & Preventive Services Task, F. 2013. Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: U.S. preventive services task force recommendation statement. *Annals of Internal Medicine,* 159**,** 210-8.
CG16	SDCEP 2012. Oral Health Assessment and Review. Dental Clinical Guidance. Version 1.0. Dundee: Scottish Dental Clinical Effectiveness Programme.
CG17	NICE 2012. Smokeless tobacco cessation: South Asian communities. Public Health guideline (PH39). England: National Institute for Health and Clinical Excellence.
CG18	RACGP 2011. Supporting smoking cessation: a guide for health professionals. Melbourne, Australia: The Royal Australian College of General Practitioners.
CG19	NTCP 2011. Tobacco dependence treatment guidelines. National Tobacco Control Programme, Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India.

CG20	NHG 2011. NHG Guideline M96. The prevention consultation, cardiometabolic risk module. *Dutch College of General Practitioners,* 54**,** 138-55.
CG21	NICE 2010. Alcohol-use disorders: preventing harmful drinking. Public Health guideline (PH24). England: National Institute for Health and Clinical Excellence.
CG22	NICE 2008. Stop smoking services. Public Health guideline (PH10). England: National Institute for Health and Clinical Excellence.
CG23	Fiore, M. C., Jaen, C. R., Baker, T. B., Bailey, W. C., Bennett, G., Benowitz, N. L., Christiansen, B. A., Connell, M., Curry, S. J., Dorfman, S. F., Fraser, D., Froelicher, E. S., Goldstein, M. G., Hasselblad, V., Healton, C. G., Heishman, S., Henderson, P. N., Heyman, R. B., Husten, C., Koh, H. K., Kottke, T. E., Lando, H. A., Leitzke, C., Mecklenburg, R. E., Mermelstein, R. J., Morgan, G., Mullen, P. D., Murray, E. W., Orleans, C. T., Piper, M. E., Robinson, L., Stitzer, M. L., Theobald, W., Tommasello, A. C., Villejo, L., Wewers, M. E. & Williams, C. 2008. Treating tobacco use and dependence: 2008 update. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service: Clinical Practice Guideline.
CG24	IPCRG 2008. International Pimary Care Respiratory Group consensus statement: tackling the smoking epidemic - practical guidance for primary care. *In:* van Schayck, O. C., Pinnock, H., Ostrem, A., Litt, J., Tomlins, R., Williams, S., Buffels, J., Giannopoulos, D., Henrichsen, S., Kaper, J., Korzh, O., Rodriguez, A. M., Kawaldip, S., Zwar, N. & Yaman, H. (eds.) *Primary Care Respiratory Journal.*
CG25	RACGP 2006. Putting prevention into practice: guidelines for the implementation of prevention in the general practice setting. Melbourne, Australia: The Royal Australian College of General Practitioners 'Green Book' Project Advisory Committee.
CG26	NICE 2006. Brief interventions and referral for smoking cessation. Public Health guideline (PH1). England: National Institute for Health and Clinical Excellence.

Table S2: List of excluded studies at the full-text screening stage with reasons for exclusion

a) **Systematic Reviews**

Study	Reason for exclusion
Alvarez-Bueno, C.; Rodriguez-Martin, B.; Garcia-Ortiz, L.; Gomez-Marcos, M. A.; Martinez-Vizcaino, V. (2015). Effectiveness of brief interventions in primary health care settings to decrease alcohol consumption by adult non-dependent drinkers: a systematic review of systematic reviews. *Preventive Medicine*.76; S33-8	Review of reviews
Asfar, Taghrid; Ebbert, Jon O.; Klesges, Robert C.; Relyea, George E. (2011). Do smoking reduction interventions promote cessation in smokers not ready to quit? *Addictive Behaviors*. 36(7):764-768	Wrong setting
Aveyard, Paul; Begh, Rachna; Parsons, Amanda; West, Robert (2012). Brief opportunistic smoking cessation interventions: A systematic review and meta-analysis to compare advice to quit and offer of assistance. *Addiction*.107(6):1066-1073	Wrong study design
Bauld, L.; Bell, K.; McCullough, L.; Richardson, L.; Greaves, L. (2010). The effectiveness of NHS smoking cessation services: a systematic review. *Journal of Public Health.* 32(1):71-82	Wrong setting
Boyle, R.; Solberg, L.; Fiore, M. (2014). Use of electronic health records to support smoking cessation. *Cochrane Database of Systematic Reviews*. (12):34	Wrong intervention
Bridle, C.; Riemsma, R. P.; Pattenden, J.; Sowden, A. J.; Mather, L.; Watt, I. S.; Walker, A (2005). Systematic review of the effectiveness of health behavior interventions based on the transtheoretical model. *Psychology & Health*. 20(3):283-301	Wrong setting
Chen, D.; Wu, L. T. (2015). Smoking cessation interventions for adults aged 50 or older: A systematic review and meta-analysis. *Drug and Alcohol Dependence 01*. 154:14-24	Wrong setting
Christakis, D. A.; Garrison, M. M.; Ebel, B. E.; Wiehe, S. E.; Rivara, F. P. (2003). Pediatric smoking prevention interventions delivered by care providers: a systematic review. *American Journal of Preventive Medicine.* 25(4): 358-362.	Wrong population
Coulton, S. (2011). Alcohol misuse. *Clinical Evidence*	Review of reviews
Crouch, R.; Wilson, A.; Newbury, J. (2011). A systematic review of the effectiveness of primary health education or intervention programs in improving rural women's knowledge of heart disease risk factors and changing lifestyle behaviours. *International Journal of Evidence-Based Healthcare*. 9:236-45	Wrong intervention
Dennis, S.; Williams, A.; Taggart, J.; Newall, A.; Denney-Wilson, E.; Zwar, N.; Shortus, T.; Harris, M. F. (2012). Which providers can bridge the health literacy gap in lifestyle risk factor modification education: a systematic review and narrative synthesis. BMC Family Practice.13; 44	Wrong outcomes
Ebbert, J.; Montori, V. M.; Erwin, P. J.; Stead, L. F. (2011). Interventions for smokeless tobacco use cessation. *Cochrane Database Syst Rev*. (2):Cd004306	Wrong intervention
Ebbert, J. O.; Rowland, L. C.; Montori, V. M.; Vickers, K. S.; Erwin, P. J.; Dale, L. C. (2003). Treatments for spit tobacco use: a quantitative systematic review. *Addiction*. 98(5):569-583	Wrong setting
Ebrahim, S.; Smith, G. D. (1997). Systematic review of randomised controlled trials of multiple risk factor interventions for preventing coronary heart disease. *BMJ*. 314(7095):1666-74	Wrong setting
Gao, X.; Lo, E. C.; Kot, S. C.; Chan, K. C. (2014). Motivational interviewing in improving oral health: a systematic review of randomized controlled trials. Journal of Periodontology 85(3): 426-437	Wrong population
Goldfarb, M.; Slobod, D.; Dufresne, L.; Brophy, J. M.; Sniderman, A.; Thanassoulis, G. (2015). Screening Strategies and Primary Prevention Interventions in Relatives of People With Coronary Artery Disease: A	Wrong setting

Systematic Review and Meta-analysis. *Canadian Journal of Cardiology*. 31(5):649-657	
Gordon, A. J. (2006).Screening the drinking: Identifying problem alcohol consumption in primary care settings. *Advanced Studies in Medicine*. 6(3):137-147	Wrong intervention
Green, Amanda C.; Hayman, Laura L.; Cooley, Mary E. (2015). Multiple health behavior change in adults with or at risk for cancer: A systematic review. *American Journal of Health Behavior*. 39(3):380-394 US American Journal of Health Behavior	Wrong intervention
Harris, R.; Gamboa, A.; Dailey, Y.; Ashcroft, A. (2012). One-to-one dietary interventions undertaken in a dental setting to change dietary behavior. *Cochrane Database of Systematic Reviews*. 3():CD006540	Wrong intervention
Ketola, E.; Sipila, R.; Makela, M. (2000). Effectiveness of individual lifestyle interventions in reducing cardiovascular disease and risk factors. *Annals of Medicine*. 32(4):239-251	Wrong setting
Kim, S. S.; Chen, W.; Kolodziej, M.; Wang, X.; Wang, V. J.; Ziedonis, D. (2012). A systematic review of smoking cessation intervention studies in China. *Nicotine Tob Res*. 14(8):891-9	Wrong setting
Kottke, T. E.; Battista, R. N.; Defriese, G. H. & Brekke, M. L. (1988). Attributes of successful smoking cessation interventions in medical practice. A meta-analysis of 39 controlled trials. *JAMA,* 259, 2883-9	No separate primary care results (combined results for all hospital settings)
Lancaster, T.; Stead, L. F. (2005). Individual behavioural counselling for smoking cessation. *Cochrane Database of Systematic Reviews*. (2):CD001292	Wrong setting
Law, M.; Tang, J. L. (1995). An analysis of the effectiveness of interventions intended to help people stop smoking *Arch Intern Med*. 155(18):1933-41	Wrong setting
Lundahl, Brad; Moleni, Teena; Burke, Brian L.; Butters, Robert; Tollefson, Derrik; Butler, Christopher; Rollnick, Stephen (2013). Motivational interviewing in medical care settings: A systematic review and meta-analysis of randomized controlled trials. *Patient Education and Counseling*. 93(2):157-168	Wrong setting
McCambridge, J.; Jenkins, R. J. (2008). Do brief interventions which target alcohol consumption also reduce cigarette smoking? Systematic review and meta-analysis. *Drug Alcohol Depend*. (3):263-70	Wrong setting
McCambridge, J.; Kypri, K. (2011). Can simply answering research questions change behaviour? Systematic review and meta analyses of brief alcohol intervention trials. *PLoS One*. 6(10):e23748	Wrong intervention
Okumura, L. M.; Rotta, I.; Correr, C. J. (2014). Assessment of pharmacist-led patient counseling in randomized controlled trials: a systematic review. *International Journal of Clinical Pharmacy*. 36(5):882-891	Wrong intervention
Patnode, C. D.; O'Connor, E.; Whitlock, E. P.; Perdue, L. A.; Soh, C.; Hollis, J. (2013). "Primary care-relevant interventions for tobacco use prevention and cessation in children and adolescents: a systematic evidence review for the U.S. Preventive Services Task Force." Annals of internal medicine 158(4): 253-260	Wrong population
Patton, R.; Deluca, P.; Kaner, E.; Newbury-Birch, D.; Phillips, T.; Drummond, C. (2014). Alcohol screening and brief intervention for adolescents: the how, what and where of reducing alcohol consumption and related harm among young people. *Alcohol Alcohol.* 49(2):207-12	Review of reviews
Ramseier, C. A.; Suvan, J. E. (2015). Behaviour change counselling for tobacco use cessation and promotion of healthy lifestyles: a systematic review. *Journal of Clinical Periodontology*. 42 Suppl 16():S47-58	Wrong setting
Ranney, L.; Melvin, C.; Lux, L.; McClain, E.; Lohr, K. N. (2006). Systematic review: Smoking cessation intervention strategies for adults and adults in special populations. *Annals of Internal Medicine*. 145(11):845-856	Wrong setting
Riemsma, R. P.; Pattenden, J.; Bridle, C.; Sowden, A.; Mather, L.; Watt, I. S.; Walker, A. (2003). Systematic review of the effectiveness of stage based interventions to promote smoking cessation. *British Medical Journal.* 326(7400):1175-1177	Wrong setting

Rubak, S.; Sandbaek, A.; Lauritzen, T.; Christensen, B.(2005). Motivational interviewing: A systematic review and meta-analysis. *British Journal of General Practice*. 55(513):305-312	Wrong setting
Satur, J. G.; Gussy, M. G.; Morgan, M. V.; Calache, H.; Wright, C. (2010). Review of the evidence for oral health promotion effectiveness. *Health Education Journal*. 69(3):257-266	Wrong setting
Schroer-Gunther, M. A.; Zhou, M.; Gerber, A.; Passon, A. M. (2011). Primary tobacco prevention in China--a systematic review. *Asian Pac J Cancer Prev*. 12(11):2973-80	Wrong setting
Stead, L. F.; Lancaster, T. (2012). Combined pharmacotherapy and behavioural interventions for smoking cessation. *Cochrane Database Syst Rev*. 10():Cd008286	Wrong intervention
Sullivan, L. E.; Tetrault, J. M.; Braithwaite, R. S.; Turner, B. J.; Fiellin, D. A. (2011). A meta-analysis of the efficacy of nonphysician brief interventions for unhealthy alcohol use: implications for the patient-centered medical home. *American Journal on Addictions*. 20(4):343-56	Wrong setting
Tait, R. J.; Hulse, G. K. (2003). A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug. *Drug & Alcohol Review*. 22(3):337-46	Wrong setting
Williams, Emily C.; Johnson, M. Laura; Lapham, Gwen T.; Caldeiro, Ryan M.; Chew, Lisa; Fletcher, Grant S.; McCormick, Kinsey A.; Weppner, William G.; Bradley, Katharine A. (2011). Strategies to implement alcohol screening and brief intervention in primary care settings: A structured literature review. *Psychology of Addictive Behaviors*. 25(2):206-214	Wrong intervention

b) Clinical Guidelines

Guideline	Reason for exclusion
AAOM (2014). Clinical Practice Statement: Risk Assessment.	Wrong study design
AAOM (2013). Clinical Practice Statement: Medical History	Wrong study design
ENTUK (2011). Head and Neck Cancer: Multidisciplinary Management Guidelines, 4th edition. *British Association of Otorhinolaryngology, Head and Neck Surgery, The Royal College of Surgeons of England*	Treatment/Management CG
BASHH (2006). UK National guidelines on undertaking consultations requiring sexual history taking. *British Association for Sexual Health and HIV*	Wrong setting
BTA (2008). Reichert, J., de Araújo, A.J., Gonçalves, C.M.C., Godoy, I., Chatkin, J.M., Sales, M.D.P.U. and de Almeida Santos, S.R.R. Brazilian Thoracic Association (BTA) Guidelines. *J Bras Pneumol*, *34*(10), pp.845-88.	Treatment/Management CG
NHS Health Scotland publication "A Guide to Smoking Cessation in Scotland 2010"	Duplicate - higher quality and large guideline included (NICE 2006, 2008)
NICE (2007). Sexually transmitted infections and under-18 conceptions: prevention. *Public health guideline (PH3)*, *National Institute for Health and Clinical Excellence*	Wrong intervention
NICE (2013). Tobacco: harm-reduction approaches to smoking. *National Institute for Health and Clinical Excellence - Clinical Guidelines 1*	Wrong setting
NGC (2012). Tobacco exposure. In: Expert panel on integrated guidelines for cardiovascular health and risk reduction in children and adolescents. [National Heart, Lung, and Blood Institute (U.S.)] *info@guidelines.gov (NGC) 12*	Wrong intervention
(2008). The New South Wales Health drug and alcohol psychosocial interventions professional practice guidelines. *Clinical Practice Guidelines Portal 1*	Wrong setting
AAFP (2009). Summary of recommendations for clinical preventive services. *American Academy of Family Physicians 7*	Summary document (included full CG)
(2014). South Australian lung cancer pathway. *Clinical Practice Guidelines Portal 2*	Treatment/Management CG
(2014). South Australian head and neck cancer pathway. *Clinical Practice Guidelines Portal 2*	Treatment/Management CG
(2012). Safer Sex. *British HIV Association 1*	Wrong setting
(2010). Prevention of cardiovascular disease. *National Institute for Health and Clinical Excellence - Clinical Guidelines 1*	Wrong setting
(2012). New Zealand primary care handbook 2012. *New Zealand Guidelines Group 3*	Wrong intervention
(2011). Guidelines for the assessment of absolute cardiovascular disease risk. [National Heart Foundation of Australia] *info@guidelines.gov (NGC) 7*	Treatment/Management CG
(2013). Guideline Summary: Risk estimation and the prevention of cardiovascular disease. A national clinical guideline. [Scottish Intercollegiate Guidelines Network] *info@guideline.gov (NGC) 2*	Wrong setting
USPSTF (2013). Guideline Summary: Primary care interventions to prevent tobacco use in children and adolescents: U.S. Preventive Services Task Force recommendation statement. [U.S. Preventive Services Task Force]. *info@guideline.gov (NGC) 12*	Wrong intervention
CDC (2013). Guideline Summary: Human papillomavirus (HPV) infection. In: Sexually transmitted diseases treatment guidelines, 2010. [Centers for Disease Control and Prevention] *info@guideline.gov (NGC) 2*	Treatment/Management CG
USPSTF ((2015). Guideline Summary: Behavioral counseling interventions to prevent sexually transmitted infections: U.S. Preventive Services Task	Wrong setting

Force recommendation statement. [U.S. Preventive Services Task Force] *info@guideline.gov (NGC) 3*	
MQIC (2013). Guideline Summary: Adolescent health risk behavior assessment. [Michigan Quality Improvement Consortium] *info@guideline.gov (NGC) 4*	Wrong setting
ACCF (2014). Guideline Summary: 2013 ACC/AHA guideline on the assessment of cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. [American College of Cardiology Foundation]. *info@guideline.gov (NGC) 12*	Wrong intervention
(2012). Facilitating Client Centred Learning. *Registered Nurses' Association of Ontario 1*	Practice/Professional focused
SIGN (2006). Diagnosis and management of head and neck cancer. *SIGN 11*	Treatment/Management CG
NICE (2008). CVD risk assessment and management. *NICE Clinical Knowledge Summaries 1*	Wrong intervention
NICE (2011). Cardiovascular disease: identifying and supporting people most at risk of dying early [National Institute for Health and Clinical Excellence (NICE)] *info@guidelines.gov (NGC) 5*	Wrong patient population
(2008). Canadian Consensus Guidelines on Human Papillomavirus. *Society of Obstetricians and Gynaecologists of Canada 4*	Wrong setting
NHMRC (2009). Australian Guidelines to Reduce Health Risks from Drinking Alcohol. *National Health and Medical Research Council 1*	Wrong setting
(2014). ARCHIVED (March 2010)- Contraceptive choices for young people. *Faculty of Sexual & Reproductive Healthcare 8*	Wrong setting
NICE (2010). Alcohol-use disorders: preventing harmful drinking. *National Institute for Health and Clinical Excellence - Clinical Guidelines 1*	Wrong setting

Table S3: Characteristics and main findings from all included Systematic Reviews (n=31)

Study ID (Author, year)	Risk factors and number of primary care trials/ studies	Intervention provider	Preventive interventions (Ask/Assess/Advise/Referral)	Type of synthesis and Main findings	Quality score (AMSTAR/ ROBIS)
SR1 (Lindson-Hawley 2015)	Smoking (n=3 RCTs)	General practitioners	Motivational interviewing (MI)- 1-6 sessions, duration of each session ranging from 10-60 minutes Training ranged from 2-40 hours (usually in the form of workshops) Follow-up telephone calls (1-4 calls) and around 10 minutes each, every 6 months (n=2 RCTs)	Meta-analysis Tobacco abstinence: MI > brief advice or usual care Shorter sessions (< 20 minutes) > longer sessions (> 20 minutes) Single sessions > multiple sessions Face-to-face MI = telephone MI 1 or 2 follow-up calls > more than 2 follow-up calls General practitioner > nurses or counsellors (n=1)	AMSTAR= 11 ROBIS= Low
SR2 (Bully 2015)	Smoking (n=7 RCTs)	Primary care- nurses, doctors, psychologists, and nutritionists	Brief motivational interview or counselling, self-help manuals, written prescriptions, emails, and financial incentives. Theoretical approaches: transtheoretical model (TTM), theory of planned behaviour (TPB), health belief model (HBM) Duration: few minutes to a number of months (not clearly reported)	Narrative synthesis Smoking cessation: Brief intervention (TTM based) > usual care HBM or TPB based = usual care Long term effectiveness of interventions (>12 months follow-up)- (n=4 RCTs)	AMSTAR= 8 ROBIS= Low
SR3 (Morton 2015)	Alcohol (n=11 RCTs)	Primary care practitioners	Motivational interviewing (MI)- with or without additional intervention components. Face-to-face MI (n=8): 1-8 sessions, 11 to 20 min. Both face-to-face and phone MI sessions (n=3)	Narrative synthesis Alcohol reduction: MI > usual care or minimal intervention (n=6).	AMSTAR= 6 ROBIS= Unclear

				'Low' intervention (one face-to-face session and 5 follow-up calls) > 'High' intervention group (6 face-to-face sessions) (n=1)	
SR4 (Angus 2014)	Alcohol (n=22 economic or modeling evaluations)	General practitioner and practice nurse	Screening and brief interventions (SBI), supportive written materials, follow-up telephone call (5 min.) or follow-up consultations with further advice (if necessary). BIs of 10 min or less (n=12); over 10 min (maximum 45 min) (n=11). "stepped care"- 20 min. advice + referral to motivational enhancement therapy and/or specialist alcohol services. "minimal intervention"- 5 min. advice	<u>Cost-effectiveness (alcohol interventions)</u>: SBIs > no advice General practitioner (n=15) = nurse (n=5) interventions Shorter BIs (10 min or less) = longer BIs (over 10 min) Longer BIs > shorter BIs (n=5) "stepped care" > "minimal intervention" (nurse-led) (n=2)	AMSTAR= 7 ROBIS= High
SR5 (Gebara 2013)	Alcohol (n=1 RCT)	Primary care provider	Brief intervention (BI) -face-to-face intervention in a single session, with the session length varying between 10 and 30 minutes.	Thematic and structural content analysis <u>Alcohol reduction</u>: BI (single session, 10-30 min)- not effective (controls not reported) Males > Females (female consumption increasing following the BI, more defensive reactions- result being classified as negative)	AMSTAR= 3 ROBIS= High
SR6 (Rice 2013)	Smoking (n=24 RCTs)	Nurses	High intensity intervention- more than 10 minutes, additional materials and/or strategies other than simple leaflets, follow-up visits (n=19). Low intensity intervention- advice provided (with or without a leaflet), 10 minutes or less, with up to one follow-up visit (n=5).	Meta-analysis (n=18) and narrative synthesis (n=6) <u>Smoking cessation</u>: Nursing intervention > no intervention or usual care (at 6 months or longer)	AMSTAR= 10 ROBIS= Low

			Use of NRT (n=2) Intervention was a core component of nurse's role (n=4); other studies nurses trained (using the '5 As' framework).	High intensity intervention = low intensity intervention	
SR7 (VanBuskirk 2013)	Smoking (n=3 RCTs) Alcohol (n=3 RCTs) Substance use (Marijuana) (n=1 RCT)	Physicians, nurse practitioners, or other trained professionals (e.g. therapist, health educator, counsellor, interventionist, research assistant)	Motivational interviewing (MI)- in-person MI sessions with phone calls as ''booster'' or follow-up sessions. MI-specific training: 8 hours to 4 weeks (n=5) Use of AUDIT tool (n=1)	Meta-analysis <u>Smoking cessation</u>: Three 20-min sessions > usual care (7 times more quitting) (n=1) In-person MI session plus follow-up phone calls (four 15-min calls) = in-person MI session only (n=1) <u>Alcohol reduction</u>: 2 MI sessions (20 min. each) or 1 MI session (45–60 min) > usual care; 12-month follow-up <u>Substance use</u>: One 15–20 min in-person MI session followed by one 10-min booster phone call > usual care	AMSTAR= 7 ROBIS= Low
SR8 (Stead 2013)	Smoking (n=42 RCTs)	Physicians, or physicians supported by another healthcare worker	Minimal intervention: advice (with or without a leaflet), single consultation lasting less than 20 minutes plus up to one follow-up visit. Intensive intervention: greater time at the initial consultation, additional materials other than a leaflet (e.g. demonstration of expired carbon monoxide or pulmonary function tests, self-help manuals), or more than one follow-up visit or referral to a cessation clinic. Follow-up: typically one year, the longest being three years.	Meta-analysis <u>Smoking cessation</u>: Brief advice > no advice/ usual care (n=17) (RR 1.66, 95% CI 1.42 to 1.94; I^2=31%). Intensive advice > no advice/ usual care (n=11) (RR 1.86, 95% CI 1.60 to 2.15; I^2=50%). Intensive advice > minimal advice (small difference- RR 1.37, 95% CI 1.20 to 1.56; I^2=32%).	AMSTAR= 10 ROBIS= Low

				Follow-up visits – more effective (n=5) Use of additional aids (n=10) = no additional aids (n=17) Combination of brief advice and computer-generated tailored letters > advice or letter alone (n=1)	
SR9 (Noordman 2012)	Smoking (n=6) Alcohol (n=6) Combined lifestyle behaviours (n=25)	General practitioners (or physicians), nurses or both (in combination with other health care providers)	Face-to-face communication-related behaviour change techniques (BCTs)- behavioural counselling or motivational interviewing or education and advice. 1 to 15 sessions, lasted from 30s to 60 min. Most studies combined techniques such as advice and education or goal setting, self-monitoring and motivational interviewing.	'Best Evidence Synthesis' Single or combined interventions significantly effective. Physicians = nurses or both or in combination with other providers - provide effective BCTs. Simple advice > intensive advice (simple advice as effective as motivational interviewing). Feedback, risk-assessment, goal-setting, cognitive behaviour therapy and self-monitoring- showed significant effects.	AMSTAR= 5 ROBIS= High
SR10 (Willis 2012)	Smoking (n=5 RCTs)	Health care professional. Nurse-led (n=5), with behavioural scientists, nutritionists and health councillors providing care.	Multifactorial (lifestyle) interventions- tailored intervention based on individual risk profile, goal setting, supporting materials. Duration- not reported. Follow-up: mean 3 years, ranging from 1 to 7 years. Screening: sessions to record smoking status (also cholesterol, blood glucose, activity level and dietary habits)- calculate cardiovascular disease risk scores.	Narrative synthesis Smoking cessation: Multifactorial lifestyle interventions- strong evidence for the success of smoking cessation (no change in cardiovascular disease risk score) More intensive interventions > lower intensity interventions (n=2)	AMSTAR= 7 ROBIS= Low
SR11 (Jonas 2012)	Alcohol (n=23 RCTs)	Primary care physician - alone or with a health educator, nurse,	Behavioural counselling, with or without referral (brief advice, feedback, motivational interviews, or cognitive behavioural strategies).	Meta-analyses (n=19) and qualitative synthesis (n=23) Alcohol reduction:	AMSTAR= 10 ROBIS= Low

		psychologist or researcher	Very brief (≤ 5 minutes, single-contact); brief (6 to 15 minutes, single-contact); extended (>15 minutes, single-contact); brief multi-contact (each contact ≤15 minutes); or extended multi-contact (some contacts >15 minutes). Screening assessments: multistep processes, interviews with research personnel up to 30 minutes.	Brief (10 to 15-minute) multicontact interventions- most effective (effect remains for several years). Brief multicontact interventions > extended multicontact interventions. Very brief interventions and brief interventions are less effective or ineffective. Men = women Delivered by primary care providers > research personnel	
SR12 (Carr 2012)	Smoking (n=8 RCTs- 6 RCTs involved adult smokers); Smokeless tobacco (n=6 RCTs)	Dentists and dental hygienists	Behavioural interventions involved either: 1) brief advice plus quitline referral, brief advice plus motivational interviewing, brief advice plus video-based cessation program with phone follow-up, or 2) counselling using the 5 A's plus NRT, 5 A's plus NRT and population-specific printed material, 3 A's plus pharmacotherapy and referral as needed. Duration: 10-15-minute advice in single session (n=3). BIs also included combinations of an oral examination, feedback from the examination as to oral effects of tobacco use and involved team effort. Tobacco use status was determined from the patient's chart and health questionnaire.	Meta-analysis Tobacco abstinence: Behavioural interventions > usual care (n=14) (OR 1.71, 95% CI 1.44 to 2.03 - at 6 to 24 months, I2=61%) (among both cigarette smokers and smokeless tobacco users) Subgroup of adult smokers (n=5), effect was stronger (OR=2.38, 95%CI 1.70, 3.35) Brief intervention > extended intervention (n=1)	AMSTAR= 9 ROBIS= Low
SR13 (Taggart 2012)	Smoking (n=16 RCTs) Alcohol (n=2 RCTs)	General practitioners, physician or nurse	Counselling interventions- classified by intensity of contact with the subjects (High ≥ 8 points of contact hours; Moderate >3 and <8; Low ≤ 3 points of contact hours).	Narrative synthesis Smoking cessation: Individual counselling and written materials > group education Low intensity interventions > high intensity interventions Primary health care settings > community settings	AMSTAR= 5 ROBIS= High

				Alcohol reduction: Interventions- not effective Health literacy: Low intensity interventions = high intensity interventions	
SR14 (Brown 2012)	Smoking (n=35 RCTs); substance abuse including alcohol (n=25 RCTs); sexual health (n=27 RCTs)	Community pharmacists	Interventions promoting changes to a healthier lifestyle Structured interventions, using NRT & counselling	Narrative synthesis Smoking cessation: Structured interventions > opportunistic intervention Pharmacists training > no training Substance abuse including alcohol and sexual health: Weak evidence for effectiveness	AMSTAR= 5 ROBIS= High
SR15 (Zbikowski 2012)	Smoking (n=4 RCTs)	Physicians, general practitioners and nurses	Behavioural counselling- moderate level (2-5 sessions), tailored to older smokers or stage-based, with self-help materials and follow-up advice or phone calls. 11min advice followed by 2 phone calls 7 min. each (n=1)	Descriptive/ narrative synthesis Smoking cessation: Physician delivered interventions > no intervention (n=4) Physician/nurse counselling with pharmacotherapy and brief follow-up > no counselling (n=2)	AMSTAR= 2 ROBIS= High
SR16 (Cahill 2010)	Smoking (n=2 RCTs)	Primary care physician	Individual counselling or brief advice- 10-minute, tailored to the participant's perceived stage of change, tailored self-help materials, one or more follow-up phone calls or letters, use NRT gum if appropriate. Training of physicians in the stages of change model; one trial used MI-based counselling.	Meta-analysis Smoking cessation: Evidence not clear for primary care staged intervention, and training of physicians. Advice + NRT = usual care (n=1) Training = no training (n=2)	AMSTAR= 11 ROBIS= Low

SR17 (Kaner 2009)	Alcohol (n=24 RCTs)	General practitioners, nurse practitioners or psychologists	Motivational interviews or cognitive behavioural therapy approaches. Brief intervention (BI): 1-5 sessions, 1 to 50 minutes each. Treatment duration ranged from 5-10 minutes to 60 minutes advice. Extended interventions: 2-7 sessions, initial and booster sessions ranged from 15 to 50 minutes. Screening- general health questionnaires, or alcohol screening tools such as CAGE, AUDIT or MAST, or variations on these. Administered by telephone or in the clinic (at registration).	Meta-analysis <u>Alcohol reduction</u>: Brief intervention > control group (n=22), follow-up of one year or longer (mean difference: -38 grams/week, 95% CI: -54 to -23, I^2=57%) Men > Women (at one year of follow up) Extended interventions > Brief intervention (n=5) (non-significant)	AMSTAR= 10 ROBIS= Low
SR18 (Halcomb 2007)	Smoking (n= 9 RCTs) Alcohol (n= 3 RCTs)	General practice nurse- all trials Doctor (n=2)	Individual or one-to-one interventions Multifaceted interventions- involved a range of individualised health assessment, lifestyle counselling, motivational interviewing, health education and protocol driven management of various risk factors. Targeted interventions- involved a baseline health check followed by the delivery of various forms of health education, focused on modification of a single lifestyle risk factor.	Narrative synthesis Smoking cessation: Multifaceted interventions interventions > no interventions Nurse interventions = doctor interventions (n=1) Targeted interventions interventions > no interventions (n=1) interventions = no interventions (n=2) number of those who stopped smoking decreased with increasing age Alcohol reduction: Low intervention group (one appointment and five 15-min telephone follow ups and education manual) > control group (n=1) High intervention group (six 45-min appointments and education manual) = control group (n=1)	AMSTAR= 7 ROBIS= Unclear

				High & low intervention group > control group (n=1)	
SR19 (Wilhelmsson 2007)	Alcohol (n=1 RCT and 1 before-after study)	Clinicians, physician- and nurse practitioners	Brief intervention/ counselling Staff received training (2.5 hr. in RCT) in an alcohol preventive programme	Narrative synthesis Alcohol reduction: Very short counselling or BI > usual care alcohol-related discussions were longer among the clinicians who received training	AMSTAR= 4 ROBIS= High
SR20 (Huibers 2007)	Smoking (n=2 RCTs & CCTs) Alcohol (n=2 RCTs & CCTs)	General practitioners (or family physician or family doctor)	Psychosocial interventions (including counselling, or more structured approaches, like cognitive behavioural interventions (CBI) or problem-solving therapy) Intervention consisted of a standardised number of at least 2 face-to-face contacts between patient and general practitioner. Timing of interventions not reported	Meta-analysis (results from smoking and alcohol studies were not pooled due to heterogeneity) Smoking cessation: 1 high quality RCT: Five-session ’repeated counselling’ (RC) = one-session minimal intervention (MI) = RC+gum = RC+spirometry - overall cessation in all groups at 12 months Alcohol reduction: 1 high quality RCT: Two-session CBI by research GP = CBI by nurse = one-session brief advice by regular GP - overall reduction in all groups at 12 months	AMSTAR= 9 ROBIS= Low
SR21 (Hyman 2006)	Alcohol (n=2 RCTs)	Staff or clinic nurse (1 trial compared nurse	Brief interventions (Two 30 min. sessions included in one study, another study included 2 or more consultation sessions over 12 months)	Review of clinical trials (summarized results from all included studies, no synthesis)	AMSTAR= 6 ROBIS= High

		delivered to physician delivered BI)		Alcohol reduction: Limited evidence Nurse delivered BI > non-intervention or control group Equal effectiveness at 3, 6 and 12 months (no difference for follow-up)	
SR22 (Bertholet 2005)	Alcohol (n= 19 RCTs)	Primary care provider: GP (most studies), physician, nurse, trained interventionist or researchers	Brief Alcohol Intervention (BAI)- advice, motivational interviewing or cognitive behavioural techniques, feedback regarding alcohol consumption levels and/or adverse effects of alcohol consumption. Length of intervention ranged from 5 to 45 minutes, a booster session or follow-up visit. AUDIT or CAGE scores	Qualitative synthesis and Meta-analysis Alcohol reduction: BI (5-15 min.) > no intervention/usual care/less than 5 min. of intervention BI accompanied by written material and repeated intervention (follow-up visits) - more effective (n=6) Men = women Follow-up: 6 months = 12 months	AMSTAR= 7 ROBIS= Low
SR23 (Gorin 2004)	Smoking (n= 16 RCTs and quasi-experimental studies)	Primary care physicians, dentists, nurse or healthcare team	In-person cessation advice or counselling Intensity ranged from brief (3-5 min.) over single health visit, to structured behavioural change interventions lasting an hour delivered over multiple visits. Average duration of interventions was 76.5 days, no. of sessions was 4, with mean duration per session of 22.7 min.	Descriptive analyses and Metaregression (meta-analyses) Smoking cessation: Cessation effects: Physicians > multiprovider teams = dentists > nurses Cessation effects: More health care providers > fewer providers Measured clinical components- assess, assist, or arrange had no statistically significant influence on cessation.	AMSTAR= 5 ROBIS= High

SR24 (van Sluijs 2004)	Smoking (n=14 RCTs/CTs)	General practitioner (GP) or primary care physician	Stages-of-change–based interventions; differed from a mailed letter to a possible six contact moments with individual counselling. Provider training- one study provided 1.5hr group session + 1/2hr individual session with role play; another study included manuals and training incorporated in a 10-week lecture series	Qualitative (best-evidence synthesis) and quantitative synthesis (odds ratios) Smoking cessation: Stages-of-change–based interventions > Usual care or brief standard advice or no provider training Personal advice from the primary care physician, with follow-up advice during subsequent visits (mostly not planned for smoking cessation) - most effective strategy Medium-term follow-up (limited evidence) > short and long-term follow-up (no evidence for effect)	AMSTAR= 6 ROBIS= Low
SR25 (Whitlock 2004)	Alcohol (n= 11 RCTs and 1 CT)	Primary care physicians (additionally, research staff or health educators, counsellors or clinic nurses delivered some or all of the intervention)	Very brief interventions (n=2)- 1 session, up to 5 minutes long Brief interventions (n=6)- 1 session, up to 15 minutes long Brief multicontact interventions (n=7)- an initial session up to 15 minutes long, plus follow-up contacts Training: sessions, ranged from 15 minutes to 2.5 hours (n=7) Screening: involved self-administered questionnaires or brief interviews. Conducted outside the routine care encounter, approx. 30 minutes. Many of the trials used CAGE and AUDIT instruments.	Qualitative or narrative synthesis Alcohol reduction: Brief multicontact interventions > usual care (13% to 34% reduction per week) Very BIs & BIs ≥ usual care (limited evidence, n=3) Effective interventions (any intensity) included at least 2 of 3 key elements- feedback, advice, and goal-setting. 2 studies also reported tailoring intervention. Men = women (Brief multicontact interventions)	AMSTAR= 7 ROBIS= Low

				Older adults ≥ younger adults (n=1) Outcomes- at least 12 months follow-up	
SR26 (Ballesteros 2004)	Alcohol (n= 13 RCTs)	Primary care providers	Brief interventions (BIs) lasting ~10–15 minutes in one session, with reinforcing visits through follow-up of ~3–5 min each Minimal interventions (MI) lasting ~3–5 minutes Extended brief interventions (EBI)- BI plus several specific reinforcement sessions through follow-up, ~10–15 min each.	Meta-analysis Alcohol reduction: BIs > minimal interventions/usual care BIs to heavy drinkers > moderate drinkers EBI- limited evidence for effectiveness	AMSTAR= 7 ROBIS= Unclear
SR27 (Sinclair 2004)	Smoking (n=2 RCTs)	Pharmacists and/or members of pharmacy staff	Advice or more intensive behavioural therapy, with or without the use of any form of NRT or other pharmacotherapy. Involved training interventions which included the Stages of Change Model- 2-3-hour workshop for pharmacists and pharmacy assistants Follow-up points were not identical (3, 6 and 12 months in one, and 1, 4 and 9 months in the other study). In both studies, follow- up was by postal questionnaire and depended on self-reported smoking status.	Narrative synthesis Smoking cessation: Pharmacist interventions > usual pharmacy support or any less intensive programme The strength of evidence is limited because only one of the trials showed a statistically significant effect.	AMSTAR= 9 ROBIS= Low
SR28 (Blenkinsopp 2003)	Smoking (n=2 RCTs, 3 non-RCTs)	Community pharmacists and pharmacy assistants	2 RCTs: Structured or tailored counselling, an information leaflet, weekly follow-up for the first 4 weeks and monthly thereafter as needed up to 12 months. Training based on ‘stages of change’ model, which included self-study and attending a 3hr. workshop or one evening training	Qualitative synthesis Smoking cessation: Advice/counselling > usual care (n=2 RCTs) Training > no training	AMSTAR= 6 ROBIS= High

			session and subsequently supported by a researcher visit (n=2 RCTs). 1 non-RCT: intervention included six 1.5hr. meetings in each pharmacy. 2 days intensive training (with lectures, role plays and discussions with other smoking cessation professional).		
SR29 (Poikolainen 1999)	Alcohol (n=7)	Family or general practitioners	Very brief (5-20 min) interventions and extended (2-5 sessions or several visit) brief interventions (BIs)	Meta-analysis Alcohol reduction: Extended BIs > Very BIs Women > men (Significant statistical heterogeneity)	AMSTAR= 3 ROBIS= High
SR30 (Ashenden 1997)	Smoking (n=23 RCTs) Alcohol (n=6 RCTs)	General practitioner, nurse or counsellor	Lifestyle advice- verbal advice plus written materials Brief advice- single consultation; Intensive advice- more than a single consultation and follow-up by appointment, telephone or letter. Multifactorial advice (n=3)	Meta-analysis Smoking cessation: Brief or intensive advice > no advice (n=16) Brief advice = intensive advice (n=7) Alcohol reduction: Brief or intensive advice > no advice (n=3) advice = no advice (n=3) men > women (n=2)	AMSTAR= 6 ROBIS= Unclear

SR31 (Kahan 1995)	Alcohol (n=6 RCTs)	Primary care physicians	Brief interventions, sessions with patients lasted 30 minutes or less Training sessions: 1 hour or less	Narrative/ descriptive synthesis Alcohol reduction: Intervention group > control group (n=3) - among men Intervention group < control group (n=2) - among women (negative results) 15-minute counselling session = 5-minutes of advice (n=2)	AMSTAR= 4 ROBIS= High

Table S4: AMSTAR scores for included Systematic Reviews (n=31)

Study ID (Author, year)	Was an " a priori" design provided?	Was there duplicate study selection and data extraction?	Was a comprehensive literature search performed?	Was the status of publication (i.e. grey literature) used as an inclusion criterion?	Was a list of studies (included and excluded) provided?	Were the characteristics of the included studies provided?	Was the scientific quality of the included studies assessed and documented?	Was the scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest included?	AMSTAR score
SR1 (Lindson-Hawley 2015)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
SR2 (Bully 2015)	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	8
SR3 (Morton 2015)	✓	✓	×	×	×	✓	✓	✓	✓	×	×	6
SR4 (Angus 2014)	✓	×	✓	✓	×	✓	✓	✓	✓	×	×	7
SR5 (Gebara 2013)	×	✓	×	×	×	✓	×	×	✓	×	×	3
SR6 (Rice 2013)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	10
SR7 (VanBuskirk 2013)	×	×	✓	✓	×	✓	✓	✓	✓	✓	×	7
SR8 (Stead 2013)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	10
SR9 (Noordman 2012)	×	✓	×	×	×	✓	✓	✓	✓	×	×	5
SR10 (Willis 2012)	×	✓	✓	✓	×	✓	✓	✓	✓	×	×	7
SR11 (Jonas 2012)	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	10
SR12 (Carr 2012)	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	9

SR13 (Taggart 2012)	×	✓	✓	×	×	✓	✓	✓	×	×	×	5
SR14 (Brown 2012)	✓	×	✓	✓	×	✓	✓	×	×	×	×	5
SR15 (Zbikowski 2012)	×	×	✓	×	×	✓	×	×	×	×	×	2
SR16 (Cahill 2010)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
SR17 (Kaner 2009)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	10
SR18 (Halcomb 2007)	×	✓	✓	✓	✓	✓	✓	×	✓	×	×	7
SR19 (Wilhelmsson 2007)	×	✓	×	×	×	✓	✓	✓	×	×	×	4
SR20 (Huibers 2007)	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	9
SR21 (Hyman 2006)	×	×	✓	✓	×	✓	✓	✓	✓	×	×	6
SR22 (Bertholet 2005)	×	✓	✓	×	×	✓	✓	✓	✓	✓	×	7
SR23 (Gorin 2004)	×	×	✓	✓	×	×	×	✓	✓	✓	×	5
SR24 (van Sluijs 2004)	×	✓	✓	×	×	✓	✓	✓	✓	×	×	6
SR25 (Whitlock 2004)	×	✓	✓	✓	✓	✓	✓	✓	×	×	×	7
SR26 (Ballesteros 2004)	?	×	✓	×	✓	✓	✓	✓	✓	✓	×	7
SR27 (Sinclair 2004)	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	9
SR28 (Blenkinsopp 2003)	✓	×	✓	✓	×	✓	✓	✓	×	×	×	6
SR29 (Poikolainen 1999)	×	×	✓	×	×	✓	×	×	✓	×	×	3
SR30 (Ashenden 1997)	×	×	✓	×	×	✓	✓	✓	✓	✓	×	6
SR31 (Kahan 1995)	×	×	✓	×	×	✓	✓	✓	×	×	×	4

✓ = Yes; × = No; **?** = Can't answer

(Shea BJ, Grimshaw JM, Wells GA, Boers M, Andersson N, Hamel C, et al. Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. BioMed Central Medical Research Methodology. 2007;7(1):10.)

Table S5: ROBIS scores for included Systematic Reviews (n=31)

	Phase 2				Phase 3
Study ID (Author, year)	**1. Study eligibility criteria**	**2. Identification and selection of studies**	**3. Data collection and study appraisal**	**4. Synthesis and findings**	**Risk of bias in the review**
SR1 (Lindson-Hawley 2015)	☺	☺	☺	☺	☺
SR2 (Bully 2015)	?	☺	☺	?	☺
SR3 (Morton 2015)	?	?	☺	?	?
SR4 (Angus 2014)	☺	?	☹	?	☹
SR5 (Gebara 2013)	☹	☹	☹	☹	☹
SR6 (Rice 2013)	☺	☺	☺	☺	☺
SR7 (VanBuskirk 2013)	?	?	☺	☺	☺
SR8 (Stead 2013)	?	☺	☺	☺	☺
SR9 (Noordman 2012)	☺	☺	☹	☹	☹
SR10 (Willis 2012)	☺	☺	☺	☺	☺
SR11 (Jonas 2012)	☺	☺	☺	☺	☺
SR12 (Carr 2012)	☺	☺	☺	☺	☺
SR13 (Taggart 2012)	?	?	?	?	☹
SR14 (Brown 2012)	?	☹	☹	?	☹

SR15 (Zbikowski 2012)	☹	☹	?	☹	☹
SR16 (Cahill 2010)	☺	☺	☺	☺	☺
SR17 (Kaner 2009)	☺	☺	☺	☺	☺
SR18 (Halcomb 2007)	☺	☺	☺	☹	?
SR19 (Wilhelmsson 2007)	☹	?	☹	☹	☹
SR20 (Huibers 2007)	?	☺	☺	☺	☺
SR21 (Hyman 2006)	?	☹	☹	☺	☹
SR22 (Bertholet 2005)	☺	☺	☺	☺	☺
SR23 (Gorin 2004)	☹	☹	☹	☹	☹
SR24 (van Sluijs 2004)	☺	?	☺	☺	☺
SR25 (Whitlock 2004)	☺	☺	☺	☹	☺
SR26 (Ballesteros 2004)	☺	?	?	☺	?
SR27 (Sinclair 2004)	?	☺	☺	☺	☺
SR28 (Blenkinsopp 2003)	☹	☺	?	☹	☹
SR29 (Poikolainen 1999)	☹	☹	☹	☺	☹
SR30 (Ashenden 1997)	☺	?	☺	☺	?
SR31 (Kahan 1995)	?	?	?	?	☹

☺ = low risk; ☹ = high risk; **?** = unclear risk (use of characters- suggested tabular presentation for ROBIS results)

Notation as per: Whiting P, Savović J, Higgins JP, Caldwell DM, Reeves BC, Shea B, et al. ROBIS: a new tool to assess risk of bias in systematic reviews was developed. Journal of Clinical Epidemiology. 2016;69:225-34.

Table S6: Recommendations from all included clinical guidelines (n=26) about oral cancer risk factor assessment and delivering preventive interventions

Clinical Guideline (CG) ID	Target users	Risk factors (target population)	Ask/ Assess	Advise/ Arrange	Assist/ Referral
CG1 (Kottke 2016)	Health care professionals- all clinicians, clinics and health care delivery systems, and other expert audiences	Tobacco and alcohol (Adults aged 18 years or more)	Tobacco: All adults to be screened for tobacco use. Record a patient's smoking status as a vital sign or list tobacco use or exposure as a specific problem in the medical records. Alcohol: Screen individuals using validated tool for risky/hazardous drinking. Ask a single question about heavy drinking, or administer a written self-report instrument (AUDIT, AUDIT-C).	Tobacco: Clinicians should advise patients who smoke to quit. Offer behavioural (motivational) or pharmacologic interventions. Agree upon one or more SMART goals. Alcohol: Offer a brief behavioural intervention for individuals who screen positive; 10-15 minutes, multi-contacts. Agree upon one or more SMART goals.	Tobacco: Offer more intensive counselling or referrals Alcohol: For alcohol dependence refer to chemical dependency counsellor or program
CG2 (Piepoli 2016)	Healthcare professionals in their clinical practice: primary care, acute hospital settings and cardiac rehabilitation centre	Smoking Alcohol- as part of recommendations on nutrition	Smoking: (5A's) Ask: Systematically inquire about smoking status at every opportunity. Assess: Determine the person's degree of addiction and readiness to quit. Alcohol: not reported	Smoking: Advise: Unequivocally urge all smokers to quit. Arrange: Arrange a schedule of follow-up. Alcohol: Consumption of alcoholic beverages should be limited to 2 glasses per day (20 g/d of alcohol) for men and 1 glass per day (10 g/d of alcohol) for women.	Smoking: Assist: Agree on a smoking cessation strategy, including setting a quit date, behavioural counselling, and pharmacological support. Alcohol: not reported
CG3 (RACGP 2016)	General practitioner, clinicians and practice nurses	Smoking, alcohol and sexual behaviours	Smoking: Ask about patient's interest in quitting.	Smoking: Advise to stop smoking, agree on quit goals and offer pharmacotherapy if	Smoking: Offer referral to a proactive telephone call-back cessation

			Assess nicotine dependence Alcohol: All patients should be asked about the quantity and frequency of alcohol intake from age 15 years.	appropriate. Follow-up to support maintenance and prevent relapse using self-help or pharmacotherapy. Alcohol: Those with at-risk patterns of alcohol consumption should be offered brief advice to reduce their intake. Provide interventions using brief motivational interviewing targeted at high-risk use; 5-15 minute advice. Training for clinicians and practice nurses.	service (e.g. the Quitline 13 7848), or motivational interviewing. Alcohol: not reported
CG4 (RACGP 2015)	General practitioners (GPs) and practice staff (the GP practice team)	Lifestyle risk factors of smoking, nutrition, alcohol and physical activity (SNAP)	Smoking: (5 A's) Ask- identify patients with smoking Assess: Amount smoked, dependence, readiness to change. Smoking status should be assessed for every patient aged 10 years and older. Alcohol: All patients aged 15 years and older should be asked about the quantity and frequency of their alcohol intake. Assess: Alcohol intake and readiness to change; AUDIT and AUDIT-C	Smoking: Advise/agree: Brief advice and motivational interviewing, set a quit date (quit-plan). Arrange: Quit-line, follow-up visit Alcohol: Advise/agree: Information and motivational interviewing Arrange: Drug and alcohol services, follow-up visit	Smoking: Assist: Quit-line, consider pharmacotherapy Alcohol: Assist: Drug and alcohol services, pharmacotherapy
CG5 (Siu 2015)	Primary care providers, including clinicians, physicians, nurses, psychologists, social workers, and cessation counsellors	Tobacco smoking	Smoking: (5 A's) Asking every patient (all adults) about tobacco use Assessing the willingness of all tobacco users to make an attempt to quit	Smoking: Behavioural interventions alone (in-person behavioural support and counselling, telephone counselling, and self-help materials) or combined with pharmacotherapy substantially improve achievement of tobacco cessation. Brief sessions (<10 min) effectively increase the proportion of adults who successfully quit smoking and remain	Smoking: Assist all tobacco users with their attempt to quit Arrange follow-up

				abstinent for 1 year. Although less effective than longer interventions, even minimal interventions (<3 min) have been found to increase cessation rates in some studies	
CG6 (NICE 2015)	Dental care professionals, e.g. dental hygienists, dental nurses, dental therapists, dental technicians and orthodontic therapists. Directors of public health, dental public health consultants, educators	Smoking and alcohol	Smoking: Ask and record whether the person uses tobacco. Alcohol: Consider asking people about their alcohol use	Smoking: Offer brief advice and follow recommendations from CG 22 (NICE ph10 guideline). Alcohol: Follow recommendations from CG 21. Consider delivering oral health improvement messages in a variety of formats and using different media to meet the needs of different groups. Trained professionals	Smoking: Offer to refer them to the local stop smoking service
CG7 (Kralikova 2015)	All professions in clinical medicine – as recommended by WHO mainly doctors, nurses, pharmacists and dentists	Tobacco	Document for each patient identified and selected as smoker; and encourage to stop	From brief intervention (10-minute) at each clinical contact with patients up to intensive treatment. It includes psycho-socio-behavioural support and pharmacotherapy.	Not reported
CG8 (PHE 2014a)	Primary dental care teams	Smoking (or tobacco use) Alcohol	Smoking (or tobacco): Ask – establish and record smoking status Alcohol: Ask – establish and record if the patient is drinking above low risk (recommended) levels	Smoking (or tobacco): Advise – advise on benefits of stopping and that evidence shows the best way is with a combination of support and treatment Alcohol: Advise – offer brief advice to those drinking above recommended levels	Smoking (or tobacco): Act – offer help referring to local stop smoking services Alcohol: Act – refer or signpost high risk drinkers to their GP or local alcohol support services

				Training: in undergraduate or dental setting; in line with national training standards. The minimum standard that every dental practice member should achieve is 'Very brief advice, just 30 seconds to ask, advise and act'.	
CG9 (PHE 2014b)	Dental professionals or dental teams, commissioners and educators	Tobacco (refers to PHE 2014a, and NICE guidelines)	Establish and record smoking status (ASK)- at least once a year. Is the patient a smoker, ex-smoker or a non-smoker?	Very brief advice Advise on the personal benefits of quitting (ADVISE)	Offer help (ACT) Refer to local stop smoking services
CG10 (CDC 2014)	For alcohol screening: receptionists, medical assistants, nurses To deliver the brief interventions: primary care practitioners/physicia ns, physician assistants, nurse practitioners, nurses, health educators, or other allied health professionals	Alcohol use	Patients should be screened at least annually The 'Single Question Alcohol Screen' or AUDIT (1–3) Ask if they would like your medical advice	Patients who screen positive for risky drinking need a brief intervention (5-15 minutes). Tailoring the plan for alcohol brief interventions to your practice; establish a goal and develop an action plan. Provide feedback about screening results. Establish a follow-up system to monitor patients' drinking, provide encouragement and support. Determine who needs training- since every primary care practice is different.	For dependence: Offer the patient a referral to further treatment A qualified clinician in the practice to manage dependent patients. Offering medications for alcohol dependence, particularly if patients refuse to go to traditional alcohol treatment.
CG11 (SDCEP 2014)	Clinicians who are involved in the prevention and treatment of periodontal diseases e.g. dentists, dental therapists, dental hygienists and oral health educators	Smoking and Alcohol (patients both at risk of and with periodontal diseases)	Smoking: Ask the patient if he/she (still) smokes (or uses smokeless tobacco) and record the response. Ask if the patient is interested in stopping smoking. Alcohol: Assess patient's alcohol consumption. Ask about his/her daily/weekly alcohol consumption	Smoking: Discuss effect smoking has on his/her oral health and general health and the benefits of stopping. Inform the patient that stopping smoking is the single most important thing he/she can do to improve not only oral health but general health as well. Offer relevant health promotion material (e.g. 'Aspire' magazine) Alcohol:	Smoking: Refer to smoking cessation services if necessary Alcohol: Advise the patient to see his/ her general medical practitioner for further advice and help.

			and convert into units. Ask patient's willingness to discuss this.	Outline the possible harmful effects of excessive alcohol consumption. Advise them to visit the Alcohol Focus Scotland website (www.alcohol-focus-scotland.org.uk) for further advice and help.	
CG12 (NZHealth 2014)	All health care workers, managers of health care services, practitioners in stop-smoking services	Smoking (or tobacco)	The ABC pathway Ask about and document every person's smoking status.	Give brief advice (face-to-face) to stop to all patients who smoke at every opportunity. Can give this advice in 30 seconds. Tailored brief advice and self-help materials. Seek appropriate training	Strongly encourage every person who smokes to use Cessation support (a combination of behavioural support and stop-smoking medicine works best) and offer them help to access it. Refer to, or provide, cessation support to everyone who accepts the offer.
CG13 (Zwar 2014)	General practice team (GP or practice nurse)	Smoking	<u>5As approach</u> Ask- regularly ask all patients if they smoke and record the information in the medical record. Assess- interest in quitting, to help tailor advice to each smoker's needs and stage of change. Nicotine dependence should also be assessed as this helps to guide treatment. Assessment of other relevant problems, such as mental health conditions, other drug dependencies and comorbidities.	Advise- all smokers to quit in a clear, unambiguous way such as 'the best thing you can do for your health is to stop smoking'. Arrange: follow-up visits to increase the likelihood of long-term abstinence. When time is short, use the approach of 'very brief advice'- Ask, Advise and Refer.	Assist: all smokers should be offered help to quit.
CG14 (NICE 2014)	Practitioners, policy makers, researchers, individuals, health and social care organisations and other service providers	Range of behaviours including smoking, alcohol misuse	Assess participants' health in relation to the behaviour and the type of actions needed	Use a very brief or brief intervention to motivate people to change behaviours that may damage their health. The interventions should also be used to inform people about services or interventions that can help them	Direct and refer people to specialist support services

				improve their general health and wellbeing. Tailor interventions to meet participants' needs. Train professionals	
CG15 (Moyer 2013)	Primary care practices or primary care clinicians	Alcohol misuse	Clinicians should screen adults aged 18 years or older for alcohol misuse AUDIT, AUDIT-C, or Single-question screening, such as asking, “How many times in the past year have you had 5 (for men) or 4 (for women and all adults older than 65 y) or more drinks in a day?”	Provide persons engaged in risky or hazardous drinking with brief behavioural counselling interventions to reduce alcohol misuse. Interventions may be delivered by face-to-face sessions, written self-help materials, computer- or Web-based programs, or telephone counselling. Brief multi-contact (each contact is 6 to 15 minutes) behavioural counselling seems to have the best evidence of effectiveness; very brief (≤ 5 minutes) behavioural counselling has limited effect.	Not reported
CG16 (SDCEP 2012)	Primary care dental team	Tobacco and alcohol	Tobacco: Assess the patient’s smoking habits: follow the ‘ask’ and ‘assess’ elements of the 5 ‘A’ protocol Alcohol: Ask each patient about their weekly alcohol consumption in units and the largest number of units consumed in the past week. Consider using a validated alcohol screening tool to gain an objective measure of alcohol consumption.	Tobacco: After ‘ask’ and ‘assess’, either ‘refer’ the patient or carry out the remaining ‘advise’, ‘assist’ and ‘arrange follow-up’ elements of the 5 ‘A’ protocol. Alcohol: Advise high-risk drinkers about possible harmful effects of excessive alcohol consumption	Tobacco: After ‘ask’ and ‘assess’, refer the patient to a smoking cessation service Alcohol: Advise to see their general medical practitioner and/or to visit the Alcohol Focus Scotland website if they have concerns.
CG17 (NICE 2012)	Primary healthcare teams: GPs, nurses, dentists, dental nurses, dental	Smokeless tobacco (people of South Asian origin are the focus of this guidance as they	Ask people if they use smokeless tobacco, using the names that the various products are known by locally. If necessary, show them a	Ensure smokeless tobacco users are aware of the health risks. Use a brief intervention to advise them to stop.	In addition to delivering a brief intervention, refer people who want to quit to local specialist tobacco

	hygienists, community pharmacists	are the predominant users of smokeless tobacco products in England)	picture of what the products look like, using visual aids. (This may be necessary if the person does not speak English well or does not understand the terms being used.) Record the outcome in the patient notes.	Record the response to any attempts to encourage or help them to stop using smokeless tobacco in the patient notes (as well as recording whether they smoke). Training for practitioners	cessation services (see NICE guidance ph10). This includes services specifically for South Asian groups, where they are available.
CG18 (RACGP 2011)	All health professionals, including dental professionals	Smoking	A system for identifying all smokers and documenting tobacco use should be used in every practice or healthcare service. Assessment of readiness to quit is a valuable step in planning treatment	All smokers should be offered brief advice to quit. Offer brief cessation advice in routine consultations and appointments whenever possible (at least annually). All smokers attempting to quit should be offered follow-up. Pharmacotherapy should be offered in case of nicotine dependence	Telephone call-back counselling services are effective in assisting cessation for smokers who are ready to quit. Referral to such services should be considered for this group of smokers.
CG19 (NTCP 2011)	Physician or other health care providers	Tobacco	(5 A's) Systematically identify all tobacco users at every visit. It should be an essential part of evaluation that for every tobacco user at every consultation, tobacco-use status be queried and documented. Determine willingness to make a quit attempt. Assess nicotine dependence	All tobacco users should be firmly advised to quit in a way that is supportive and nonconfrontational. Tell them about benefits of quitting. Brief advice (few minutes) should have a clear, strong, and personalized message. Pharmacotherapy where needed. Schedule a follow-up contact.	Not reported
CG20 (NHG 2011)	Primary care professionals, general practitioner	Smoking	A risk questionnaire is completed (calculate risk score) before the Prevention Consultation, which can be used to deduce whether there is an increased risk of the listed cardiometabolic conditions. Individuals with a score on the questionnaire below the threshold value but with risk factors (smoking, etc.) receive targeted lifestyle advice.	Tailored or targeted lifestyle advice, and patients are informed of the option to make an appointment with the GP or the practice support employee for risk communication and targeted lifestyle advice according to the NHG Guidelines on Smoking Cessation (only summary document available online) – which recommends that it is important to offer smokers, who are motivated to stop, intensive support at the right moment. Medicinal support in	Not reported

				the way of nicotine replacement therapy, nortriptyline or bupropion is, if possible, recommended in motivated smokers who smoke at least 10 cigarettes daily.	
CG21 (NICE 2010)	Trained primary healthcare; other healthcare services (outpatient departments, sexual health, pharmacies, dental surgeries)	Alcohol (Adult drinkers- hazardous or harmful amount of alcohol)	Complete a validated alcohol questionnaire, e.g. AUDIT, or abbreviated version (such as AUDIT-C, AUDIT-PC, or FAST)	Offer a session of structured brief advice on alcohol for 5–15 minutes, based on FRAMES principles (feedback, responsibility, advice, menu, empathy, self-efficacy). Offer an extended intervention (motivational interviewing or motivational-enhancement therapy), from 20 to 30 minutes. Follow up or offer up to four additional sessions (if needed).	Referral to a specialist alcohol treatment service for alcohol dependence or have failed to benefit from structured brief advice and an extended brief intervention.
CG22 (NICE 2008)	NHS and other professionals responsible for smoking cessation services. e.g. Doctors, nurses, pharmacists, dentists, quit-line counsellors	Smoking or tobacco use (everyone who smokes or uses tobacco in any other form)	Identify and record the smoking and/or tobacco use status of all their patients	Healthcare professionals should be trained to give brief advice (less than 10 minutes) on stopping tobacco use. Remind at every suitable opportunity of the health benefits of stopping. Pharmacotherapy as appropriate. Train all healthcare staff to offer brief advice and to make referrals	Offer referral to the NHS Stop Smoking Service, to help people in their attempt to quit
CG23 (Fiore 2008)	Physician or other clinician (e.g., nurse, psychologist, dentist, or counsellor)	Smoker or tobacco user	Identify and document tobacco use status for every patient at every visit as a ‘vital sign’. Assess willingness to make a quit attempt.	Advise in a clear, strong, and personalized manner, urge every tobacco user to quit (3-10-minutes). Or offer intense counselling of four or more sessions that are 10 minutes or more in length. Arrange follow-up contacts, self-help material, or offer medication.	Provide or refer for counselling or additional treatment to help the patient quit. E.g. Quit-lines, smoking cessation program, or patient's health plan program. Alternative programs such as acupuncture or hypnotism.
CG24 (IPCRG 2008)	Primary care health professionals or clinicians including	Smoking	Ask smokers and ex-smokers about smoking status on at least an annual basis: All members of the practice	a) Brief intervention: opportunistic advice in less than a minute- ask,	Refer to available smoking cessation services.

	doctors, GPs, nurses and other health workers		team should ask about smoking status at all opportunities. - Assess desire to quit, dependence and barriers to quitting	assess, provide self- help materials, and refer. b) Moderate intervention: advice in 2-5-minutes- ask, assess, advise on strategies to overcome barriers, provide self-help materials, set a quit date, assist by offering pharmacotherapy, arrange follow-up (or refer). c) Intense intervention: advice if more than 5 minutes available- ask, assess, advise, assist, arrange follow-up consultation (or refer), and address issues of dependence, habit, triggers, negative emotions. Brainstorm solutions and develop a quit plan.	Promote self-help materials, leaflets, quitline numbers in the waiting room, display no smoking posters.
CG25 (RACGP 2006)	General practitioners, general practice nurses and other practice staff, and divisions of general practice	Smoking Hazardous alcohol drinking	One-minute interventions using the 5A framework Smoking: Ask- Do you smoke? Assess- Interest in quitting; Barriers to quitting; Nicotine dependence Alcohol: Ask- Do you drink? How much on a typical day? How many days a week? Assess- Concern about drinking; Interest in cutting down; Barriers to cutting down	Smoking: Advise- Provide brief, non-judgmental personalised and clear advice to aid quitting Alcohol: Advise- Provide brief, personalised and non- judgmental clear advice to cut down; Highlight other benefits of cutting down	Smoking: Assist- Offer relevant pamphlets Arrange- Follow up or referral Alcohol: Assist- Enlist support Arrange- Offer relevant pamphlets on safe drinking levels and ideas to help reduce intake; Follow up soon after
CG26 (NICE 2006a)	GPs, nurses in primary and community care, other health professionals, such as hospital clinicians, pharmacists and dentists	Smoking	Ask people who smoke how interested they are in quitting, i.e. an assessment of the patient's commitment to quit	Brief intervention, 5-10-minutes; involving simple opportunistic advice to stop, an offer of pharmacotherapy and/or behavioural support, provision of self-help material	If they want to stop, refer them to an intensive support service such as NHS Stop Smoking Services. If they are unwilling or unable to accept a referral, offer a stop smoking aid (pharmacotherapy).

Table S7: Quality scores of clinical guidelines for the six domains of the AGREE II Instrument (D 1–D 6) and the overall quality

Clinical Guideline (CG) ID	D 1			D 2			D 3								D 4			D 5				D 6		Overall quality of CG	Recommend CG for use
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
CG1 (Kottke 2016)	6	6	6	6	2	6	6	5	7	6	7	7	6	7	7	6	7	6	6	4	1	7	7	7	Yes
CG2 (Piepoli 2016)	7	7	7	7	2	7	2	3	7	7	6	7	7	4	7	7	7	6	7	5	2	2	7	6	Yes
CG3 (RACGP 2016)	6	6	6	7	4	7	2	2	6	4	5	6	6	5	6	6	6	6	6	5	2	2	2	5	Yes, with modifications
CG4 (RACGP 2015)	6	6	6	6	4	7	2	2	7	2	6	7	6	3	7	7	7	7	7	6	6	2	2	5	Yes, with modifications
CG5 (Siu 2015)	7	7	7	6	5	6	7	7	7	4	7	7	5	2	3	6	6	7	6	6	2	6	7	6	Yes
CG6 (NICE 2015)	6	6	6	6	6	6	6	6	4	5	5	4	6	6	4	4	5	3	4	3	2	6	4	5	Yes, with modifications
CG7 (Kralikova 2015)	3	4	3	4	2	4	3	3	3	2	3	3	2	2	3	4	4	5	4	5	2	3	2	3	No
CG8 (PHE 2014a)	6	6	6	5	1	6	3	3	6	6	5	6	5	3	6	6	6	4	5	1	1	1	1	5	Yes, with modifications
CG9 (PHE 2014b)	6	6	6	6	1	7	1	1	1	1	3	4	2	2	4	5	6	6	6	1	1	1	1	4	Yes, with modifications
CG10 (CDC 2014)	6	6	6	2	2	6	2	1	2	2	2	2	2	2	6	6	6	6	7	4	5	1	2	4	Yes, with modifications
CG11 (SDCEP 2014)	7	7	7	7	6	7	7	6	7	7	6	7	7	7	7	7	7	6	7	1	4	2	4	7	Yes
CG12 (NZHealth 2014)	6	7	5	7	2	7	7	7	7	7	7	7	5	6	7	6	7	7	7	4	6	2	7	6	Yes
CG13 (Zwar 2014)	6	6	7	2	1	5	1	1	1	1	4	4	4	1	6	6	6	4	4	1	1	1	6	3	No
CG14 (NICE 2014)	6	6	6	6	6	6	6	6	4	5	5	4	6	6	5	6	5	4	5	4	3	6	5	6	Yes
CG15 (Moyer 2013)	5	6	5	5	4	5	6	6	6	3	5	6	4	2	3	5	5	6	5	5	2	5	6	5	Yes, with modifications

CG16 (SDCEP 2012)	6	7	7	7	1	5	2	2	1	5	5	2	6	5	4	6	5	5	5	2	6	2	4	5	Yes, with modifications
CG17 (NICE 2012)	6	7	7	6	3	5	4	4	3	6	6	4	6	6	5	6	6	5	5	4	6	5	5	6	Yes
CG18 (RACGP 2011)	7	7	6	6	2	7	2	2	7	3	6	7	6	5	7	7	7	6	7	2	2	4	7	6	Yes
CG19 (NTCP 2011)	5	5	6	5	2	4	2	2	2	2	6	3	4	2	5	6	4	5	3	2	2	2	2	3	No
CG20 (NHG 2011)	5	6	6	5	2	3	3	4	4	5	5	3	5	6	5	6	5	5	5	3	5	3	4	5	Yes, with modifications
CG21 (NICE 2010)	6	5	6	6	2	7	5	5	6	7	6	7	6	5	7	6	5	6	6	6	4	2	2	6	Yes
CG22 (NICE 2008)	6	6	6	6	6	6	6	6	6	6	5	6	6	6	5	5	5	5	5	5	6	5	4	6	Yes
CG23 (Fiore 2008)	6	6	6	5	4	6	6	7	7	7	6	7	6	6	5	6	6	5	6	5	5	5	6	6	Yes
CG24 (IPCRG 2008)	3	4	4	4	2	4	3	3	3	2	3	3	2	2	5	5	5	5	5	5	2	3	2	3	No
CG25 (RACGP 2006)	6	7	5	5	3	7	2	2	3	2	5	4	3	2	5	6	4	6	7	5	6	3	2	4	Yes, with modifications
CG26 (NICE 2006a)	6	6	6	5	5	6	5	5	5	5	6	6	6	6	5	5	5	4	4	5	6	6	4	5	Yes, with modifications