

More detailed information to be shown on the JLA website for the questions discussed at the final workshop.									
PSP unique identifier (to be allocated by JLA team on receipt of final priorities from PSP)	Record ID (the unique identifier of the uncertainty. To be allocated by JLA team on receipt of final priorities from PSP)	PSP Name	Total number of verified uncertainties identified by the PSP	Uncertainty (PICO formatted indicative uncertainty where possible. Advised minimum requirements are 'Population' and 'Intervention'. Not all submissions may be suitable for PICO structure, but they should be in a format that will ultimately be of value to the research community)	Explanatory note (a plain language summary of up to 150 words, explaining key points of the uncertainty and why it is important, for research funders to begin working on. PSPs may wish to include examples of the original survey submissions here)	Date of the priority setting workshop	Rank of the uncertainty at the final workshop. (If no rank was agreed, please indicate)	Evidence (reference, and weblink where available, to the most recent relevant systematic review identified by the PSP, plus a maximum of 2 other systematic reviews, including protocols for future systematic reviews, that the PSP considers relevant.)	Health Research Classification System (high level HRCS code to be allocated by the JLA team unless the PSP prefers to complete this)
P3		Oral and Dental	38	What is the best way to prevent tooth decay, and reduce oral health inequalities at a community or population level?	Numerous approaches have been evaluated for preventing caries at a community or population level (with only some evaluating reduction in health inequalities). Some of the more frequently evaluated interventions are listed below. None of the interventions are supported by long-term, high quality evidence (supervised mouthrinse programmes, undertaken in a school setting, are supported by moderate level evidence; health inequalities not evaluated) Water fluoridation: There is low quality evidence that community water fluoridation is effective at reducing caries levels in both deciduous and permanent dentition in children. There is insufficient evidence to determine whether water fluoridation results in a change in disparities in caries levels across SES. There is insufficient evidence to determine the effectiveness of water fluoridation for preventing caries in adults. There is insufficient information to determine the effect on caries levels of stopping water	12-Dec-18	1	Water fluoridation: Iheozor-Ejiofor Z, Worthington HV, Walsh T, O'Malley L, Clarkson JE, Macey R, Alam R, Tugwell P, Welch V, Glenny AM. Water fluoridation for the prevention of dental caries. Cochrane Database Syst Rev. 2015 Jun 18;(6):CD010856. School-based behavioural interventions: Cooper, AM., O'Malley, LA., Elison, SN., Armstrong, R., Burnside, G., Adair, P, et al. 2013. Primary school-based behavioural interventions for preventing caries. Cochrane Database of Systematic Reviews. School based sealant programmes: Griffin, SO., Naavaal, S., Scherrer, C., Patel, M., Chattopadhyay, S & Community Preventive Services Task, F 2017. Evaluation of School-Based Dental Sealant Programs: An Updated Community Guide Systematic Economic Review. American journal of preventive medicine, 52, 407-415. Guide to Community Preventive Services. Preventing dental caries: school based dental sealant delivery programs. www.thecommunityguide.org/oral/schoolsealants.html. Published 2017	
A2		Oral and Dental	38	How can access to dental services be improved for the general public?	Insufficient evidence	12-Dec-18	2		
C1		Oral and Dental	38	What are the most effective ways of increasing early detection/diagnosis of oral cancer?	Limited evidence to support diagnostic adjuncts to be used in primary care settings Low-quality evidence suggests that cytologic testing seems to be the most accurate adjunct among those included in this review. Biopsy and histopathologic assessment remain the single definitive test to diagnose PMDs and OSCC through detecting dysplasia.	12-Dec-18	3	Lingen, Mark W. et al.Evidence-based clinical practice guideline for the evaluation of potentially malignant disorders in the oral cavity The Journal of the American Dental Association , Volume 148 , Issue 10 , 712 - 727.e10 Macey R, Walsh T, Brocklehurst P, Kerr AR, Liu JL, Lingen MW, Ogden GR, Warnakulasuriya S, Scully C. Diagnostic tests for oral cancer and potentially malignant disorders in patients presenting with clinically evident lesions. Cochrane Database Syst Rev. 2015 May 29;(5):CD010276. Walsh T, Liu JL, Brocklehurst P, Glenny AM, Lingen M, Kerr AR, Ogden G, Warnakulasuriya S, Scully C. Clinical assessment to screen for the detection of oral cavity cancer and potentially malignant disorders in apparently healthy adults. Cochrane Database Syst Rev. 2013 Nov 21;(11):CD010173.	
A1		Oral and Dental	38	How can access to dental services be improved for the people with additional needs	Insufficient evidence	12-Dec-18	4		
SD4		Oral and Dental	38	How can dental health professionals work with other health professionals to help improve oral health?	Insufficient evidence	12-Dec-18	5		
P6		Oral and Dental	38	How can basic oral hygiene be achieved for people with additional care needs?	Insufficient evidence	12-Dec-18	6		
COM1		Oral and Dental	38	How to improve communication between dental teams and patients/carers?	The importance of communication between dental teams and patients/carers has been widely established but very little evidence was found on improving communication skills. The evidence for embedding communication skills in dental education is of variable quality. Overall, dental students are receptive to communication skills learning and to the use of simulated patient interaction as a pedagogic tool. However, there is no evidence regarding the patient experience and impact of dental undergraduate communication skills learning and assessment.	12-Dec-18	7	Carey, J.A., Madill, A., & Manogue, M. (2010). Communications skills in dental education: a systematic research review. Eur J Dent Educ, 14, 69-78.	
GH2		Oral and Dental	38	Is there a role for dental health professionals in treating oral health problems to improve general health?	Weak evidence that treatment of periodontal disease by scale root planing improves glycaemic control in people with diabetes in the short term only. Insufficient evidence to demonstrate that one periodontal therapy is more effective than another. Insufficient evidence to determine if periodontal treatment during pregnancy has an impact on preterm birth. Weak evidence that periodontal treatment may reduce low birth weight (< 2500 g) Insufficient evidence to determine if periodontal therapy can prevent the recurrence of CVD in the long term in patients with chronic periodontitis. No evidence on primary prevention.	12-Dec-18	8	Simpson TC, Weldon JC, Worthington HV, Needleman I, Wild SH, Moles DR, Stevenson B, Furness S, Iheozor-Ejiofor Z. Treatment of periodontal disease for glycaemic control in people with diabetes mellitus. Cochrane Database of Systematic Reviews 2015, Issue 11. Art. No.: CD004714. Iheozor-Ejiofor Z, Middleton P, Esposito M, Glenny AM. Treating periodontal disease for preventing adverse birth outcomes in pregnant women. Cochrane Database of Systematic Reviews 2017, Issue 6. Art. No.: CD005297. Li C, Lv Z, Shi Z, Zhu Y, Wu Y, Li L, Iheozor-Ejiofor Z. Periodontal therapy for the management of cardiovascular disease in patients with chronic periodontitis. Cochrane Database of Systematic Reviews 2017, Issue 11. Art. No.: CD009197.	
P5		Oral and Dental	38	What is the best way to prevent gum disease, and reduce oral health inequalities at a community or population level?	Insufficient evidence	12-Dec-18	9	Scottish Dental Clinical Effectiveness Programme (SDCEP). Prevention and Treatment of Periodontal Diseases in Primary Care. June 2014	

D1		Oral and Dental	38	<p>What role do digital technologies play in the provision of dental care?</p> <p>The definition of digital technologies is extremely wide so this search focused on computer technologies. Using digital technologies to improve health behaviours There is no evidence on dental care but there are two systematic reviews on using texting and mobile phone apps to improve health behaviours. The quality of evidence on using mobile phone apps and messaging intervention to improve health behaviours is of low to moderate. There are significant information gaps.</p> <p>Using digital technologies to assist treatments There is one systematic review on using computer technology application in surgical implant dentistry. The quality of evidence varies. There is no evidence to suggest that computer-assisted surgery is better than conventional procedures in safety, outcomes, morbidity and efficiency.</p>	10	<p>Badawy, S.M., & Kuhns, L.M. (2017). Texting and Mobile Phone App Interventions for Improving Adherence to Preventive Behavior in Adolescents: A Systematic Review. 5, e50.</p> <p>Free, C., Phillips, G., Gallie, L., Watson, L., Felix, L., Edwards, P., et al. (2013). The Effectiveness of Mobile-Health Technology-Based Health Behaviour Change or Disease Management Interventions for Health Care Consumers: A Systematic Review. PLOS Medicine, 10, e1001362.</p> <p>Jung, R.E., Schneider, D., Ganeles, J., Wismeijer, D., Zwahlen, M., Hammerle, C.H., et al. (2009). Computer technology applications in surgical implant dentistry: a systematic review. Int J Oral Maxillofac Implants, 24 Suppl, 92-109</p> <p>Vodopivec-Jamsek, V., de Jongh, T., Gurol-Urganci, I., Atun, R., & Car, J. (2012). Mobile phone messaging for preventive health care. Cochrane Database of Systematic Reviews.</p>
DA1		Oral and Dental	38	<p>What is the best way to treat patients who are dentally anxious?</p> <p>Sedation: no definitive conclusion on which was the most effective drug or method of sedation used for anxious children</p> <p>Oscillating tips vs rotating drills: low quality evidence, unable to conclude whether oscillating tips are effective the management of pain and dental fear in children or adolescents</p> <p>Non-pharmacological interventions: Low quality evidence regarding the effectiveness of behavioral interventions such as cognitive behavioral therapy/behavioural therapy results in a reduction in dental anxiety, and improves the patients' acceptance of dental treatment. Insufficient/inconsistent evidence regarding the effectiveness of interventions such as music therapy, hypnosis, relaxation training and meditation.</p> <p>Dental staff communication/behaviour:</p>	11	<p>Cianetti, S., Abraha, I., Pagano, S., Lupatelli, E & Lombardo, G 2018. Sonic and ultrasonic oscillating devices for the management of pain and dental fear in children or adolescents that require caries removal: a systematic review. BMJ open, 8, e020840.</p> <p>Kuang, H., Johnson, JA., Mulqueen, JM & Bloch, MH 2017. The efficacy of benzodiazepines as acute anxiolytics in children: A meta-analysis. Depression and anxiety, 34, 888-896.</p> <p>Goettems, ML., Zborowski, EJ., Costa, FDS., Costa, VPP & Torriani, DD 2017. Nonpharmacologic Intervention on the Prevention of Pain and Anxiety During Pediatric Dental Care: A Systematic Review. Academic pediatrics, 17, 110-119.</p> <p>Conway, A., Rolley, J & Sutherland, JR 2016. Midazolam for sedation before procedures. Cochrane Database of Systematic Reviews.</p> <p>Wide Boman, U., Carlsson, V., Westin, M & Hakeberg, M 2013. Psychological treatment of dental anxiety among adults: a systematic review. European journal of oral sciences, 121, 225-34.</p> <p>Gordon, D., Heimberg, RG., Tellez, M & Ismail, AI 2013. A critical review of approaches to the treatment of dental anxiety in adults. Journal of anxiety disorders, 27, 265-278</p>
C3		Oral and Dental	38	<p>What are the best ways of managing oral conditions associated with cancer treatment?</p> <p>There are several systematic reviews evaluating the management of oral conditions associated with cancer treatment. Oral conditions assessed include mucositis, candidiasis, xerostomia/salivary gland dysfunction and herpes simplex virus.</p> <p>With regard to the prevention of mucositis there is high quality evidence that oral cryotherapy leads to large reductions in oral mucositis of all severities in adults receiving 5FU for solid cancers. There is also high quality evidence that KGF is beneficial in the prevention of oral mucositis in adults who are receiving: a) radiotherapy to the head and neck with cisplatin or fluorouracil; or b) chemotherapy alone for mixed solid and haematological cancers. There is weaker evidence for the following interventions: oral cryotherapy in adults receiving high-dose melphalan before HSCT; low level laser; glutamine; KGF in adults receiving bone marrow/stem cell transplant after conditioning therapy for haematological malignancies.</p>	12	<p>Cho, HK, Jeong, YM, Lee, HS, Lee, YJ & Hwang, SH 2015. Effects of honey on oral mucositis in patients with head and neck cancer: A meta-analysis. The Laryngoscope, 125, 2085-92.</p> <p>Clarkson, JE, Worthington, HV & Eden, OB 2007. Interventions for treating oral mucositis for patients with cancer receiving treatment. The Cochrane database of systematic reviews, CD001973.</p> <p>He, M, Zhang, B, Shen, N, Wu, N & Sun, J 2018. A systematic review and meta-analysis of the effect of low-level laser therapy (LLLT) on chemotherapy-induced oral mucositis in pediatric and young patients. European journal of pediatrics, 177, 7-17.</p> <p>Leonart, LP, Tonin, FS, Ferreira, VL, Pentead, STS, Wiens, A, Motta, FA & Pontarolo, R 2017. A network meta-analysis of primary prophylaxis for invasive fungal infection in haematological patients. Journal of clinical pharmacy and therapeutics, 42, 530-538.</p> <p>Leung, HWC & Chan, ALF 2016. Glutamine in Alleviation of Radiation-Induced Severe Oral Mucositis: A Meta-Analysis. Nutrition and cancer, 68, 734-42.</p> <p>Mercadante, V, Al Hamad, A, Lodi, G, Porter, S & Foyles, C 2017. Interventions for the management</p>
GH1		Oral and Dental	38	<p>Do dental care professionals have a role in screening and treating for general health problems?</p> <p>No strong evidence that the screening for general health problems undertaken by oral health professionals improves health outcomes. However, reviews highlight their ethical obligation to undertake screening.</p>	13	
T1		Oral and Dental	38	<p>What is the best way for dental teams to manage gum disease?</p> <p>Evidence predominantly low quality (no high quality evidence) "The evidence suggests that sub-gingival instrumentation of probing depths greater than 3 mm is effective in improving periodontal health" "Evidence suggests that power driven RSI and hand RSI are equally effective in terms of improved clinical outcomes" "There is currently no evidence of a difference in effectiveness between full mouth and quadrant debridement and both are therefore suitable for the treatment of chronic periodontitis." "Evidence does not support the adjunctive use of disinfectants during sub-gingival instrumentation " "Current evidence does not support the use of local antimicrobials as a primary treatment for chronic periodontitis." "The evidence suggests that adjunctive systemic antibiotic therapy may lead to statistically significant improvements in outcomes such as probing depth and clinical attachment level when compared with RSI alone. However, the clinical</p>	14	<p>Scottish Dental Clinical Effectiveness Programme (SDCEP). Prevention and Treatment of Periodontal Diseases in Primary Care. June 2014</p>

P7b				<p>What are the barriers/enablers to maintaining a healthy mouth (across different populations and settings)?</p>	<p>Factors affecting children's adherence to regular dental attendance: "Factors identified at the patient level included parents' education, socioeconomic status, behavioral beliefs, perceived power and subjective norms. At the provider level, the authors identified communication and professional skills. At the system level, the authors identified collaborations between communities and health care professionals, as well as a formal policy of referring patients from family physicians and pediatricians to dentists."</p> <p>Oral hygiene in children: "Oral hygiene facilitators were found to be the concern about how clean were their teeth, oral health literacy of both children and parents and toothpaste appeal to children. Oral hygiene barriers were Children's boredom, low oral health literacy, forgetfulness and low socioeconomic level."</p>		15	<p>Hoben, M., Clarke, A., Huynh, K.T., Kobagi, N., Kent, A., Hu, H., et al. (2017). Barriers and facilitators in providing oral care to nursing home residents, from the perspective of care aides: A systematic review and meta-analysis. <i>International journal of nursing studies</i>, 73, 34-51.</p> <p>Badri, P., Saltaji, H., Flores-Mir, C., & Amin, M. (2014). Factors affecting children's adherence to regular dental attendance: A systematic review. <i>The Journal of the American Dental Association</i>, 145, 817-828.</p> <p>Angelopoulos M, Kavvadia K, Oulis C, Reppa C. Oral Hygiene Facilitators and Barriers in Greek 10 Years Old Schoolchildren. <i>Int J Clin Pediatr Dent</i>. 2015 May-Aug;8(2):87-93.</p>
S1		Oral and Dental	38	<p>How can people be encouraged to reduce sugar consumption for oral and general health?</p>	<p>Most of the studies about reducing sugar intake focus on reducing children obesity and sugar sweetened beverages (SSBs). Interventions can be categorised into the following three groups:</p> <p>Health education and promotion The effectiveness of educational and behaviours interventions is modest. There is evidence to suggest demonstrating children the desired behaviour can reduce SSBs intake but the effect is amongst adolescents and adults is less prominent. The application of Knowledge-Attitude-Behaviour model for understanding sugar is limited as sugar intake behaviour is shaped by multiple factors and knowledge and attitude are only two of them. Oral health professionals are in a unique position to reduce SSBs consumption. Further studies are needed to identify effective techniques that can be integrated into preventive patient care.</p> <p>Changes of the food environment in a particular setting</p>		16	<p>Abdel Rahman, A., Jomaa, L., Kahale, L.A., Adair, P., & Pine, C. (2018). Effectiveness of behavioral interventions to reduce the intake of sugar-sweetened beverages in children and adolescents: a systematic review and meta-analysis. <i>Nutrition reviews</i>, 76, 88-107.</p> <p>Al Rawahi, S.H., Asimakopoulou, K., & Newton, J.T. (2017). Theory based interventions for caries related sugar intake in adults: systematic review. <i>BMC psychology</i>, 5, 25.</p> <p>Avery, A., Bostock, L., & McCullough, F. (2015). A systematic review investigating interventions that can help reduce consumption of sugar-sweetened beverages in children leading to changes in body fatness. <i>Journal of human nutrition and dietetics : the official journal of the British Dietetic Association</i>, 28 Suppl 1, 52-64.</p> <p>Bes-Rastrollo, M., Sayon-Orea, C., Ruiz-Canela, M., & Martinez-Gonzalez, M.A. (2016). Impact of sugars and sugar taxation on body weight control: A comprehensive literature review. <i>Obesity (Silver Spring, Md.)</i>, 24, 1410-1426.</p> <p>Cabrera Escobar, M.A., Veerman, J.L., Tollman, S.M., Bertram, M.Y., & Hofman, K.J. (2013). Evidence that a tax on sugar sweetened beverages reduces the obesity rate: a meta-analysis. <i>BMC</i></p>
C2		Oral and Dental	38	<p>What are the most effective ways of managing potentially malignant disorders (e.g oral lichen planus)?</p>	<p>There is no strong evidence to support the role of surgical, medical or risk cessation techniques for reducing the risk or recurrence/malignant transformation of potentially malignant disorders. A number of different interventions have been evaluated for the management of OLP specifically. There is no clear evidence suggesting the superiority of any specific intervention in reducing clinical signs of OLP.</p>		17	<p>Akram, Z., Abduljabbar, T., Vohra, F & Javed, F 2018. Efficacy of low level laser therapy compared to steroid therapy in the treatment of oral lichen planus: A systematic review. <i>Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology</i>, 47, 11-17.</p> <p>Akram, Z., Javed, F., Hosein, M., Al-Qahtani, MA., Alshehri, F., Alzahrani, AI, et al. 2018. Photodynamic therapy in the treatment of symptomatic oral lichen planus: A systematic review. <i>Photodermatology, photoimmunology & photomedicine</i>, 34, 167-174.</p> <p>Al-Maweri, SA., Ashraf, S., Kalakonda, B., Halboub, E., Petro, W & AlAizari, NA 2018. Efficacy of photodynamic therapy in the treatment of symptomatic oral lichen planus: a systematic review. <i>Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology</i>, 47, 326-332.</p> <p>Al-Maweri, SA., Kalakonda, B., Al-Soneidar, WA., Al-Shamiri, HM., Alakhali, MS & Alaizari, N 2017. Efficacy of low-level laser therapy in management of oral lichen planus: a systematic review. <i>Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology</i>, 46, 11-17.</p>
P4		Oral and Dental	38	<p>What is the best way to prevent gum disease in individuals?</p>	<p>See evidence for P1.</p> <p>Scale and polish: High quality evidence that for adults without severe periodontitis who regularly access routine dental care, there is little or no difference in gingivitis and probing depths over two to three years between routinely provided scale and polish and no scheduled scale and polish.</p>		18	<p>Lamont T, Worthington HV, Clarkson JE, Beirne PV. Routine scale and polish for periodontal health in adults. <i>Cochrane Database of Systematic Reviews</i> (in press)</p>
MT1		Oral and Dental	38	<p>What is the best way to manage teeth missing for any reason (e.g tooth decay, trauma, developmental conditions) and at any age?</p>	<p>Implants Oral administration of two grams of amoxicillin one hour before placement of dental implants is effective in reducing implant failures. Unclear whether postoperative antibiotics are beneficial, or which antibiotics work best.</p> <p>Weak evidence that flapless placement of dental implants reduces postoperative discomfort (pain and swelling). Insufficient evidence to recommend any specific flap or suturing technique. Insufficient evidence regarding soft tissue grafts from the palate improving gum thickness and aesthetics. Insufficient evidence to determine which is the most effective way to treat peri-implantitis. Insufficient evidence to demonstrate superiority of any particular type of implant characteristic or implant system over another. Insufficient evidence to determine the possible advantages or disadvantages of immediate, immediate-delayed or delayed</p>		19	<p>Atieh MA, Alsabeeha NH, Payne AG, Duncan W, Faggion CM, Esposito M. Interventions for replacing missing teeth: alveolar ridge preservation techniques for dental implant site development. <i>Cochrane Database Syst Rev</i>. 2015 May 28;(5):CD010176.</p> <p>Esposito M, Ardebili Y, Worthington HV. Interventions for replacing missing teeth: different types of dental implants. <i>Cochrane Database Syst Rev</i>. 2014 Jul 22;(7):CD003815.</p> <p>Esposito M, Felice P, Worthington HV. Interventions for replacing missing teeth: augmentation procedures of the maxillary sinus. <i>Cochrane Database Syst Rev</i>. 2014 May 13;(5):CD008397.</p> <p>Esposito M, Worthington HV. Interventions for replacing missing teeth: hyperbaric oxygen therapy for irradiated patients who require dental implants. <i>Cochrane Database Syst Rev</i>. 2013 Sep 30;(9):CD003603.</p> <p>Esposito M, Worthington HV. Interventions for replacing missing teeth: dental implants in zygomatic bone for the rehabilitation of the severely deficient edentulous maxilla. <i>Cochrane Database Syst Rev</i>. 2013 Sep 5;(9):CD004151.</p> <p>Esposito M, Cusano MC, Worthington HV,</p>

P2				What is the best way to prevent tooth decay in individuals (of all ages)?	<p>A wide range of interventions have been evaluated for the prevention of caries (including sealants, varnishes, scale and polish, tooth mousse (CPP-ACP), probiotics, slow-release fluoride devices, fluoride supplements, dietary advice, oral hygiene advice, xylitol)</p> <p>Sealants: There is moderate quality evidence that resin-based sealants applied on occlusal surfaces of permanent molars are effective for preventing caries in children and adolescents (at 24 months). There is insufficient evidence to judge the effectiveness of glass ionomer sealant or the relative effectiveness of different types of sealants.</p> <p>Fluoride varnish: There is moderate quality evidence that fluoride varnish reduces decayed, missing or filled tooth surfaces in both primary and permanent dentition. The evidence regarding the frequency of the application is less clear.</p>	20	<p>Sealants: Papageorgiou, SN., Dimitraki, D., Kotsanos, N., Bekes, K & van Waas, H 2017. Performance of pit and fissure sealants according to tooth characteristics: A systematic review and meta-analysis. Journal of dentistry, 66, 8-17.</p> <p>Hou, J., Gu, Y., Zhu, L., Hu, Y., Sun, M & Xue, H 2017. Systemic review of the prevention of pit and fissure caries of permanent molars by resin sealants in children in China. Journal of investigative and clinical dentistry, 8.</p> <p>Ahovuo-Saloranta, A., Forss, H., Walsh, T., Nordblad, A., Mäkelä, M & Worthington, HV 2017. Pit and fissure sealants for preventing dental decay in permanent teeth. Cochrane Database of Systematic Reviews.</p> <p>Wright, JT., Tampi, MP., Graham, L., Estrich, C., Crall, JJ., Fontana, M, et al. 2016. Sealants for preventing and arresting pit-and-fissure occlusal caries in primary and permanent molars: A systematic review of randomized controlled trials-a report of the American Dental Association and the American Academy of Pediatric Dentistry. Journal of the American Dental Association (1939), 147, 631-645.e18.</p>	12-Dec-18
P1d				Is cleaning in between teeth needed for maintaining good oral health?	<p>Numerous systematic reviews of interdental brushing (IDB) and flossing of varying quality. All based on trials of unclear/high risk of bias.</p> <p>Flossing: people who brush and floss regularly have less gum bleeding compared to toothbrushing alone. There was weak evidence of a possible small reduction in plaque. No information on other measurements such as tooth decay because the trials were not long enough.</p> <p>IDB: low quality evidence that IDB reduces gingivitis (gum inflammation) more than flossing. Some low quality evidence that inter-dental cleaning with IDBs is the most effective method for inter-dental plaque removal.</p>	21	<p>Berchier CE, Slot DE, Haps S, GA VdW. The efficacy of dental floss in addition to a toothbrush on plaque and parameters of gingival inflammation: a systematic review. Int J Dent Hyg. 2008;6(4):265-79.</p> <p>de Oliveira KMH, Nemezio MA, Romualdo PC, da Silva RAB, de Paula ESFWG, Küchler EC. Dental Flossing and Proximal Caries in the Primary Dentition: A Systematic Review. Oral health & preventive dentistry. 2017;15(5):1-8.</p> <p>Figuro E, Nóbrega DF, García-Gargallo M, Tenuta LM, Herrera D, Carvalho JC. Mechanical and chemical plaque control in the simultaneous management of gingivitis and caries: a systematic review. Journal of clinical periodontology. 2017;44 Suppl 18:S116-S34.</p> <p>Hoenderdos NL, Slot DE, Paraskevas S, GA VdW. The efficacy of woodsticks on plaque and gingival inflammation: a systematic review. Int J Dent Hyg. 2008;6(4):280-9.</p> <p>Hujoel PP C-CJ, Banting DW, Loesche WJ. Dental flossing and interproximal caries: a systematic review. J Dent Res. 2006;85(4):298-305.</p> <p>Kotsakis GA, Lian Q, Ioannou AL, Michalowicz BS, John MT, H. C. A network meta-analysis of interproximal oral hygiene.</p>	12-Dec-18
TG1				What interventions are best at managing tooth grinding/clenching?	<p>Despite some promising results, the evidence base for all treatment options (splint therapy, behavioural interventions, pharmaceutical interventions) is extremely limited and no definitive statements regarding the most appropriate treatment can be made.</p>	22	<p>De la Torre Canales, G., Camara-Souza, MB., do Amaral, CF., Garcia, RCMR & Manfredini, D 2017. Is there enough evidence to use botulinum toxin injections for bruxism management? A systematic literature review. Clinical oral investigations, 21, 727-734.</p> <p>Kreiner, M., Betancor, E & Clark, GT 2001. Occlusal stabilization appliances. Evidence of their efficacy. Journal of the American Dental Association (1939), 132, 770-7.</p> <p>Lang, R., White, PJ., Machalick, W., Rispoli, M., Kang, S., Aquilar, J, et al. 2009. Treatment of bruxism in individuals with developmental disabilities: a systematic review. Research in developmental disabilities, 30, 809-18.</p> <p>Long, H., Liao, Z., Wang, Y., Liao, L & Lai, W 2012. Efficacy of botulinum toxins on bruxism: an evidence-based review. International dental journal, 62, 1-5.</p> <p>Macedo, CR., Macedo, EC., Torloni, MR., Silva, AB & Prado, GF 2014. Pharmacotherapy for sleep bruxism. The Cochrane database of systematic reviews, CD005578.</p> <p>Macedo, CR., Silva, AB., Machado, MA., Saconato, H & Prado, GF 2007. Occlusal splints for treating sleep bruxism. The Cochrane Database of Systematic Reviews.</p>	12-Dec-18
P1e				Is the use of a daily mouthwash at home, useful for maintaining good oral health?	<p>Despite some promising results, the evidence base for all treatment options (splint therapy, behavioural interventions, pharmaceutical interventions) is extremely limited and no definitive statements regarding the most appropriate treatment can be made.</p>	23	<p>Marinho VC, Chong LY, Worthington HV, Walsh T. Fluoride mouthrinses for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2016 Jul 29;7:CD002284. doi: 10.1002/14651858.CD002284.pub2. Review. PubMed PMID: 27472005.</p> <p>Weyant RJ, Tracy SL, Anselmo TT, Beltrán-Aguilar ED, Donly KJ, Frese WA, Hujoel PP, Iafolla T, Kohn W, Kumar J, Levy SM, Tinanoff N, Wright JT, Zero D, Aravamudan K, Frantsve-Hawley J, Meyer DM; American Dental Association Council on Scientific Affairs Expert Panel on Topical Fluoride Caries Preventive Agents. Topical fluoride for caries prevention: executive summary of the updated clinical recommendations and supporting systematic review. J Am Dent Assoc. 2013 Nov;144(11):1279-91. Review. Erratum in: J Am Dent Assoc. 2013 Dec;144(12):1335. Dosage error in article text. PubMed PMID: 24177407; PubMed Central PMCID: PMC4581720.</p> <p>Marinho VC, Higgins JP, Logan S, Sheiham A. Topical fluoride (toothpastes, mouthrinses, gels or varnishes) for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2003;(4):CD002782. Review. PubMed PMID: 14599054.</p>	12-Dec-18

W1		Oral and Dental	38	<p>What are the long-term health effects (including harms) of tooth whitening?</p>	<p>comparison to no treatment/placebo. In terms of health outcomes, low quality evidence Regarding adverse events, most commonly reported were tooth sensitivity and oral irritation (more prevalent with higher concentrations of the active ingredient). Some evidence that activation of bleaching agents by heat, light or laser may have an adverse effect on pulpal tissue. All studies are short-term and predominantly sponsored or conducted by the manufacturers. Long term evidence on oral health related quality of life and adverse events is missing.</p>	12-Dec-18	24	<p>Attin, T., Hannig, C., Wiegand, A & Attin, R 2004. Effect of bleaching on restorative materials and restorations--a systematic review. Dental materials : official publication of the Academy of Dental Materials, 20, 852-61. Buchalla, W & Attin, T 2007. External bleaching therapy with activation by heat, light or laser--a systematic review. Dental materials : official publication of the Academy of Dental Materials, 23, 586-96. de Geus, JL., Wambier, LM., Kossatz, S., Loguercio, AD & Reis, A 2016. At-home vs In-office Bleaching: A Systematic Review and Meta-analysis. Operative dentistry, 41, 341-56. Gerlach, RW., Barker, ML., Karpinia, K & Magnusson, I 2009. Single site meta-analysis of 6% hydrogen peroxide whitening strip effectiveness and safety over 2 weeks. Journal of dentistry, 37, 360-5. Hasson, H., Ismail, AI & Neiva, G 2006. Home-based chemically-induced whitening of teeth in adults. The Cochrane database of systematic reviews, CD006202. He, L-B., Shao, M-Y., Tan, K., Xu, X & Li, J-Y 2012. The effects of light on bleaching and tooth sensitivity during in-office vital bleaching.</p>	
C4		Oral and Dental	38	<p>Should dental professionals recommend e-cigarettes?</p>	<p>There is low-moderate quality evidence to suggest that e-cigarettes may be helpful for some smokers for quitting or reducing smoking. There is insufficient evidence to demonstrate the long-term effects (in terms of smoking cessation or harms), or for which groups of people e-cigarettes may be most useful.</p>	12-Dec-18	25	<p>Bourke, L, Bauld, L, Bullen, C, Cumberbatch, M, Giovannucci, E, Islami, F, McRobbie, H, Silverman, DT & Catto, JWF 2017. E-cigarettes and Urologic Health: A Collaborative Review of Toxicology, Epidemiology, and Potential Risks. European urology, 71, 915-923. Glasser, AM, Collins, L, Pearson, JL, Abudayyeh, H, Niaura, RS, Abrams, DB & Villanti, AC 2017. Overview of Electronic Nicotine Delivery Systems: A Systematic Review. American journal of preventive medicine, 52, e33-e66. Kalkhoran, S & Glantz, SA 2016. E-cigarettes and smoking cessation in real-world and clinical settings: a systematic review and meta-analysis. The Lancet. Respiratory medicine, 4, 116-28. Khoudjian, S, Devji, T, Lytvyn, L, Campbell, K, Hopkins, R & O'Reilly, D 2016. The efficacy and short-term effects of electronic cigarettes as a method for smoking cessation: a systematic review and a meta-analysis. International journal of public health, 61, 257-67. Liu, X, Lu, W, Liao, S, Deng, Z, Zhang, Z, Liu, Y & Lu, W 2018. Efficiency and adverse events of electronic cigarettes: A systematic review and meta-analysis (PRISMA-compliant article). Medicine, 97, e0324. Maler, M, von der Toppel, J, Schwartz, P</p>	

ID	Uncertainty (PICO formatted indicative uncertainty where possible. Advised minimum requirements are 'Population' and 'Intervention'. Not all submissions may be suitable for PICO structure, but they should be in a format that will ultimately be of value	Original uncertainty	Summary of the evidence	Evidence (reference, and weblink where available, to the most recent relevant systematic review identified by the PSP, plus a maximum of 2 other systematic reviews, including protocols for future systematic reviews, that the PSP considers relevant.)	Source of Uncertainty (if there are multiple sources, a PSP may wish to show them e.g. 1 x patient, 19 x clinician, 4 x research recommendations)	
P1a	How and when should you brush your teeth?	Original questions covered issues linked to how to brush your teeth to prevent caries and gum disease, along with the timing, duration and frequency of toothbrushing. These questions covered all age groups.	Current clinical guidelines indicate that brushing should be undertaken a minimum of twice daily. This is based on a systematic review that shows a 14% increase in prevented fraction (95% CI 6% to 22%) with twice daily brushing compared to once daily brushing. There is insufficient evidence to specify a specific duration of brushing;	SIGN (2014). Dental interventions to prevent caries in children. A national clinical guideline, Scottish Intercollegiate Guidelines Network. SIGN 138. Public Health England (2017). Delivering better oral health: an evidence-based toolkit for prevention. Marinho VC, Higgins JP, Sheiham A, Logan S. Fluoride toothpastes for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2003;(1):CD002278.	14 patients, carers or members of public; 6 health professionals; 4 other	Partially answered
P1d	Is cleaning in between teeth needed for maintaining good oral health?	Original questions covered the role of flossing or interdental brushes. What is the effectiveness/relative effectiveness of different interdental cleaning methods? If flossing is used, how often? Is it useful for the 'average' patient, not prone to periodontal disease, with minimal instruction? Does flossing help with the prevention of tooth decay, gum disease, dementia, heart disease or other conditions?	Numerous systematic reviews of interdental brushing (IDB) and flossing of varying quality. All based on trials of unclear/high risk of bias. Flossing: people who brush and floss regularly have less gum bleeding compared to toothbrushing alone. There was weak evidence of a possible small reduction in plaque. No information on other measurements such as tooth decay because the trials were not long enough. IDB: low quality evidence that IDB reduces gingivitis (gum inflammation) more than flossing. Some low quality evidence that inter-dental cleaning with IDBs is the most effective method for inter-dental plaque removal.	Berchier CE, Slot DE, Haps S, GA VdW. The efficacy of dental floss in addition to a toothbrush on plaque and parameters of gingival inflammation: a systematic review. Int J Dent Hyg. 2008;6(4):265-79. de Oliveira KMH, Nemezio MA, Romualdo PC, da Silva RAB, de Paula ESFWG, Küchler EC. Dental Flossing and Proximal Caries in the Primary Dentition: A Systematic Review. Oral health & preventive dentistry. 2017;15(5):1-8. Figuerio E, Nóbrega DF, García-Gargallo M, Tenuta LM, Herrera D, Carvalho JC. Mechanical and chemical plaque control in the simultaneous management of gingivitis and caries: a systematic review. Journal of clinical periodontology. 2017;44 Suppl 18:S116-S34. Hoenderdos NL, Slot DE, Paraskevas S, GA VdW. The efficacy of woodsticks on plaque and gingival inflammation: a systematic review. Int J Dent Hyg. 2008;6(4):280-9. Hujoel PP C-CJ, Banting DW, Loesche WJ. Dental flossing and interproximal caries: a systematic review. J Dent Res. 2006;85(4):298-305. Kotsakis GA, Lian Q, Ioannou AL, Michalowicz BS, John MT, H. C. A network meta-analysis of interproximal oral hygiene methods in the reduction of clinical indices of inflammation. J Periodontol. 2018 May;89(5):558-570. doi: 10.1002/JPER.17-0268	10 patients, carers or members of public;	Uncertainty Evidence based on studies at high risk of bias and short term
P1e	Is the use of a daily mouthwash at home, useful for maintaining good oral health?	Original questions covered whether to use a mouthwash, what type and when. Risks associated with mouthrinses were also raised. Does the regular use of a mouthwash actually help maintain healthy teeth, gums and mouths? Should mouthwashes containing alcohol be avoided? Should mouthrinses be used before or after brushing? Do they give rise to an increased risk of oral cancer? Questions relate to preventing and treating disease and are relevant to all age groups.	Moderate quality evidence that supervised use of fluoride mouthrinse by children and adolescents is associated with a large reduction in caries increment in permanent teeth. No studies regarding coronal caries in adults older than 18 years. Insufficient evidence regarding unsupervised use. High quality evidence of a reduction in gingivitis in individuals with mild gingival inflammation; not considered to be clinically relevant. High-quality evidence of a large reduction in dental plaque with chlorhexidine mouthrinse. No evidence that one concentration of chlorhexidine rinse is	Marinho VC, Chong LY, Worthington HV, Walsh T. Fluoride mouthrinses for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2016 Jul 29;7:CD002284. doi: 10.1002/14651858.CD002284.pub2. Review. PubMed PMID: 27472005. Weyant RJ, Tracy SL, Anselmo TT, Beltrán-Aguilar ED, Donly KJ, Frese WA, Hujoel PP, Iafolla T, Kohn W, Kumar J, Levy SM, Tinanoff N, Wright JT, Zero D, Aravamudan K, Frantsve-Hawley J, Meyer DM; American Dental Association Council on Scientific Affairs Expert Panel on Topical Fluoride Caries Preventive Agents. Topical fluoride for caries prevention: executive summary of the updated clinical recommendations and supporting systematic review. J Am Dent Assoc. 2013 Nov;144(11):1279-91. Review. Erratum in: J Am Dent Assoc. 2013 Dec;144(12):1335. Dosage error in article text. PubMed PMID: 24177407; PubMed Central PMCID: PMC4581720.	6 patients, carers or members of public; 5 health professionals; 1 other	Uncertainty
P2	What is the best way to prevent tooth decay in individuals (of all ages)?	Original questions focused on all aspects of the prevention of tooth decay, encompassing a broad range of interventions (including fluoride varnishes, sealants, OHI, reduction in sugar consumption), settings (including primary care settings, educational settings, supermarkets, care homes), healthcare providers, and age groups. For example, what effect has the discontinuation of school dental checks had on the incidence of dental caries in school age children? What is the best form and setting(s) for a complex intervention to prevent caries in children? Should free toothbrushes & toothpaste be offered at a dental appointment? How can we prevent dental disease in the aging population?	A wide range of interventions have been evaluated for the prevention of caries (including sealants, varnishes, scale and polish, tooth mousse (CPP-ACP), probiotics, slow-release fluoride devices, fluoride supplements, dietary advice, oral hygiene advice, xylitol) Sealants: There is moderate quality evidence that resin-based sealants applied on occlusal surfaces of permanent molars are effective for preventing caries in children and adolescents (at 24 months). There is insufficient evidence to judge the effectiveness of glass ionomer sealant or the relative effectiveness of different types of sealants. Fluoride varnish: There is moderate quality evidence that fluoride varnish reduces decayed, missing or filled tooth surfaces in both primary and	Sealants: Papageorgiou, SN., Dimitraki, D., Kotsanos, N., Bekes, K & van Waes, H 2017. Performance of pit and fissure sealants according to tooth characteristics: A systematic review and meta-analysis. Journal of dentistry, 66, 8-17. Hou, J., Gu, Y., Zhu, L., Hu, Y., Sun, M & Xue, H 2017. Systemic review of the prevention of pit and fissure caries of permanent molars by resin sealants in children in China. Journal of investigative and clinical dentistry, 8. Ahovuo-Saloranta, A., Forss, H., Walsh, T., Nordblad, A., Mäkelä, M & Worthington, HV 2017. Pit and fissure sealants for preventing dental decay in permanent teeth. Cochrane Database of Systematic Reviews. Wright, JT., Tampi, MP., Graham, L., Estrich, C., Crall, JJ., Fontana, M, et al. 2016. Sealants for preventing and arresting pit-and-fissure occlusal caries in primary and permanent molars: A systematic review of randomized controlled trials-a report of the American Dental Association and the American Academy of Pediatric Dentistry. Journal of the American Dental Association (1939),	6 patients, carers or members of public; 17 health professionals; 2 other	Uncertainty (for majority of interventions; partially answered regarding fluoride varnish and sealants)

P3	What is the best way to prevent tooth decay, and reduce oral health inequalities at a community or population level?	Original questions focused on all age groups (from peri-natal population through to aging population), different ethnic groups and those with special needs. Interventions listed included school dental screening, school based interventions, community water fluoridation, changes in workforce as well as 'oral health interventions' in general.	Numerous approaches have been evaluated for preventing caries at a community or population level (with only some evaluating reduction in health inequalities). Some of the more frequently evaluated interventions are listed below. None of the interventions are supported by long-term, high quality evidence (supervised mouthrinse programmes, undertaken in a school setting, are supported by moderate level evidence; health inequalities not evaluated) Water fluoridation: There is low quality evidence that community water fluoridation is effective at reducing caries levels in both deciduous and permanent dentition in children. There is insufficient evidence to determine whether water fluoridation results in a change in disparities in caries levels across SES. There is insufficient evidence to determine the effectiveness of water fluoridation for preventing caries in adults. There is insufficient information to determine the effect on caries levels of stopping water fluoridation programmes. School-based behavioural interventions: insufficient evidence to determine whether behavioural interventions in primary schools leads to a change in behaviours associated with dental caries School based sealant programmes: moderate evidence of effectiveness in preventing dental caries and evidence indicating school based sealant programmes increase the number of children receiving sealants	Water fluoridation: Iheozor-Ejiofor Z, Worthington HV, Walsh T, O'Malley L, Clarkson JE, Macey R, Alam R, Tugwell P, Welch V, Glenny AM. Water fluoridation for the prevention of dental caries. Cochrane Database Syst Rev. 2015 Jun 18;(6):CD010856. School-based behavioural interventions: Cooper, AM., O'Malley, LA., Elison, SN., Armstrong, R., Burnside, G., Adair, P, et al. 2013. Primary school-based behavioural interventions for preventing caries. Cochrane Database of Systematic Reviews. School based sealant programmes: Griffin, SO., Naavaal, S., Scherrer, C., Patel, M., Chattopadhyay, S & Community Preventive Services Task, F 2017. Evaluation of School-Based Dental Sealant Programs: An Updated Community Guide Systematic Economic Review. American journal of preventive medicine, 52, 407-415. Guide to Community Preventive Services. Preventing dental caries: school based dental sealant delivery programs. www.thecommunityguide.org/oral/schoolsealants.html. Published 2013. School based supervised mouthrinse programmes: Marinho, VCC., Chong, LY., Worthington, HV & Walsh, T 2016. Fluoride mouthrinses for preventing dental caries in children and adolescents. Cochrane Database of Systematic Reviews. Supervised toothbrushing programmes: Santos, A., de Oliveira, BH & Nadanovsky, P 2018. A systematic review of the effects of supervised toothbrushing on caries incidence in children and adolescents. International journal of paediatric dentistry, 28, 3-11.	1 patients, carers or members of public; 11 health professionals; 3 other	Uncertainty
P4	What is the best way to prevent gum disease in individuals?	Original questions covered a range of interventions including mouthrinses, scale and polish, NHS payment to hygienists, reduction in snacking/change in diet, use of adjuncts to prevent gum disease. The questions, on the whole, did not specify age of population.	See evidence for P1. Scale and polish: High quality evidence that for adults without severe periodontitis who regularly access routine dental care, there is little or no difference in gingivitis and probing depths over two to three years between routinely provided scale and polish and no scheduled scale and polish.	Lamont T, Worthington HV, Clarkson JE, Beirne PV. Routine scale and polish for periodontal health in adults. Cochrane Database of Systematic Reviews (in press)	4 patients, carers or members of public; 6 health professionals	Uncertainty
P5	What is the best way to prevent gum disease, and reduce oral health inequalities at a community or population level?	Original questions focused on the most effective way to prevent gum disease and optimise the health of the population. Interventions included the use of mouthrinses, scale and polish, changes in snacking/diet, changes in workforce.	Insufficient evidence	Scottish Dental Clinical Effectiveness Programme (SDCEP). Prevention and Treatment of Periodontal Diseases in Primary Care. June 2014	2 patients, carers or members of public; 10 health professionals; 1 other	Uncertainty
P6	How can basic oral hygiene be achieved for people with additional care needs?	Original questions focused on the best methods to clean teeth and gums/prevent aspiration/offer oral care for a wide range of children and adults with special care needs including those with cerebral palsy, learning disabilities, cancer, stroke, dysphagia, dementia, autism. The questions focused on different settings (care homes, residential homes, community settings and hospitals) and different types of procedures and equipment (e.g.	Insufficient evidence		2 patients, carers or members of public; 10 health professionals; 1 other	Uncertainty
P7a	What are the best ways improve peoples' understanding of how to maintain a healthy mouth?	The original questions focused predominantly on how best to raise the profile of oral health. How best to educate people on the importance of good oral hygiene. Settings included primary care settings, pre-schools/schools, community settings, social media. How do we encourage patients to engage with regular dental care over emergency attendance? How can we ensure that everyone [children, young adults, adults] understand how to	No systematic review was found on improving people's understanding or knowledge to maintain a healthy mouth. A few systematic reviews have examined the interventions to promote health in general. The evidence for interventions to improve health is low or insufficient. There is some evidence to suggest mass media programmes can be effective in health promotion.	Berkman, N.D., Sheridan, S.L., Donahue, K.E., Halpern, D.J., & Crotty, K. (2011). Low health literacy and health outcomes: An updated systematic review. Annals of Internal Medicine, 155, 97-107. Berkman, N.D., Sheridan, S.L., Donahue, K.E., Halpern, D.J., Viera, A., Crotty, K., et al. (2011). Health Literacy Interventions and Outcomes: An Updated Systematic Review. Evidence Report/Technology Assessment: Prepared by RTI International—University of North Carolina Evidencebased Practice Center under contract No. 290-2007-10056. Kay, E., & Locker, D. (1998). A systematic review of the effectiveness of health promotion aimed at	10 patients, carers or members of public; 18 health professionals; 1 other	Uncertainty
P7b	What are the barriers/enablers to maintaining a healthy mouth (across different populations and settings)?	Original questions explored barriers to individuals' own care, or those they care for. They covered barriers to performing basic oral care and attending dental appointments as well as enablers for changing behaviour. For example, what are the main barriers to you brushing your teeth twice a day? What are the main barriers to you attending a dentist at least every 24 months? How to incentivise change in behaviour and attitude? Are the charges made by dentists putting people off visiting? What are the main barriers to getting parents of young children to care for their and the children's teeth? What are the barriers to [carers from] performing best care?	Factors affecting children's adherence to regular dental attendance: "Factors identified at the patient level included parents' education, socioeconomic status, behavioral beliefs, perceived power and subjective norms. At the provider level, the authors identified communication and professional skills. At the system level, the authors identified collaborations between communities and health care professionals, as well as a formal policy of referring patients from family physicians and pediatricians to dentists." Oral hygiene in children: "Oral hygiene facilitators were found to be the concern about how clean were their teeth, oral health literacy of both children and parents and toothpaste appeal to children. Oral hygiene barriers were Children's boredom, low oral health literacy, forgetfulness and low socioeconomic level."	Hoben, M., Clarke, A., Huynh, K.T., Kobagi, N., Kent, A., Hu, H., et al. (2017). Barriers and facilitators in providing oral care to nursing home residents, from the perspective of care aides: A systematic review and meta-analysis. International journal of nursing studies, 73, 34-51. Badri, P., Saltaji, H., Flores-Mir, C., & Amin, M. (2014). Factors affecting children's adherence to regular dental attendance: A systematic review. The Journal of the American Dental Association, 145, 817-828. Angelopoulou M, Kavvadia K, Oulis C, Reppa C. Oral Hygiene Facilitators and Barriers in Greek 10 Years Old Schoolchildren. Int J Clin Pediatr Dent. 2015 May-Aug;8(2):87-93.	6 patients, carers or members of public; 4 health professionals	Uncertainty

T1	What is the best way for dental teams to manage gum disease?	Original questions touched on options for the best and most cost-effective way to treat/ prevent gum disease, as well as the efficacy of deep cleaning procedures. In the case of chronic periodontal disease: is RSD an effective an effective treatment? What is the role of different members of the dental team?	Evidence predominantly low quality (no high quality evidence) "The evidence suggests that sub-gingival instrumentation of probing depths greater than 3 mm is effective in improving periodontal health" "Evidence suggests that power driven RSI and hand RSI are equally effective in terms of improved clinical outcomes" "There is currently no evidence of a difference in effectiveness between full-mouth and quadrant debridement and both are therefore suitable for	Scottish Dental Clinical Effectiveness Programme (SDCEP). Prevention and Treatment of Periodontal Diseases in Primary Care. June 2014	5 patients, carers or members of public; 9 health professionals; 3 others	Partially answered
T2	What is the best way for the dental team to manage tooth decay?	Original questions concern the best methods, and timing (should there be a period of watchful waiting; should lesions only be treated when they reach a pre-defined size/depth?), of treatment for caries in children, adults and the elderly. Questions also targeted which materials are most suitable as fillings (as alternatives to amalgam) in both adult and child patients, the best methods of production, and which are likely to produce optimal, lasting effects. What is the role of the Hall crown in child patients?	Low-quality evidence "suggests that ART using H-GIC may have a higher risk of restoration failure than conventional treatment for caries lesions in primary teeth. The effects of ART using composite and RM-GIC are uncertain" Low quality evidence that "crowns placed on primary molar teeth with carious lesions, or following pulp treatment, are likely to reduce the risk of major failure or pain in the long term compared to fillings. Crowns fitted	Dorri M, Martinez-Zapata MJ, Walsh T, Marinho VC, Sheiham Deceased A, Zaror C. Atraumatic restorative treatment versus conventional restorative treatment for managing dental caries. Cochrane Database Syst Rev. 2017 Dec 28;12:CD008072. Innes NP, Ricketts D, Chong LY, Keightley AJ, Lamont T, Santamaria RM. Preformed crowns for decayed primary molar teeth. Cochrane Database Syst Rev. 2015 Dec 31;(12):CD005512. Dorri M, Dunne SM, Walsh T, Schwendicke F. Micro-invasive interventions for managing proximal dental decay in primary and permanent teeth. Cochrane Database Syst Rev. 2015 Nov 5;(11):CD010431.	3 patients, carers or members of public; 19 health professionals; 1 other	Partially answered
DG1	What is the best way to diagnose gum disease?	Original questions target two points: reliable biomarkers for chronic periodontitis/ implantitis - do they exist? Can diagnostic applications of saliva in oral and system diseases be developed?	Insufficient evidence		2 health professionals	Uncertainty
E1	What is the best way to manage the need for general anaesthesia to take out teeth?	Original questions relate to the use of general anaesthesia on children/ young adult patients: the benefits and cost thereof. Does a cheaper, less invasive alternative with fewer adverse affects exist? What is the effectiveness and cost effectiveness of performing dental treatment under GA versus inhalation sedation for uncooperative children with multiple caries lesions?	Insufficient evidence		2 patients, carers or members of public; 1 health professionals; 3 others	Uncertainty
E2	What is the best way to manage extraction of wisdom teeth?	Original questions covered when to extract wisdom teeth and how to prevent infection in impacted wisdom teeth.	Insufficient evidence is available to determine whether or not asymptomatic disease-free impacted wisdom teeth should be removed.	Ghaemina H, Perry J, Nienhuijs MEL, Toedtling V, Tummers M, Hoppenreijts TJM, Van der Sanden WJM, Mettes TG. Surgical removal versus retention for the management of asymptomatic disease-free impacted wisdom teeth. Cochrane Database of Systematic Reviews 2016, Issue 8. Art. N. 6888879	2 patients, carers or members of public	Uncertainty
A1	How can access to dental services be improved for the people with additional needs	Original questions covered access to primary care, domiciliary care and emergency care. Access covered availability of dental services, physical barriers (such as buildings with poor facilities), financial barriers and anxiety. Populations covered included migrants, homeless, low SES, travelling community, very young, elderly, children under local authority safeguarding.	Insufficient evidence		9 patients, carers or members of public; 7 health professionals; 1 other	
A2	How can access to dental services be improved for the general public?	Original questions covered barriers to accessing and attending; improving knowledge of how to access dental services; the role of direct access to therapists/hygeinists; the role of drop-in dental clinics; how to reduce people with dental problems presenting at A&E	Insufficient evidence		9 patients, carers or members of public; 10 health professionals; 6 other	
C1	What are the most effective ways of increasing early detection/diagnosis of oral cancer?	Original questions covered the identification of potentially malignant disorders, how to detect oral cancer early (including educating the public about the signs and symptoms of oral cancer) and how to diagnose oral cancer.	Limited evidence to support diagnostic adjuncts to be used in primary care settings Low-quality evidence suggests that cytologic testing seems to be the most accurate adjunct among those included in this review. Biopsy and histopathologic assessment remain the single definitive test to diagnose PMDs and OSCC through detecting dysplasia.	Lingen, Mark W. et al.Evidence-based clinical practice guideline for the evaluation of potentially malignant disorders in the oral cavity The Journal of the American Dental Association , Volume 148 , Issue 10 , 712 - 727.e10 Macey R, Walsh T, Brocklehurst P, Kerr AR, Liu JL, Lingen MW, Ogden GR, Warnakulasuriya S, Scully C. Diagnostic tests for oral cancer and potentially malignant disorders in patients presenting with clinically evident lesions. Cochrane Database Syst Rev. 2015 May 29;(5):CD010276. Walsh T, Liu JL, Brocklehurst P, Glenn AM, Lingen M, Kerr AR, Ogden G, Warnakulasuriya S, Scully C.	1 patients, carers or members of public; 3 health professionals	
C2	What are the most effective ways of managing potentially malignant disorders (e.g oral lichen planus)?	Original questions focus on the best treatment of oral lichen planus and its symptoms. Also some focus on how 'risky behaviour' (e.g betel quid chewing) can be reduced?	There is no strong evidence to support the role of surgical, medical or risk cessation techniques for reducing the risk or recurrence/malignant transformation of potentially malignant disorders.	Akram, Z., Abduljabbar, T., Vohra, F & Javed, F 2018. Efficacy of low level laser therapy compared to steroid therapy in the treatment of oral lichen planus: A systematic review. Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the	3 patients, carers or members of public; 5 health professionals	Uncertainty
C3	What are the best ways of managing oral conditions associated with cancer treatment?	Original questions touch on managing during- and post- cancer treatment oral conditions, such as dry mouth and mucositis.	There are several systematic reviews evaluating the management of oral conditions associated with cancer treatment. Oral conditions assessed include mucositis, candidiasis, xerostomia/salivary gland dysfunction and herpes simplex virus.	Cho, HK, Jeong, YM, Lee, HS, Lee, YJ & Hwang, SH 2015. Effects of honey on oral mucositis in patients with head and neck cancer: A meta-analysis. The Laryngoscope, 125, 2085-92. Clarkson, JE, Worthington, HV & Eden, OB 2007. Interventions for treating oral mucositis for patients with cancer receiving treatment. The Cochrane database of systematic reviews, CD001973. He, M, Zhang, B, Shen, N, Wu, N & Sun, J 2018. A systematic review and meta-analysis of the effect of low level laser therapy (LLLT) on chemotherapy induced oral mucositis in pediatric and young	3 patients, carers or members of public; 2 health professionals	Partially answered There is high quality evidence for oral cryotherapy and for KGF for the prevention of oral mucositis. However, this evidence is from specific patient
C4	Should dental professionals recommend e-cigarettes?		There is low-moderate quality evidence to suggest that e-cigarettes may be helpful for some smokers for quitting or reducing smoking. There is insufficient evidence to demonstrate the long-term effects (in terms of	Bourke, L, Bauld, L, Bullen, C, Cumberbatch, M, Giovannucci, E, Islami, F, McRobbie, H, Silverman, DT & Catto, JWF 2017. E-cigarettes and Urologic Health: A Collaborative Review of Toxicology, Epidemiology, and Potential Risks. European urology, 71, 915-923.		Uncertainty
S1	How can people be encouraged to reduce sugar consumption for oral and general health?	The original questions covered the prevalence of sugar in our diet. How can awareness be raised of the ill effects of sugar on dental (and general) health in all age groups? Why is there not more pressure on food and beverage manufacturers to provide transparency on the sugar content of their products? What other means exists to curtail the presence of high sugar products in our day-to-day environments, or does society's acceptance thereof have direct bearing on the rate of progress in improving oral healthcare in children? On a small scale, how can unhealthy snacking between meals be discouraged, can chewing sugar free gum help to maintain healthy teeth?	Most of the studies about reducing sugar intake focus on reducing children obesity and sugar sweetened beverages (SSBs). Interventions can be categorised into the following three groups: Health education and promotion The effectiveness of educational and behaviours interventions is modest. There is evidence to suggest demonstrating children the desired behaviour can reduce SSBs intake but the effect is amongst adolescents and adults is less prominent. The application of Knowledge-Attitude-Behaviour model for understanding sugar is limited as sugar intake behaviour is shaped by multiple factors and knowledge and attitude are only two of them.	Abdel Rahman, A., Jomaa, L., Kahale, L.A., Adair, P., & Pine, C. (2018). Effectiveness of behavioral interventions to reduce the intake of sugar-sweetened beverages in children and adolescents: a systematic review and meta-analysis. Nutrition reviews, 76, 88-107. Al Rawahi, S.H., Asimakopoulou, K., & Newton, J.T. (2017). Theory based interventions for caries related sugar intake in adults: systematic review. BMC psychology, 5, 25. Avery, A., Bostock, L., & McCullough, F. (2015). A systematic review investigating interventions that can help reduce consumption of sugar-sweetened beverages in children leading to changes in body fatness. Journal of human nutrition and dietetics : the official journal of the British Dietetic Association, 28 Suppl 1, 52-64. Bes-Rastrollo, M., Sayon-Orea, C., Ruiz-Canela, M., & Martinez-Gonzalez, M.A. (2016). Impact of sugars and sugar taxation on body weight control: A comprehensive literature review. Obesity (Silver	5 patients, carers or members of public; 4 health professionals	Partially answered Answered: 1. The overall evidence for health education and promotion intervention is mixed and lacking long-term effects. Most likely to benefit the 'disadvantaged' population. 2. There is high quality evidence suggesting SSBs can be replaced by water or low-calorie beverages. 3. Although the evidence for the

W1	What are the long-term health effects (including harms) of tooth whitening?	The original questions concerned the risks of teeth whitening treatments: do they cause damage to the teeth, which kind contribute to the health and overall appearance of the teeth, and how best, if at all, should they be used?	comparison to no treatment/placebo. In terms of health outcomes, low quality evidence Regarding adverse events, most commonly reported were tooth sensitivity and oral irritation (more prevalent with higher concentrations of the active ingredient). Some evidence that activation of bleaching agents by heat, light or laser may have an adverse effect on pulpal tissue. All studies are short-term and predominantly sponsored or conducted by the manufacturers. Long term evidence on oral health related quality of life and adverse events is missing.	Attin, T., Hannig, C., Wiegand, A & Attin, R 2004. Effect of bleaching on restorative materials and restorations—a systematic review. Dental materials : official publication of the Academy of Dental Materials, 20, 852-61. Buchalla, W & Attin, T 2007. External bleaching therapy with activation by heat, light or laser—a systematic review. Dental materials : official publication of the Academy of Dental Materials, 23, 586-96. de Geus, JL., Wambier, LM., Kossatz, S., Loguercio, AD & Reis, A 2016. At-home vs In-office Bleaching: A Systematic Review and Meta-analysis. Operative dentistry, 41, 341-56. Gerlach, RW., Barker, ML., Karpinia, K & Magnusson, I 2009. Single site meta-analysis of 6% hydrogen peroxide whitening strip effectiveness and safety over 2 weeks. Journal of dentistry, 37, 360-5. Hasson, H., Ismail, AI & Neiva, G 2006. Home-based chemically-induced whitening of teeth in adults. The Cochrane database of systematic reviews, CD006202. He, L-B., Shao, M-Y., Tan, K., Xu, X & Li, J-Y 2012. The effects of light on bleaching and tooth sensitivity during in-office vital bleaching: a systematic review and meta-analysis. Journal of dentistry, 40, 644-53. Kielbassa, AM., Maier, M., Gieren, A-K & Eliav, E 2015. Tooth sensitivity during and after vital tooth bleaching: A systematic review on an unsolved problem. Quintessence international (Berlin, Germany : 1985), 46, 881-97.	1 patients, carers or members of public; 3 health professionals	Partially answered
COM1	How to improve communication between dental teams and patients/carers?	Original questions focused on helping dentists communicate better with both adults and children in terms of explaining the importance of oral hygiene, treatment options, costs, benefits/harms.	The importance of communication between dental teams and patients/carers has been widely established but very little evidence was found on improving communication skills. The evidence for embedding communication skills in dental education is of variable quality. Overall, dental students are receptive to communication skills learning and to the use of simulated patient interaction as a pedagogic tool. However, there is no evidence regarding the patient experience and impact of dental	Carey, J.A., Madill, A., & Manogue, M. (2010). Communications skills in dental education: a systematic research review. Eur J Dent Educ, 14, 69-78.	3 patients, carers or members of public; 4 health professionals	Uncertainty
DA1	What is the best way to treat patients who are dentally anxious?	Original questions probed the means of supporting members of the public requiring dental attention, but are too anxious to visit a dentist. How many people in all age groups are struggling with this fear, and which cost/effective tools are available to tackle this? Could it be as simple as finding a dentist you trust?	Sedation: no definitive conclusion on which was the most effective drug or method of sedation used for anxious children Oscillating tips vs rotating drills: low quality evidence, unable to conclude whether oscillating tips are effective the management of pain and dental fear in children or adolescents Non-pharmacological interventions: Low quality evidence regarding the effectiveness of behavioral interventions such as cognitive behavioral	Cianetti, S., Abraha, I., Pagano, S., Lupatelli, E & Lombardo, G 2018. Sonic and ultrasonic oscillating devices for the management of pain and dental fear in children or adolescents that require caries removal: a systematic review. BMJ open, 8, e202840. Kuang, H., Johnson, JA., Mulqueen, JM & Bloch, MH 2017. The efficacy of benzodiazepines as acute anxiolytics in children: A meta-analysis. Depression and anxiety, 34, 888-896. Goettems, ML., Zborowski, EJ., Costa, FDS., Costa, VPP & Torriani, DD 2017. Nonpharmacologic Intervention on the Prevention of Pain and Anxiety During Pediatric Dental Care: A Systematic Review. Academic pediatrics, 17, 110-119. Conway, A., Polley, J & Sutthadand, JP 2016. Midazolam for sedation before procedures. Cochrane	8 patients, carers or members of public; 6 health professionals	Uncertainty
TG1	What interventions are best at managing tooth grinding/clenching?	Original questions concerned the availability of non/ invasive techniques for treating teeth grinding and clenching in all age groups. Which work best? Should relaxation techniques be factored in, or can patients rely on mouthguards? Is teeth grinding considered a serious problem by dental health practitioners?	Despite some promising results, the evidence base for all treatment options (splint therapy, behavioural interventions, pharmaceutical interventions) is extremely limited and no definitive statements regarding the most appropriate treatment can be made.	De la Torre Canales, G., Camara-Souza, MB., do Amaral, CF., Garcia, RCMR & Manfredini, D 2017. Is there enough evidence to use botulinum toxin injections for bruxism management? A systematic literature review. Clinical oral investigations, 21, 727-734. Kreiner, M., Betancor, E & Clark, GT 2001. Occlusal stabilization appliances. Evidence of their efficacy. Journal of the American Dental Association (1939), 132, 770-7. Lang, R., White, PJ., Machalick, W., Rispoli, M., Kang, S., Aquilar, J, et al. 2009. Treatment of bruxism in individuals with developmental disabilities: a systematic review. Research in developmental	3 patients, carers or members of public	Uncertainty
MT1	What is the best way to manage teeth missing for any reason (e.g tooth decay, trauma, developmental conditions) and at any age?	Original questions concentrated on the use of implants in an aging population. How will this growing trend affect the aged, their dental health routines and their overall quality of life? Why is it difficult for older patients to get a well fitting lower denture?	Implants Oral administration of two grams of amoxicillin one hour before placement of dental implants is effective in reducing implant failures. Unclear whether postoperative antibiotics are beneficial, or which antibiotics work best.	Atieh MA, Alsabeeha NH, Payne AG, Duncan W, Faggion CM, Esposito M. Interventions for replacing missing teeth: alveolar ridge preservation techniques for dental implant site development. Cochrane Database Syst Rev. 2015 May 28;(5):CD010176. Esposito M, Ardebili Y, Worthington HV. Interventions for replacing missing teeth: different types of dental implants. Cochrane Database Syst Rev. 2014 Jul 22;(7):CD003815.	2 patients, carers or members of public; 2 health professionals; 1 other	Partially answered for implants Implants effective but specific characteristics/timing unclear (success rates generally high)
GH1	Do dental care professionals have a role in screening and treating for general health problems?	Original questions referred to the current role of dentists as healthcare providers, and whether this could be extended to provide support in the following areas: alleviating pressures on the NHS, contributing to processes of diagnosis and referral, assisting in addressing the issue of childhood obesity and youth smoking, containing the problem of malnutrition or chest infection in the aged, as well as influencing overall system health through the provision of periodontal health checks.	No strong evidence that the screening for general health problems undertaken by oral health professionals improves health outcomes. However, reviews highlight their ethical obligation to undertake screening.	Sultan A, Warreth A, Fleming P, MacCarthy D. Does the dentist have a role in identifying patients with undiagnosed diabetes mellitus? J Ir Dent Assoc. 2014 Dec-2015 Jan;60(6):298-303. Glick M. Screening for traditional risk factors for cardiovascular disease: a review for oral health care providers. J Am Dent Assoc. 2002 Mar;133(3):291-300. Friedlander AH, Friedlander IK, Pogrel MA. Dentistry's role in the diagnosis and co-management of patients with sleep apnoea/hypopnoea syndrome. Br Dent J. 2000 Jul 22;189(2):76-80.	1 patient, carer or member of public; 5 health professionals	Uncertainty
GH2	Is there a role for dental health professionals in treating oral health problems to improve general health?	Original questions were predominantly focused on the management of periodontal disease to improve systemic diseases (e.g CVD, diabetes, RA, kidney disease) and general quality of life. Broader questions relating to better oral care for the prevention/management of health conditions such as malnutrition or chest infections were also covered.	Weak evidence that treatment of periodontal disease by scale root planing improves glycaemic control in people with diabetes in the short term only. Insufficient evidence to demonstrate that one periodontal therapy is more effective than another. Insufficient evidence to determine if periodontal treatment during pregnancy has an impact on preterm birth. Weak evidence that periodontal treatment may reduce low birth weight (< 2500 g)	Simpson TC, Weldon JC, Worthington HV, Needleman I, Wild SH, Moles DR, Stevenson B, Furness S, Iheozor-Ejiofor Z. Treatment of periodontal disease for glycaemic control in people with diabetes mellitus. Cochrane Database of Systematic Reviews 2015, Issue 11. Art. No.: CD004714. Iheozor-Ejiofor Z, Middleton P, Esposito M, Glenny AM. Treating periodontal disease for preventing adverse birth outcomes in pregnant women. Cochrane Database of Systematic Reviews 2017, Issue 6. Art. No.: CD005297. Li C, Lv Z, Shi Z, Zhu Y, Wu Y, Li L, Iheozor-Ejiofor Z. Periodontal therapy for the management of	2 patients, carers or members of public; 4 health professionals	Uncertainty

O1	What are the individual and societal costs and benefits of orthodontic care?	Original questions concentrated on the benefits - both psychological as well as dental - of orthodontic intervention in childhood.	Weak/moderate evidence that orthodontic treatment reduces the impact on children and adolescents' OHRQoL. Insufficient evidence about orthodontic treatment on general quality of life; studies do not employ standardized assessment methods. Insufficient evidence regarding societal costs and benefits.	Kragt L, Dharmo B, Wolvius EB, Ongkosuwito EM. The impact of malocclusions on oral health-related quality of life in children-a systematic review and meta-analysis. Clin Oral Investig. 2016 Nov;20(8):1881-1894. Piassi E, Antunes LS, Antunes LA. Orthodontic treatment reduces the impact on children and adolescents' oral health-related quality of life. Indian J Dent Res. 2016 Mar-Apr;27(2):213-9. Andiappan M, Gao W, Bernabé E, Kandala NB, Donaldson AN. Malocclusion, orthodontic treatment, and the Oral Health Impact Profile (OHIP-14): Systematic review and meta-analysis. Angle Orthod. 2015 May;85(3):493-500. Zhou Y, Wang Y, Wang X, Volière G, Hu R. The impact of orthodontic treatment on the quality of life a systematic review. BMC Oral Health. 2014 Jun 10;14:66.	2 patients, carers or members of public; 1 health professional	Uncertainty
OM1	What is the best way to prevent/treat frequent mouth ulcers?	Original questions focused on the best (preventative) treatment of recurring mouth ulcers.	Despite a large number of trials of both systemic, topical and physical interventions for the prevention and treatment of frequent/recurrent mouth ulcers, the body of evidence is of very low quality and no single treatment can be identified as being more effective than others (although some appear promising); results remain inconclusive with regard to the best intervention for the management of recurrent mouth ulcers.	Suter, VGA, Sjolund, S & Bornstein, MM 2017. Effect of laser on pain relief and wound healing of recurrent aphthous stomatitis: a systematic review. Lasers in medical science, 32, 953-963. Najeeb, S, Khurshid, Z, Zohaib, S, Najeeb, B, Qasim, SB & Zafar, MS 2016. Management of recurrent aphthous ulcers using low-level lasers: A systematic review. Medicina (Kaunas, Lithuania), 52, 263-268. Li, C-L, Huang, H-L, Wang, W-C & Hua, H 2016. Efficacy and safety of topical herbal medicine treatment on recurrent aphthous stomatitis: a systemic review. Drug design, development and therapy, 10, 107-15. Vale, FA, Moreira, MS, de Almeida, FCS & Ramalho, KM 2015. Low-level laser therapy in the treatment of recurrent aphthous ulcers: a systematic review. TheScientificWorldJournal, 2015, 150412. Pavlic, V, vujic-Aleksic, V, Aoki, A & Nezcic, L 2015. Treatment of recurrent aphthous stomatitis by laser therapy: A systematic review of the literature. Vojnosanitetski pregled, 72, 722-8. Ni Riordain, R, Shirlaw, P, Alajbeg, I, Al Zamel, GY, Fung, PL, Yuan, AD, McCreary, C, Stoopler, ET, De	5 patients, carers or members of public; 2 health professionals	Uncertainty
	What is the best way to treat dry mouth?	Original questions were directed at methods of treating the increasing number of sufferers of (chronic) dry mouth.			2 health professionals	
SD1	How can patient safety best be achieved during dental care?	How can we improve translation of research into clinical practice? Can the evidence based toolkit be implemented in general dental practice? What is the cost to the dentist of good diagnosis and prevention?	The quality of the studies varied and none of their outcomes were verified by other researchers. This systematic review finds that the only interventions in dentistry that reduce or minimise adverse events are surgical safety checklists.	Bailey, E., Tickle, M., Campbell, S., & O'Malley, L. (2015). Systematic review of patient safety interventions in dentistry. BMC Oral Health, 15, 152.	5 health professionals	Partially answered
SD2	What is the best way to implement best practice in effective oral health care?	How can we improve translation of research into clinical practice? Can the evidence based toolkit be implemented in general dental practice? What is the cost to the dentist of good diagnosis and prevention?	Insufficient evidence		4 health professionals	Uncertainty
SD3	What is the best mix of skills needed in the dental team to deliver oral health care?	Should hygienists be brought into free NHS dental hygiene service? How should we achieve a wider dental profession engagement? Is it worth visiting a dental hygienist regularly?	Insufficient evidence		2 patients, carers or members of public; 1 health professional; 1 other	Uncertainty
SD4	how can dental health professionals work with other health professionals to help improve oral health?	Original questions covered the role of other health professionals in the prevention and identification of tooth decay in children; how can communication be improved between dentists and schools, GPs, health visitor and parents.	Insufficient evidence		1 patient, carer or member of public; 3 health professionals; 1 other	Uncertainty
ON1	What is the best way to prevent and manage osteonecrosis of the jaw?	Original questions targeted the issue of osteonecrosis of the jaw and how it can be effectively prevented. What is the incidence of this condition in women prescribed IV Zometa or Denosumab?	Following a comprehensive review of the literature, SDCEP provide clear guidance on the management of patients at risk of medically related osteonecrosis of the jaw (albeit based on low quality evidence). They identify research recommendations including the need to determine the efficacy of MRONJ prevention protocols for patients who require an extraction, and the efficacy of proposed treatment strategies for MRONJ	NHS Education for Scotland, 2017. Oral health management of patients at risk of medication-related osteonecrosis of the jaw. Scottish Dental Clinical Effectiveness Programme.	3 patients, carers or members of public; 1 health professional	Uncertainty
OP1	What are the best ways to manage non-dental orofacial pain?	Original questions covered a range of non-dental orofacial pain causes and different methods for managing them. Mainly focused in adults.	Range of causes (e.g TMD, trigeminal neuralgia, burning mouth syndrome...) and large number of treatment approaches have been evaluated (e.g pharmacological, behavioural, surgical, physical, splint...). Evidence remains inconclusive/low quality for majority of interventions. (awaiting new review on trigeminal neuralgia and TMD (splint therapy))		2 patients, carers or members of public; 2 health professionals	Uncertainty

D1	What role do digital technologies play in the provision of dental care?	Digital technologies covered all aspects of dental services, encompassing mobile apps, specialist equipment such as intra oral cameras, referral systems, digital notes.	<p>The definition of digital technologies is extremely wide so this search focused on computer technologies.</p> <p>Using digital technologies to improve health behaviours</p> <p>There is no evidence on dental care but there are two systematic reviews on using texting and mobile phone apps to improve health behaviours. The quality of evidence on using mobile phone apps and messaging intervention to improve health behaviours is of low to moderate. There are significant information gaps.</p> <p>Using digital technologies to assist treatments</p> <p>There is one systematic review on using computer technology application in surgical implant dentistry. The quality of evidence varies. There is no evidence to suggest that computer-assisted surgery is better than conventional procedures in safety, outcomes, morbidity and efficiency.</p>	<p>Badawy, S.M., & Kuhns, L.M. (2017). Texting and Mobile Phone App Interventions for Improving Adherence to Preventive Behavior in Adolescents: A Systematic Review. 5, e50.</p> <p>Free, C., Phillips, G., Galli, L., Watson, L., Felix, L., Edwards, P., et al. (2013). The Effectiveness of Mobile-Health Technology-Based Health Behaviour Change or Disease Management Interventions for Health Care Consumers: A Systematic Review. PLOS Medicine, 10, e1001362.</p> <p>Jung, R.E., Schneider, D., Ganeles, J., Wismeijer, D., Zwahlen, M., Hammerle, C.H., et al. (2009). Computer technology applications in surgical implant dentistry: a systematic review. Int J Oral Maxillofac Implants, 24 Suppl, 92-109</p> <p>Vodopivec-Jamsek, V., de Jongh, T., Guroi-Urganci, I., Atun, R., & Car, J. (2012). Mobile phone messaging for preventive health care. Cochrane Database of Systematic Reviews.</p>	3 health professionals	<p style="text-align: right;">Uncertainty</p>
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