

Mapping questions and priority topics to Cochrane Oral Health's existing reviews

1. Introduction

The purpose of this report is to outline the mapping stage in Cochrane Oral Health's priority setting process. We have gathered information on priority topics for systematic reviews in oral health from several sources. These were:

1. Data on how our existing reviews are being used: how often they have been cited, downloaded and discussed on social media (report [here](#));
2. Trials registry records and trials data, to find out the up-and-coming research areas in oral health, which might have scope for a new systematic review (report [here](#));
3. Published guidelines to find out where guideline developers need more research evidence, and where a new systematic review help them to deliver better guidance (report [here](#));
4. The opinions of patients, carers and the general public, to find out what questions people have about their oral health (report [here](#)).
5. Priorities emerging from the [James Lind Alliance Oral Health Priority Setting Partnership](#).

Common questions and themes were identified by these five methodologies. The results were then mapped against the existing portfolio of Cochrane Oral Health reviews, and planned reviews

2. Methods

A list of Cochrane Oral Health registered titles, protocols and reviews was extracted from Cochrane's information system (Archie) and uploaded to Excel. The reviews, protocols and registered titles were coded by theme, type of review (eg prevention/treatment/diagnosis etc), the population and the condition.

The priority issues that had emerged from the five different stages of the priority setting process had also been coded in the same way. This allowed the identification of priority issues that had already been covered by an existing or planned review, so that we could see which of our existing reviews were priorities, and should be updated in the near future. Any gaps between the priority issues and the current portfolio could also be easily mapped, and areas only partially covered by current reviews or planned reviews could be established.

Existing reviews or registered titles which had been established in at least three of the priority setting projects went forward to the next stage in the process.

During the examination of the questions, uncertainties and priority issues described above, any uncertainties or questions which did not map to a review or a registered review title, or only partially mapped, were extracted and listed on a separate spreadsheet as potential new topic areas for a brand new Cochrane review. Potential new titles were considered for the next stage in the process provided that they were suitable for a Cochrane systematic review, and were within Oral Health's scope. The new titles also had to have featured in at least two of the five priority setting exercises outlined in the introduction.

3. Results

3.1 Priorities for updating

At the time of the mapping exercise, Cochrane Oral Health had 198 systematic review titles registered. 157 were established, published reviews. 41 were review protocols or registered review titles, i.e. they were systematic reviews in progress that had yet to be published.

Nine of these titles had featured in all of the five priority setting projects described in the introduction, and were candidates for being high priority topics (see [Table 1](#)). One of these was a protocol: Sealants for preventing dental caries in primary teeth, so this will count as a new title rather than an update. However, in two cases (Chlorhexidine mouthrinse as an adjunctive treatment for gingival health and Fluoride mouthrinses for preventing caries in children and adolescents) the topic already has high or moderate quality evidence available that the intervention is effective. These topics are then not topics where there is high levels of uncertainty. It may be instead that these are topics where the issue is that the evidence is not being disseminated widely enough or to the audience who need it. These two topics should be prioritised for knowledge transfer and dissemination processes rather than updating the systematic reviews.

Seventeen existing reviews had featured as important questions in four of the priority setting projects, and three protocols or registered titles had also featured in four, these can also be considered as potential high priority topics (see [Table 2](#)).

In three cases, the question had already been answered by high or moderate quality evidence. Routine scale and polish for periodontal health in adults, Powered versus manual toothbrushing for oral health and Pit and fissure sealants for preventing dental decay in permanent teeth will become priorities for disseminating evidence, and not for updating.

Thirty three existing reviews were covered by topics suggested in three of the five priority setting projects (see [Table 3](#)), and five protocols were also identified. Fluoride gels for preventing dental caries in children and adolescents and Micro-invasive interventions for managing proximal dental decay in primary and permanent teeth have already been answered with moderate or high quality evidence and will go forward as priorities for dissemination, and not updating.

This gives a total of fifty-five existing reviews, and a further nine protocols or registered titles, to be considered as Cochrane Oral Health's priorities. These review topics featured in three or more of the priority setting projects. The nine that were not yet published would technically count as "new" reviews for Cochrane Oral Health, rather than updates. Seven of the existing titles had already been answered with moderate or high quality evidence, and so these questions were not considered high priorities as the level of uncertainty is low.

3.2 New reviews

The uncertainties or questions which did not map to a review or a registered review title during the mapping process, or only partially mapped, were extracted and listed on a separate spreadsheet as new topic areas. These were potentially “evidence gaps” which had not been covered by Cochrane Oral Health before. Duplicate topics were removed if they had been identified during more than one of the priority setting processes, although this fact was noted. At this point, the new topic areas were sorted into the areas of prevention, treatment, prognosis and risk, prevalence, links between oral health and other conditions and diagnosis.

Potential new titles were considered for the next stage in the process provided that they were suitable for a Cochrane systematic review, and were within Oral Health’s scope as determined by Cochrane Oral Health’s Priority Setting Steering Group. The Steering Group also determined that new titles also had to have featured in at least two of the five priority setting exercises outlined in the introduction in order for there to be enough evidence that they were high priority enough to be considered a priority topic.

After the removal of duplicate topics across the five sets of priorities, 230 topic areas remained. 78 of these topics were not suitable for a Cochrane systematic review. For example, some of the topics were around establishing the prevalence of particular conditions, which is not in Cochrane’s remit. 28 of the topic areas were suitable for a Cochrane review, but either fell under the scope of a different Cochrane group, or had been already answered by a review from a different Cochrane group. For example, determining the effects of different anaesthetic agents for dental procedures had already been answered by the Cochrane review Injecting local anaesthetic agents for dental anaesthesia (St. George et al, 2018), a review registered by the Cochrane Anaesthesia Group.

This left a total of 124 new topic areas. Of the 124 new topic areas, 26 had been identified by more than two of the priority setting processes (see Table 4). These can be considered priority topics.

4. Conclusion

Cochrane Oral Health have identified 81 priority topics, that have either not been undertaken by Cochrane Oral Health, or that have not already been answered by high or moderate quality evidence. 26 of these (see Table 4) would be brand new reviews, and fifty-five (Tables 1, 2 and 3) are reviews which need to be updated.

However, Cochrane Oral Health has indicated capacity to undertake only fifteen new reviews and thirty updates in the coming three years.

The final stage of the priority setting process will therefore convene a panel of experts, consumers, clinicians, researchers and policy-makers to rank the topics to establish a top fifteen new topic areas, and a top thirty reviews for updating.

5. References

James Lind Alliance (2019). Oral and dental health. Available at: <http://www.jla.nihr.ac.uk/priority-setting-partnerships/oral-and-dental-health/> (Accessed 11 January 2019).

St George G, Morgan A, Meechan J, Moles DR, Needleman I, Ng YL, Petrie A. Injectable local anaesthetic agents for dental anaesthesia. Cochrane Database of Systematic Reviews 2018, Issue 7. Art. No.: CD006487. DOI: 10.1002/14651858.CD006487.pub2.

TABLE 1: Cochrane Oral Health Reviews which featured in all five priority setting projects:

Fluoride toothpastes for preventing dental caries in children and adolescents
Fluoride toothpastes of different concentrations for preventing dental caries in children and adolescents
Fluoride varnishes for preventing dental caries in children and adolescents
Pit and fissure sealants versus fluoride varnishes for preventing dental decay in the permanent teeth of children
Surgical removal versus retention for the management of asymptomatic, disease free, impacted wisdom teeth
Interventions for replacing missing teeth: augmentation of the maxillary sinus
Chlorhexidine mouthrinse as an adjunctive treatment for gingival health
Fluoride mouthrinses for preventing dental caries in children and adolescents

TABLE 2: Cochrane Oral Health Reviews which featured in four of five priority setting projects:

Routine scale and polish for periodontal health in adults
Powered versus manual toothbrushing for oral health
Water fluoridation for the prevention of dental caries
Chlorhexidine treatment for the prevention of dental caries in children and adolescents
Pit and fissure sealants for preventing dental decay in the permanent teeth
Xylitol-containing products for preventing dental caries in children and adults
Home use of interdental cleaning devices, in addition to toothbrushing, for preventing and controlling periodontal diseases and dental caries
One-to-one oral hygiene advice provided in a dental setting for oral health
Oral hygiene programmes for people with intellectual disabilities
Interventions for replacing missing teeth: different types of dental implants
Systemic antibiotics for symptomatic apical periodontitis and acute apical abscess in adults
Topical fluoride (toothpastes, mouthrinses, gels or varnishes) for preventing dental caries in children and adolescents
Direct composite resin fillings versus amalgam fillings for permanent or adult posterior teeth
Recall intervals for oral health in primary care patients
Interventions for replacing missing teeth: different times for loading dental implants
Interventions for preventing oral mucositis for patients with cancer receiving treatment
Enamel matrix derivative (Emdogain®) for periodontal tissue regeneration in intrabony defects

TABLE 3: Cochrane Oral Health Reviews which featured in three of five priority setting projects:

Fluoride gels for preventing dental caries in children and adolescents
Micro-invasive interventions for managing proximal dental decay in primary and permanent teeth
Fluoridated milk for preventing dental caries
Fluoride supplementation in pregnant women for preventing dental caries in the primary teeth of their children
Oral hygiene care for critically ill patients to prevent ventilator-associated pneumonia
Sedation of children undergoing dental treatment
Oral health educational interventions for nursing home staff and residents
School dental screening for oral health
Interventions for replacing missing teeth: alveolar ridge preservation techniques for dental implant site development
Interventions for the treatment of oral and oropharyngeal cancers: surgical treatment
Interventions for preventing oral mucositis in patients with cancer receiving treatment:

cytokines and growth factors
Autologous platelet concentrates for treatment of periodontal defects
Full-mouth treatment modalities (within 24 hours) for chronic periodontitis in adults
Periodontal therapy for the management of cardiovascular disease in patients with chronic periodontitis
Treating periodontal disease for preventing adverse birth outcomes in pregnant women
Root coverage procedures for the treatment of localised recession-type defects
Combinations of topical fluoride (toothpastes, mouthrinses, gels, varnishes) versus single topical fluoride for preventing dental caries in children and adolescents
Fluoride supplements (tablets, drops, lozenges or chewing gums) for preventing dental caries in children
One topical fluoride (toothpastes, or mouthrinses, or gels, or varnishes) versus another for preventing dental caries in children and adolescents
Primary school-based behavioural interventions for preventing caries
Antibiotics for the prophylaxis of bacterial endocarditis in dentistry
Interventions for the management of dry mouth: non-pharmacological interventions
Interventions for the management of dry mouth: topical therapies
One-to-one dietary interventions undertaken in a dental setting to change dietary behaviour
Triclosan/copolymer containing toothpastes for oral health
Interventions for replacing missing teeth: dental implants in zygomatic bone for the rehabilitation of the severely deficient edentulous maxilla
Clinical assessment to screen for the detection of oral cavity cancer and potentially malignant disorders in apparently healthy adults
Interventions for the treatment of oral cavity and oropharyngeal cancer: chemotherapy
Interventions for the treatment of oral cavity and oropharyngeal cancer: radiotherapy
Screening programmes for the early detection and prevention of oral cancer
Interventions for treating oral lichen planus
Pharmacological interventions for pain in patients with temporomandibular disorders
Interventions with pregnant women and new mothers for preventing caries in children

TABLE 4: Priority topics either not represented or only partially represented in existing Cochrane Oral Health Reviews (including registered but unpublished titles):

How often for how long and how should I brush my teeth?
Can lasers prevent mouth soreness and mouth ulcers (oral mucositis) in people being treated for cancer?
What are the best ways to prevent tooth decay and oral disease in older people?
Can tooth decay in children be prevented by changing the habits and behaviour of their parents or primary caregivers?
What are the best ways to prevent oral diseases in older people living in nursing homes or other institutions?
What role does technology play in providing dental care?
What is the best way to promote better oral health?
Does a better diet or diet supplements improve oral health? If so what are the best foods/nutrients/supplements?
What are the best ways to prevent people getting oral cancer?
Can mouthrinses stop people getting mouth soreness and ulcers (oral mucositis) when they are being treated for cancer?
Can complementary or alternative therapies stop people getting mouth soreness and ulcers (oral mucositis) when they are being treated for cancer?
Can taking probiotics (live bacteria and yeasts) prevent and control chronic gum disease (periodontitis)?

Are babies who are breastfed more likely to get tooth decay?
How does chlorhexidine mouthrinse compare with other mouthrinses as an additional treatment for gum disease?
Can changing a person's bite using splints or orthodontic braces (occlusal adjustment) prevent or treat facial and jaw pain (temporomandibular disorders)?
Can antibiotics be used to treat chronic gum disease (periodontitis) without surgery?
Can light treatment (photodynamic therapy) be a useful additional (adjunctive) treatment for chronic gum disease (periodontitis) and dental infections caused by dental implants (peri-implantitis)?
Can ways of helping people with gum disease to change behaviour or habits (psychological interventions) help them to follow instructions for keeping their mouth and teeth clean?
What's the best way to prevent and control cavities on the tooth root (root caries)?
What's the best filling material to use to fill cavities in primary or "milk" teeth?
Can a different type of fluoride called "silver diamine fluoride" prevent tooth decay?
What is the best way to measure whether children or adults are at high risk of tooth decay?
At what stage of tooth decay should a dentist use a drill?
Can complementary or alternative therapies relieve pain in people who have pain in their jaw or face (temporomandibular disorders)?
What is the best filling material for a root canal treatment so that the filling is long-lasting?
Can sealants prevent tooth decay in children under the age of six or seven (ie before children get their adult teeth)?