

## Ranking Cochrane Oral Health's priority topics

### 1. Introduction

The purpose of this report is to present the final ranking 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 protocols to find out where there was scope for new reviews, and which existing reviews should be prioritised for updating (report [here](#)).

The final stage in the data collection process was to rank the priorities which emerged, and put them to an international panel consisting of clinicians, policy-makers, guideline developers, researchers and members of the public. This ensures that the number of priority topics is within reasonable limits, so that Cochrane Oral Health have the capacity to undertake the reviews.

According to Cochrane Oral Health's report to their funding body, Cochrane Oral Health has capacity to produce fifteen new reviews and thirty updated reviews within a three year period. These were then chosen as the target numbers. From the new titles, fifteen of a possible twenty-six would be selected. For the existing reviews, thirty out of fifty-one titles would be similarly ranked and scored.

### 2. Methods

An international panel was convened to rank the identified new and existing priority titles so that a final list could be created for implementation into Cochrane Oral Health's workflow. The aim was to present the results to a panel of approximately 30 members, as recommended in the literature for this kind of exercise (James Lind Alliance, 2020). The panel was convened virtually rather than in-person, to allow a truly international representation.

The final panel consisted of 40 members. Members were:

- Policymakers (n=4);
- Guideline developers (n=3);
- Practicing dentists, including general dentists (n=14);
- Dental specialists (such as orthodontists, oral surgeons) (n=7);
- Researchers in oral care (n=4);
- Oral health care professionals (such as hygienists) (n=1);
- Consumers (n=7).

The panel was recruited in three ways. Cochrane Oral Health is part of a network of evidence producers called the Global Evidence Ecosystem for Oral Health (GEEOH). Members of the GEEOH include the American Dental Association, the Scottish Dental Clinical Effectiveness Programme (SDCEP), the World Health Organization, Public Health England and the International Association for Dental Research. These groups all produce guidelines or recommendations for dental practitioners, and previously, this guidance has utilised Cochrane Oral Health reviews. Representatives from the GEEOH were emailed with more information about the study, and invited to take part in the ranking exercise. Chief Dental Officers, who feed into national policy in their respective countries were also approached to take part.

Previous Cochrane Oral Health authors were also selected at random and contacted to see if they were able to take part. Cochrane Oral Health's authors cover all dental specialty areas, and are often either practicing dentists, members of the dental care team, or dental academic researchers. Importantly, they are also from 140 countries, the aim was to try and engage an international panel for the final stage of the research, so that the final priorities were more representative of Cochrane's global audience. A complete list of Cochrane Oral Health active authors was extracted from Cochrane Oral Health's information system, Archie. The results were exported to an Excel spreadsheet, and the authors were numbered. The "RAND" function was used to generate random numbers, and 40 Cochrane authors were selected. These were then contacted and invited to take part. Consumers were recruited via Cochrane's "Task Exchange" platform. The aim of "Task Exchange" is to "connect people who need help with their Cochrane reviews with people who have the time and expertise to help." Users are able to post a task, and people can volunteer to undertake it. Users are also able to specify what type of person is required to help, in this case, the task was targeted to "Consumers", which in Cochrane terms is anyone who "represents patients, carers and family members with first-hand experience of a healthcare condition." In April 2020, a task was posted by Cochrane Oral Health asking for volunteers to help with the ranking of new and existing priority titles. The task was left on the platform for two weeks. Eleven people responded, of whom seven took part.

The panel members were from Brazil, Canada, Chile, China, Costa Rica, Croatia, France, Germany, Greece, Hungary, India, Israel, Italy, Japan, Malaysia, the Netherlands, New Zealand, the Republic of Ireland, Singapore, South Korea, Turkey, the United Kingdom and the United States of America. Three panel members came from lower or lower middle income countries.

The ranking process was conducted online. A questionnaire was developed using the Lime Survey tool. The only demographic data collected was the name, country and profession of the participant. This was to ensure an international representation, one which covered different dental specialties, and to check who had answered the questionnaire so that reminders could be sent out to those who had not filled in the survey at the halfway stage. The survey was live for eight weeks during the summer of 2020. The data was anonymised at the close of the survey,

and identifying information was removed.

In the questionnaire, the potential new titles or topic areas were listed, and participants were invited to choose a “top ten”, and then rank them one to ten. The results were analysed by taking each respondent’s top ten new titles and assigning a score to each title in the top ten. The most important ranked review title was given a score of ten, and then each subsequently ranked title was given a score of 9,8,7 etc. until the least important in the top ten was given a score of one. The same process was followed for existing titles, but a top fifteen was scored instead, with the highest ranked review title gaining a score of 15 and the lowest ranked gaining a score of one. These scores were then added together. The maximum score a new title could achieve was 400 (forty people ranking it 10th and awarding it ten points each). The maximum score an existing title could achieve was 600 (forty people ranking it 15th and thus awarding it 15 points each). The scores were assigned and added using Excel spreadsheets.

### 3. Results

#### 3.1 New review priorities

The panel members’ top fifteen new review titles were as follows:

<b>New review topic</b>	<b>Score /400</b>
What are the best ways to prevent tooth decay and oral disease in the elderly?	186
How can oral cancer be prevented?	178
What is the best way to promote better oral health?	172
What is the best way to measure the risk of tooth decay?	166
At what stage of tooth decay should a dentist use a drill?	139
How should I brush my teeth? For how long, and how often?	115
What are the best ways to prevent oral diseases in the elderly living in nursing homes or other institutions?	105
By changing parental, or primary care-giver behaviours, can tooth decay in children be prevented?	101
What is the best way to deal with cavities on the tooth root (root caries)?	98
Does a better diet or diet supplements improve oral health? If so what are the best foods/nutrients/supplements?	95
What role does technology play in providing dental care?	93
Can “silver diamine fluoride” (a type of fluoride) prevent tooth decay?	84
Can changing dental health habits or behaviour help people with gum disease?	81
Can antibiotics be used, instead of surgery, to treat chronic gum disease (periodontitis)?	78
Can taking probiotics (live bacteria and yeasts) prevent and control chronic gum disease (periodontitis)?	72

### 3.2 Reviews for updating

The panel members were also asked to rank the existing titles into priority topics that might be updated over the next three or more years. Their top thirty titles to be updated were as follows:

<b>Priority reviews to update</b>	<b>Score /600</b>
Clinical assessment to screen for the detection of oral cavity cancer and potentially malignant disorders in apparently healthy adults	274
Periodontal therapy for the management of cardiovascular disease in patients with chronic periodontitis	265
Recall intervals for oral health in primary care patients	255
Home use of interdental cleaning devices, in addition to toothbrushing, for preventing and controlling periodontal diseases and dental caries	228
Water fluoridation for the prevention of dental caries	204
Oral hygiene care for critically ill patients to prevent ventilator-associated pneumonia	191
Interventions with pregnant women and new mothers for preventing caries in children	188
Surgical removal versus retention for the management of asymptomatic disease-free impacted wisdom teeth	187
Direct composite resin fillings versus amalgam fillings for permanent or adult posterior teeth	186
Primary school-based behavioural interventions for preventing caries	182
Oral hygiene interventions for people with intellectual disabilities	179
Oral health educational interventions for nursing home staff and residents	178
One topical fluoride versus another for preventing dental caries in children and adolescents	175
Screening programmes for the early detection and prevention of oral cancer	169
Enamel matrix derivative (Emdogain®) for periodontal tissue regeneration in intrabony defects (	167
Treating periodontal disease for preventing adverse birth outcomes in pregnant women	167
Antibacterial containing toothpastes for oral health	166
Interventions for the treatment of oral and oropharyngeal cancers: surgical treatment	166
School dental screening programmes for oral health	161
Systemic antibiotics for symptomatic apical periodontitis and acute apical abscess in adults	160
Full-mouth treatment modalities (within 24 hours) for chronic periodontitis in adults	157
Antibiotics for the prophylaxis of bacterial endocarditis in dentistry	153
One-to-one dietary interventions undertaken in a dental setting to change dietary behaviour	152
Root coverage procedures for treating localised and multiple recession-type defects	150
Combinations of topical fluoride (toothpastes, mouthrinses, gels, varnishes) versus single topical fluoride for preventing dental caries in children and adolescents	145
Autologous platelet concentrates for treating periodontal infrabony defects	145
Pit and fissure sealants versus fluoride varnishes for preventing dental decay in the permanent teeth of children and adolescents	141

Sedation of children undergoing dental treatment	135
Fluoride toothpastes of different concentrations for preventing dental caries	134
Topical fluoride (toothpastes, mouthrinses, gels or varnishes) for preventing dental caries in children and adolescents	131

#### 4. Next steps

The results of the ranking of both new topic areas and updates will be presented to the Cochrane Oral Health Editorial Base team, along with comments from the panel members on why they thought their main priorities were particularly important. The team will decide how to proceed with each title.

The results of these meetings will be developed into an implementation plan to make sure our priority reviews are completed.

#### References

James Lind Alliance (2020). *Who should take part*. Available at: <https://www.jla.nihr.ac.uk/jla-guidebook/chapter-8/who-should-take-part.htm>, (Accessed 4 November 2020)