



EPIDEMIOLOGY

## COCHRANE SKIN: DEVELOPING INNOVATIVE METHODOLOGIES FOR SYSTEMATIC REVIEWS

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Background: Cochrane systematic reviews initially focussed on reviews of therapeutic interventions. There is however a need for different types of systematic review, to answer different research questions where individual studies may be unrepresentative or underpowered. Cochrane has now developed methodologies and guidance for several types of non-therapeutic reviews. Here we present a summary of the methodological challenges and novel solutions which have been used in Cochrane Skin systematic reviews over the past 3 years.

### Observations:

A) Network Meta-analysis. Many new pharmacological interventions are compared with placebo or no treatment in clinical trials, whereas clinicians and healthcare providers often need to know their comparative effectiveness. Network meta-analysis allows indirect comparison of effectiveness of therapeutic interventions, and has been used by Cochrane Skin to evaluate systemic treatments for both psoriasis and metastatic cutaneous melanoma.

B) Diagnostic Test Accuracy review. The methodology for studies and evidence synthesis in this area is fast developing. A set of diagnostic test accuracy systematic reviews has identified important clinical findings and research gaps in the field of skin cancer diagnosis, under the supervision of Cochrane Skin.

C) Individual Participant Data Meta-analysis. As clinical trials increasingly publish their datasets in addition to their findings, systematic reviewers will need to utilise this information in order to maximise the value of their work. At Cochrane Skin we are undertaking prospective meta-analysis using individual participant data from ongoing trials evaluating whether skin care interventions applied to infants reduces their risk of developing eczema or food allergy. This review will make full use of complete clinical study datasets.





Key Messages: Cochrane Skin's innovative methodological approaches allow us to address previously unanswered questions.

As the methodologies for different types of primary studies develop, it is important for systematic reviewers to develop parallel skills in appraisal and evidence synthesis of such approaches.

