

Developing innovative methodologies for Cochrane Skin systematic reviews

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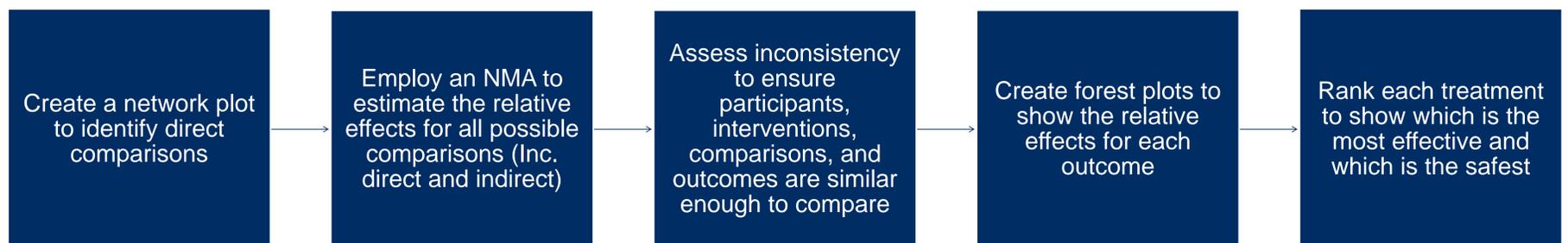
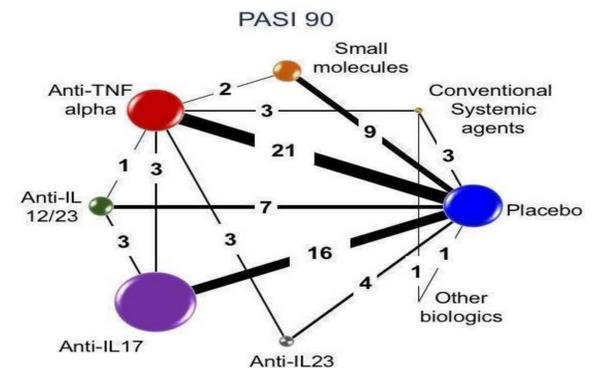
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BACKGROUND

- Cochrane reviews generally assess the effects of therapeutic interventions
- However, Cochrane has now developed new methodologies for several types of non-therapeutic reviews
- Below we present these new methodologies which have been used in Cochrane Skin over the past 3 years

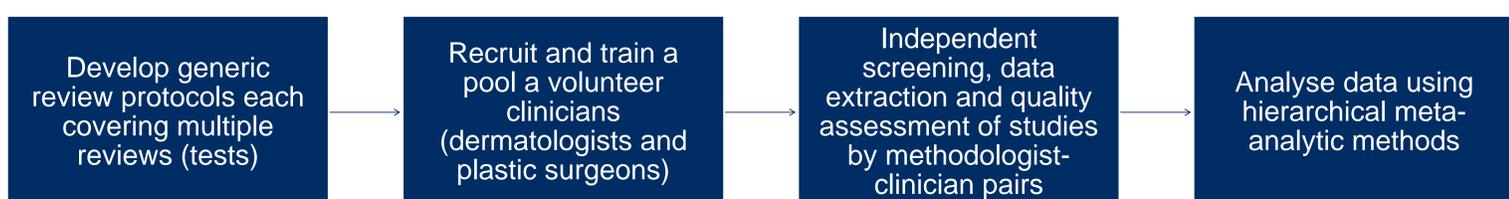
NETWORK META-ANALYSIS (NMA)

- Cochrane reviews usually include meta-analyses comparing one treatment against another
- NMA allows indirect comparisons of treatments which aren't directly compared in trials
- Cochrane Skin have produced two reviews evaluating systemic treatments for both psoriasis and metastatic cutaneous melanoma
- The psoriasis review is currently being converted into a living NMA where the searches are run every month and new studies are added into the analyses



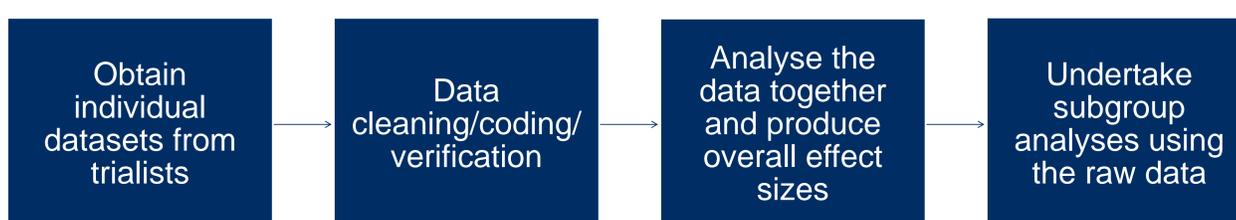
DIAGNOSTIC TEST ACCURACY (DTA) REVIEWS

- DTA reviews compare different ways of diagnosing conditions
- The analyses using sensitivity (ability to correctly identify those with the disease) and specificity (ability to correctly identify those without)
- A set of DTA systematic reviews have identified important clinical findings and research gaps in the field of skin cancer diagnosis, under the supervision of Cochrane Skin



INDIVIDUAL PARTICIPANT DATA (IPD) META-ANALYSIS

- Cochrane reviews usually use aggregate data from individual studies, limiting the analyses which can be conducted; mainly subgroup analysis and the inability to assess the effects of adherence
- Systematic reviewers can utilise the raw datasets provided by trialists to maximize the results
- At Cochrane Skin, we plan to undertake a prospective meta-analysis using individual participant data from trials evaluating whether skin care interventions applied to infants reduces their risk of developing eczema or food allergy
- The protocol will be published shortly and analysis is planned for late 2019



KEY MESSAGES

- Cochrane Skin's new 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