The Cochrane Skin Group - Core Outcome Set Initiative to develop core outcome sets across the whole of dermatology

Jan Kottner
On behalf of the CSG-COUSIN
Background

- Non-comparable outcome measures in clinical trials
- Core Outcome Set is minimum set of outcomes to be assessed and reported in clinical trial
- Outcome domains
- Outcome measurement instruments
What is the CSG-COUSIN?

- Working group within the CSG
- International, multidisciplinary

Aims

- To support the development of high quality COS in dermatology
- To standardize the selection of outcomes and outcome measurement instruments in dermatology clinical trials to make clinical trial evidence comparable
- To strengthen the quality and interpretability of evidence in dermatology through the implementation of COS in clinical trials and systematic reviews
History

- Foundation CSG-COUSIN in 2014
  - Prof. Jochen Schmitt, Dresden
  - Prof. Hywel C. Williams, Nottingham

- Inaugural Meeting at the Annual CSG Meeting in Dresden (March 2015)
  - 29 participants with diverse professional backgrounds and perspectives
  - Introduction CSG-COUSIN
  - Exchange of ideas
  - Development of future plans
Structure

- **Head**
  - Prof. Dr. Jochen Schmitt, MPH

- **Coordination**
  - Centre for Evidence-Based Healthcare at the Medical School of Dresden, Germany

- **Support**
  - Cochrane Skin Group, Nottingham

- **Three teams**
  - International
  - Multidisciplinary
  - Open for everyone
Management-Team

- Coordination of CSG-COUSIN
- Support of Methods Group and Project Teams
- First point of contact, organization of regular meetings
- Provision of resources, e.g. articles, news
- Summary of COS projects in dermatology
- Establishment and maintenance of homepage
- Newsletter
- Creation of visibility and awareness
- Support of publications
Methods Group

- Provides Methodological Support
- Internal peer review for CSG-COUSIN project groups
- Conducts methodological studies on outcomes research and COS development
- Development of methodological standards based on HOME roadmap
- Support of implementation of COS
Project Groups

- Development and implementation of Core Outcome Sets

- Group composition
  - Leader
  - One member of methods group
  - Patient representative
  - Experts
  - Methodologists
  - Clinicians
  - Others
Home

Mission statement

"Our mission is to develop and implement core outcome sets in dermatology in order to improve and standardise outcome measurement in clinical trials and to make trial evidence more useful."

Cochrane Skin Group - Core Outcome Set Initiative (CSG-COUSIN) is a multi-professional international working group within the Cochrane Skin Group. CSG-COUSIN was initiated by Prof. Jochen Schmitt and Prof. Hywel C. Williams and is coordinated by the Center for Evidence-Based Healthcare, University of Dresden, Germany. The CSG-COUSIN inaugural meeting was in March 2015.

Some examples of the high relevance of standardising outcome measurement in clinical trials are: A systematic overview of all 64 CSG reviews (comprising 1566 trials) published until January 2015 showed that from 402 predefined outcomes in the 64 CSG reviews 131 (33%) outcomes were not reported in a single trial included in these reviews. Furthermore very few of the current set of systematic reviews prepared by the Cochrane Skin Group are able to include a meta-analysis, and when it is possible, it is usually only for a few trials. Another example comes from a systematic review on outcomes and measurement instruments in stage IV melanoma trials. In 30 of 42 included randomised controlled and open-label extension trials progression-free survival (PFS) was reported. In seven out of 30 these studies reporting on PFS, a definition was not reported. And based on the remaining 23 trials, a total of 12 different definitions for PFS were extracted by the reviewers.

Currently, approximately 30 clinicians, patient representatives, and researchers are working on several projects within CSG-COUSIN. CSG-COUSIN is a research group that is open for everyone with an interest in outcomes research and evidence-based dermatology and with enthusiasm to develop and implement Core Outcome Sets in dermatology. Please contact us if you want to get involved!
Report from the kick-off meeting of the Cochrane Skin Group Core Outcome Set Initiative (CSG-COUSIN)

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19Department of Dermatology, Venerology, and Allergology, J.W. Goethe-University Hospital, Frankfurt, Germany
20Department of Dermatology, Venerology, and Allergology, J.W. Goethe-University Hospital, Frankfurt, Germany
Concordance between primary and secondary outcomes in Cochrane systematic reviews and underlying clinical trials in dermatology: a meta-epidemiologic study


Citation

Review question(s)
The objectives of this study are:

(1) To systematically assess and critically evaluate the degree of concordance between primary and secondary outcomes in Cochrane Skin Group-reviews and underlying trials, and

(2) To compare treatment outcomes estimated by meta-analysis of trials with primary outcome concordant vs. discordant to the primary outcome of the systematic review.
Meta-epidemiologic study

- MS Access data extraction tool created
- All available data from Cochrane reviews imported
- First training data entry completed
- Based on feedback full data extraction will start in February 2016
- Envisioned goal: data extraction and preliminary results available December 2016
Quick guide for COS developers

Guidance on how to develop a core outcome set for skin disease by the CSG-COUSIN methods group

Summary

The CSG-COUSIN recommends using the Harmonising Outcome Measures for Eczema (HOME) roadmap (Schmitt et al. 2015) to structure the core outcome set (COS) development process (or parts of it). The HOME roadmap provides guidance how to define, select and recommend the most important core outcome domains and how to identify the best measurement instruments for these identified domains. Despite the existence of guidance on how to develop COS (e.g., Boers et al. 2015), many details are unclear (Gargon et al. 2015). For instance, there is no ‘gold’ standard on how to do consensus studies (e.g., which decision rules to use) and how to select/develop core outcome domains and outcome measurement instruments (e.g., Kirwan et al. 2015). This document is intended to provide guidance and essential references in order to ensure that a new COS is developed with an appropriate high quality methodological level. Among others, we strongly recommend developing a protocol a priori for the COS development framework. Inappropriately developed and published COS are potentially worse than no COS if they end up measuring the wrong things in the wrong way. Formal guidelines for outcome measurement selection and for reporting for COS development studies are under development (Kirham et al. 2015, Prinsen et al. 2014) and a handbook by the Core Outcome Measures in Effectiveness Trials (COMET) initiative is expected in 2016. The table that follows outlines some key principles that need to be considered when developing a COS in a stepped fashion.

References


Authors: Kettner, Schmitt, Spuls, Williams, Apfelbacher, Prinsen, Johannson and the CSG-COUSIN Methods Group

Date: 12.01.2016

### Quick guide for COS developers

<table>
<thead>
<tr>
<th>Step</th>
<th>Key questions/tasks</th>
<th>To dos and explanations</th>
</tr>
</thead>
</table>
| Preparation     | • Do we really need a COS?                  | • Look into the literature and into epidemiological data  
• The answer should be “yes” if  
(1) there is a high incidence, prevalence, and/or high impact in terms of quality of life, costs and/or mortality of the disease or condition (burden of disease)  
(2) various non-comparable outcomes are used in clinical research especially in clinical trials and/or systematic reviews/meta-analyses  
(3) if outcomes in clinical research are unlikely to be relevant and meaningful (e.g. for patients or service users)  

• Is there already a COS of interest available and/or under development?  
  • Check the COMET database  
  • Check with the COMET Project Coordinator  
  • Visit the CSG-COUSIN homepage  
  • Consult the CSG-COUSIN coordinator  
  • Search the internet via common search engines  
  • Search electronic databases |
<table>
<thead>
<tr>
<th>Step</th>
<th>Key questions/tasks</th>
<th>To dos and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol</td>
<td>• Write a protocol for the COS development (or for different steps) in accordance with the HOME roadmap</td>
<td>• Specify all steps, tasks, planned people to involve and why</td>
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<td>• Specify the expected results of each work package</td>
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<td>• Register your initiative at COMET and at the CSG-COUSIN homepage</td>
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<td>• Set up the COS development group consisting of at least clinicians and methodologists and patients</td>
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<td>• Does the protocol follows current best practice for COS development?</td>
<td>• Clearly define the health problem, the population and setting</td>
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<td></td>
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<td>• Study the latest methodological recommendations</td>
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<td></td>
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<td>• Include experts in your group</td>
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<td></td>
<td></td>
<td>• Look for (external) feedback for your protocol</td>
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<td></td>
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<td>• Include relevant stakeholders in a meaningful way</td>
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</table>
## Quick guide for COS developers

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<tr>
<th>Step</th>
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</table>
| Outcome domains | • Identify possible outcome domains           | • Outcome domains define “what” to be measured  
• Essential features of the disease/conditions e.g. in terms of mortality, life impact, resource use, pathophysiological manifestations  
• Use and/or do a (systematic) review and make a preliminary selection of outcomes (domains) covering at least the two databases Medline and Embase  
• Develop inductively and iteratively possible outcome domains  
• Look for further input, e.g. from experts, patients (What is important for them?) |
|                 | • Define the core outcome domains             | • Do a consensus study (Delphi or Nominal groups) involving relevant stakeholders (patients, clinicians, clinical researchers) to be followed by a face-to-face group meeting plus voting to define and/or select outcome domains for outcome measurement development  
• Define decision rules a priori  
• Select outcome domains for outcome measurement development  
• Publish the results according to the checklist of Williamson et al. 2012 |
### Quick guide for COS developers

<table>
<thead>
<tr>
<th>Outcome measurements</th>
<th>What instruments exist per domain?</th>
<th>Identify all measurement instruments of the domain of interest using a systematic review covering at least the two databases Medline and Embase to create a list of existing instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What are the psychometric/clinimetric properties of these instruments?</td>
<td>Identify the empirical evidence supporting the validity of the scores or parameters. Consider to use the search algorithms and filters provided by COSMIN. Do a methodological and quality appraisal of the validation studies, by applying quality criteria. COSMIN is one of the best developed framework for doing this. Identify missing validation evidence</td>
</tr>
<tr>
<td></td>
<td>Generate missing validation evidence (if needed)</td>
<td>Plan, conduct, and report the validation studies based on highest methodological standards (e.g. following STARD 2015; GRRAS; COSMIN)</td>
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<td></td>
<td>Evaluate the quality of the instruments</td>
<td>Appraise the validation evidence taking the methodological appraisal of the study quality into account (e.g. using COSMIN). Perform a best evidence synthesis / apply levels of evidence in order to come to a short list of instruments that have the potential to be included in the COS.</td>
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<tr>
<td></td>
<td>Define the core outcome instruments</td>
<td>Do a consensus study (Delphi or Nominal groups) involving the relevant stakeholders (patients, clinicians, clinical researchers) to be followed by a face-to-face group meeting plus voting to select one core outcome instrument per core outcome domain. Define decision rules a priori. Select one core outcome instrument per core outcome domain</td>
</tr>
</tbody>
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# Quick guide for COS developers

<table>
<thead>
<tr>
<th>Dissemination</th>
<th>Make your results available</th>
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<tr>
<td></td>
<td>• Publish your results in leading journals</td>
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<td></td>
<td>• Present at conferences, meetings, symposia</td>
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<td>• Register your results in COMET and at the CSG-COUSIN homepage</td>
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<td>• Make sure that the CSG knows about them so that it can encourage reviewers to adopt them in systematic reviews</td>
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<td>• Share your experience e.g. in the CSG-COUSIN group</td>
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<td></td>
<td>• Use the COS</td>
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<table>
<thead>
<tr>
<th>Does your work make an impact?</th>
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<td>• Monitor the use of the COS (e.g. using citation databases Scopus, Web of Science, clinical trial registries)</td>
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<td></td>
<td>• Does the COS need revision e.g. due to new measurement instruments, new evidence, emerging problems of COS usage</td>
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<td>• Weigh the decision to revise against the need that the COS should not change</td>
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## Current project groups within CSG-COUSIN

<table>
<thead>
<tr>
<th>Acne vulgaris (ACORN)</th>
<th>Atopic Eczema (HOME)</th>
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<tr>
<td>Appearance of Facial Aging (IMPROVED)</td>
<td>Hand Eczema</td>
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<tr>
<td>Hidradenitis suppurativa</td>
<td>Incontinence-associated Dermatitis</td>
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<tr>
<td>Melanoma</td>
<td>Nail psoriasis</td>
</tr>
<tr>
<td>Urticaria</td>
<td>Vascular malformations (OVAMA)</td>
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<tr>
<td>Vitiligo</td>
<td>Wound healing</td>
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Discussion points I

- COS initiatives in many fields, OMERACT handbook since 2015, COMET handbook expected in 2016 → What role does HOME roadmap play?

- Is COS development discipline specific?

- Harmonization of concepts needed, e.g. “domain” in HOME roadmap vs. OMERACT
Discussion points II

I Glossary of terms would be nice to have → How to achieve agreement?

I Can we formalize a need for a COS?

I Additional entries in COMET: scar, melasma, post-inflammatory hyperpigmentation, actinic keratosis, alopecia, … (January 2016) → How do we deal with COS projects not affiliated to CSG-COUSIN?
Get involved

- All teams are open and welcome to interested new members
  - who wants to develop a new Core Outcome Set
  - who wants to be a part of a COS-project team
  - who wants to use a specific COS
  - who are searching for methodical advice
  - who wants to work methodical in the field of COS

Contact
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