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Summary EGS Next Generation Partnership

by Miriam Kolko

As a novel initiative, the EGS invited glaucoma specialists and EGS members to attend the New Generation (NG) partnership meeting at the historical Church House Westminster in London. The meeting was organized by the Cochrane Collaboration and the EGS, and the purpose of the meeting was a systematic course on how to evaluate and interpret study designs, meta-analyses and systematic reviews.

Evidently, the number of published peer-reviewed manuscripts are increasing and the quality varies immensely. Therefore, science needs to be scrutinised fairly to ensure it is robust and of sufficient quality for publication. The Achilles' heel of such a review process is the difficulty of a comprehensive evaluation and the challenge of identifying qualified reviewers. As a result, bad research slips through to publication and its value is somewhat controversial.

The course was opened by President of the EGS, Prof. Anja Tuulonen followed by the first presentation by the local host Prof. David Garway-Heath. Prof. Garway-Heath pointed out possible flaws in study designs and the terms: systematic errors or deviation from the truth in results of inferences. Moreover, the Critical appraisal skills programme (CASP, <http://www.casp-uk.net/casp-tools-checklists>) was introduced as a critical appraisal to interpret published research, i.e. randomized controlled trials, systematic reviews, and case control studies.

The coordinating editor of Cochrane eyes and vision group, Richard Wormald was the next speaker. Prof. Wormald emphasized the need for improved skills to measure effectiveness. In this matter, the comparative effectiveness research initiative (CER, <https://www.hsph.harvard.edu/comparative-effectiveness-research-initiative/>) was introduced. CER is an initiative that identifies what clinical interventions work best for improving health. In addition to a careful review of how to perform a research project according to the CER initiative, a guideline to perform systematic reviews and meta-analyses was outlined. An important recognition is to realize that a systemic review is an enormous amount of work, which should only be performed when the subject is relevant and not yet answered. In order to identify previous published systematic reviews a search in <https://www.crd.york.ac.uk/PROSPERO/> can be performed. If a systematic review is appropriate, the most critical component is the search for studies and the unbiased selection and extraction of data from these. As a guideline for the preparation of a systematic review, the PRISMA check list and flow diagram can be used <http://www.equator-network.org/reporting-guidelines/prisma/>.

Prof. Augusto Azuara-Blanco followed with a presentation on how to interpret poorly designed studies and the risk of overestimating the value of a tested diagnostic tool. The importance of considering bias was emphasized. In this matter, QUADAS-2 was introduced. QUADAS-2 (<http://www.bristol.ac.uk/population-health-sciences/projects/quadas/quadas-2/>) is a tool to evaluate the risk of bias and applicability of primary diagnostic accuracy studies. Prof. Gianni Virgili highlighted the need to evaluate systemic reviews and observational studies carefully. PICO (patients, intervention, comparator, outcome) was introduced as a model to help design proper questions in both the evaluation and in the design of a study. Prof. Jenny Evans outlined the importance of grading evidence for clinical guidelines. As a helpful source, Cochrane Eyes and Vision (<http://eyes.cochrane.org/>) updates the latest systematic Cochrane reviews of

interventions to treat or prevent eye diseases or visual impairment. As the last speaker of the day, Toby Lasserson went through the difficulties in applying evidence from systematic reviews due to the latency of publishing. The program ended with an inspiring and entertaining performance by the author of *Bad Science*, Ben Goldacre.

After a lunch break the afternoon was spent in groups where fruitful evaluations and discussion of chosen reviews and clinical studies were performed. The successful NG partnership day was closed by Prof. Anja Tuulonen and followed by a welcome reception in the beautiful Bishop Partridge Hall.

Finally, the NG partnership meeting was ended by a morning session with NG partners, Profs. Esther Hoffman, Gauti Johannesson and Francesco Oddone, given short presentations on their expectations for the NG partnership SIG. Some of the most prominent goals highlighted included improvement of the relevance and quality of science. In this matter the idea of a think tank to address the important research questions was proposed. Such think tank should be composed of both NG partners, librarians and statistician and hence improve the collaboration between sciences. Other visions and missions of the NG partnership included increased interactions with the national societies, involvement in the development of the next edition of the EGS guidelines 2020. Finally, additional goals for the NG partnership SIG could be to offer courses in leadership, presentation skills, grant writing and media skills. The NP partnership meeting was closed with enthusiasm and energy to pave the way to achieve the proposed goals.