

Systematic Reviews according to the Cochrane Collaboration criteria

S. Panico¹, C. Rispoli², N. Rocco², B. Amato²

¹Department of Clinical and Experimental Medicine and ²Department of General Surgery, Geriatrics, Oncology and Advanced Technologies - University of Naples "Federico II", Naples, Italy

Systematic Reviews (SR) have been performed in natural sciences since long ago. The cumulative scientific information is the basis to improve knowledge and stimulate new ideas. Progress in science are highly dependent on a systematic approach of the known literature; it is the necessary way to rapid developments and large diffusion of scientific knowledge.

In scientific medicine SR are essential with special respect to the transfer of knowledge in applied sciences such as clinical practice.

The Cochrane Collaboration has defined criteria to perform standardized and independent SRs highlighted below.

First, define the clinical problem. Second, perform a library search of all relevant papers (observational and/or experimental) starting from electronic databases, but also taking into account conference proceedings and, if needed, unpublished data.

Third, formulate an evaluation strategy to eliminate sources of bias (information, selection, indication, etc.) classifying the validity of any single study. Fourth, put together scrutinised information in a sy-

stematic way (i.e., meta-analysis), identifying the statistical and clinical significance of the results, with attention to clinicians, researchers and patients.

All the procedure needs the collective and integrated work of a dedicated team, at least including a scientific information retrieval expert, a statistician, two independent methodologists; physicians and patients should be represented.

In order to improve the systematic collection of literature results, with special attention to the procedures standardization, the Cochrane Collaboration provides a specific software (Review Manager), designed to handle data rationally.

In the Cochrane Library the SRs are anticipated by Protocols which describe the on-going work defining also timing, methods, search strategy, and final objectives. The Protocols are open to criticism since they are available in the Library from the beginning.

All the SRs, mostly as meta-analyses, are accessible in the Cochrane Database of Systematic Review of the Cochrane Library.