

**SCIENCE AND EVIDENCE BASED MEDICINE  
– A CRITICAL APPROACH TO EBM**

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In the early nineties of the last century the McMaster University group around David Sackett and Gordon Guyatt defined evidence based medicine as the “integration of individual clinical expertise with the best available external evidence from systematic research”. According to the Centre for Evidence-Based Medicine, “Evidence-based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.” Essentially the method is based on gathering evidence from different levels, starting with the expert opinion on level III and ranging to the meta- analysis of randomised clinical trials on level Ia.

In the medical community EBM is now widely accepted as a good tool to evaluate practical and scientific work in order to provide patients with the best possible methods. But in several countries, at least in Germany, EBM has been turned around and directed against any new methods by the reimbursing authorities. The argument widely used is: if there is no meta-analysis of RCTs then the effectiveness of a certain method is obviously not proven and a reimbursement can be denied without harm to the patients. (this happened e.g. to the VAC but also to analogous insulines and clopidogrel in recent times).

The critical part of the argument is the word prove. Does EBM provide us with proves? Or – is proving something the scientific method at all? A look in the literature and especially a review of the works of the great philosopher Sir Karl Popper will show just the contrary. The method of science is falsification. The difference will be explained.

**Conclusion:** the method of evidence based medicine has provided the medical community with a good tool. It is a method based on “the currently best available” evidence and in this sense leads to the “least bad practice” always being aware that new results may alter the current method. The argument that all methods not supported by Level Ia evidence are unscientific is wrong because science is not concerned with eternally lasting proves but with the method of falsification.