

## EDITORIAL

---

### EVIDENCE-BASED MEDICINE

Mário Cícero Falcão

---

FALCÃO M - Evidence-based Medicine. *Rev. Hosp. Clín. Fac. Med. S. Paulo* 55(4):111-112, 2000.

---

*“Evidence based Medicine argues for the fundamental separability of expertise from expert and of knowledge from knower, and the distillation of medical truth outside the clinical encounter would seem to allow both buyers and sellers in the health care market to act independently and rationally.”*

*Tannenbaum, 1993*

The history of the development of medicine has both triumphs and disasters. The assimilation of ineffective, useless, or harmful therapeutic innovations can be widely demonstrated. Nowadays, ever more powerful therapies are being introduced and disseminated. *Are rigorous scientific standards for assessing their efficacy and effectiveness being met?*

Many questions must be resolved regarding treatment, for example the magnitude of the risk, the economic costs, the consequences, the side effects, and to whom these results may be applicable.

Researchers may sometimes come up with wrong answers because of bias, imprecision, or inaccuracy; even a valid conclusion can not be generalized. Therefore to rigorously evaluate new therapies, physicians need to un-

derstand the methodology of studies very well before utilizing the results.

The comparison of many trials of an intervention, called meta-analysis, seeks to obtain an estimated summary of the effect of each intervention. The opportunity to draw more definitive conclusions from similar studies is welcome, but a valid overview of randomized trials requires predefined inclusion and exclusion criteria, methodological quality analysis, and a correct tabulation of the results.

A meta-analysis should provide increased statistical power, when individual trials are relatively small, and should also be useful in exploring differences between studies. It provides a structure for the incorporation of the new evidence in comparable researches performed in the future.

We must explore the dissonance be-

tween the science of objective measurement and the art of clinical proficiency and judgment, in order to integrate these different perspectives into clinical methods. An evidence-based approach to clinical decision making is correct or incorrect depending on whether the reported clinical observations are objective and, like all scientific measurements, reproducible. Empirical observations could be biased unless they are made scientifically and objectively.

Finally, an evidence-based approach encourages the identification of untested interventions, leading to recognition of target areas for future research.

In summary, the practice of evidence-based medicine should be encouraged to continue; however, we cannot forget the important medical discoveries that were serendipitously made by skilled clinical practitioners.

## REFERENCES

---

GREENHALGH T - Narrative based medicine: narrative based medicine in an evidence based world. **BMJ** 1999; **318**:323-5.

SINCLAIR JC - Assessing evidence concerning treatment and prevention of diseases of the newborn. In: SINCLAIR JC, BRACKEN MB.

**Effective care of the newborn infant.** Oxford, Oxford University Press, 1992, p.3-12.

TANNENBAUN SJ - What physicians know. **N Engl J Med** 1993; **329**:1268-71.