

Resources for the Yes to Life Show interview with Dr Vijayendra Murthy

24th Sept 2015

Rychetnik et al point out "the levels of the hierarchy are about the narrow concept of study design, and not the broader concept of evidence".

Petticrew, M., & Roberts, H. (2003). Evidence, hierarchies, and typologies: horses for courses. *Journal of epidemiology and community health*, 57(7), 527-529.

Efficacy v/s Effectiveness

Efficacy trials (explanatory trials) determine whether an intervention produces the expected result under ideal circumstances. Effectiveness trials (pragmatic trials) measure the degree of beneficial effect under "real world" clinical settings.

Godwin, M., Ruhland, L., Casson, I., MacDonald, S., Delva, D., Birtwhistle, R., ... & Seguin, R. (2003). Pragmatic controlled clinical trials in primary care: the struggle between external and internal validity. *BMC Medical Research Methodology*, 3(1), 28.

Comparative effectiveness has been defined as "the conduct and synthesis of research comparing the benefits and harms of different interventions and strategies to prevent, diagnose, treat and monitor health conditions in 'real world' settings.

Dreyer, N. A., Tunis, S. R., Berger, M., Ollendorf, D., Mattox, P., & Gliklich, R. (2010). Why observational studies should be among the tools used in comparative effectiveness research. *Health Affairs*, 29(10), 1818-1825.

It is perhaps important to consider what Geoffrey Rose said in 1981 in his article in *BMJ* 'Strategy of prevention: lessons from cardiovascular disease'.

"Why is so large a part of our research devoted to the "mechanics of dying", and so little to the scientific, social and economic basis of prevention?

"Why do some individuals have hypertension?" is a quite different question from "why do some populations have much hypertension, whilst in others it is rare?"

Rose, G. (2001). Sick individuals and sick populations. *International journal of epidemiology*, 30(3), 427-432.

"What is obvious can be limited, compared to what really is"

Caraka Samhita, 3rd CBC Ayurvedic classic

"Health is a fundamental human right" (People's Charter for Health, 2001)

Criticism of EBM

Shortage of coherent, consistent scientific evidence.

Clinicians frequently encounter situations in which there is no relevant evidence from either basic or applied research.

'Clinical expertise is paramount in traversing the many grey zones of practice'.

"Even when evidence exists, difficulties arise when it is inconclusive, inconsistent with previous studies, irrelevant to clinical realities or of poor quality".

Miettinen, OS. Evidence in medicine: invited commentary, *CMAJ* 1998;158:20;215-21.

Although systematic reviews can be a solution, inadequate methodology lead to surprising results & recommendations.

Barriers to the practice of high-quality medicine:

The gap between the demand for health care and the resources available to meet that demand is growing and results in clinicians having to care for more patients in less time

Improving communication between doctors and patients. Summary and recommendations of a report of a working party of the Royal College of Physicians. *J R College of Physicians London* 1997; 31; 258-9.

Paucity of evidence that evidence-based medicine "works".

Although agreeing that evidence-based medicine makes good sense in theory, its critics have quite appropriately demanded evidence for whether it improves patient outcomes. No such evidence is available from randomized trials.

Miles A, Bentley P, Polychronis A, Greg J, Evidence-based medicine: why all the fuss? This is why. *J Eval Cli Pract* 1997; 3:83-5.