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Medical Students Can Help Avoid the Expert Bias in Medicine

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ABSTRACT

Background: Applying the principles of Evidence Based Health Care (EBHC) in an academic environment we became aware of important differences between medical students and the users of clinical research. The latter may be clinicians, educators, guideline developers, or industry managers. These users are adapted to the system and have some kind of conflict of interest: they are either biased by patients' demands, by main stream thinking, by medical standards and/or by economic interests. All are under time pressure, want to avoid conflicts with their employer and the analysis of scientific reports may not really be their main focus. Medical students were not exposed to these confounders. **Methods:** Medical students under professional supervision completed critical assessments of more than 100 published studies. Their analyses were limited to identification of mistakes, bias and errors using a check list of potential weaknesses in design and conduct but included the feedback to the academic supervisors. **Results:** Medical students trained in Evidence Based Medicine are capable of identifying problems in clinical trials by the systematic application of an assessment checklist. **Conclusion:** In our approach we demonstrate that students can assist health care professionals and academic teachers with the assessment of clinical evidence. The premise of the approach is that the final appraisals, which involve consideration of clinical, practical and value issues, necessarily reside with the academic teachers, writers of guidelines or industry managers who constitute the active users of research.

KEYWORDS

Evidence Based Health Care; Medical Education; Validity of Scientific Evidence

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References

- [1] Beckett, N. S., Peters, R., Fletcher, A. E. et al. (2008). Treatment of hypertension in patients 80 years of age or older. *Journal of Medicine*, 358, 1887-1898. doi:10.1056/NEJMoa0801369
- [2] CASPb Working Group (2012) Crib sheet for an RTC: 11 questions to help you make sense of a trial. URL (last checked 29 January 2012). <http://medweb4.bham.ac.uk/websites/caspb/cribsheets>
- [3] Coomarasamy, A., & Khan, K. S. (2004). What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. *British Medical Journal*, 329, 1017. doi:10.1136/bmj.329.7473.1017
- [4] Darmoni, S. J., Haugh, M. C., Lukacs, B., & Boissel, J. P. (2001). Quality of health information about depression on internet. Level of evidence should be gold standard. *British Medical Journal*, 322, 1367.
- [5] Dellinger, R. P., Levy, M. M., Carlet, J. M. et al. (2008). Surviving sepsis campaign: International guidelines for management of severe sepsis and septic shock: 2008. *Intensive Care Medicine*, 34, 17-60. doi:10.1007/s00134-007-0934-2

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- [6] Fangerau, H. (2009). Research ethics, publication ethics and the dialectics of scientists trying not to behave badly: A comment on the advantages and limitations of twin assessment of clinical trials (TACT). *Journal of Public Health*, 17, 433-434. doi: 10.1007/s10389-009-0284-3
- [7] Finkel, M. L., Brown, H. A., Gerber, L. M., & Supino, P. G. (2003). Teaching evidence-based medicine to medical students. *Medical teacher*, 25, 202-204. doi: 10.1080/0142159031000092634
- [8] Ford, A. C., Guyatt, G. H., Talley, N. J., & Moayyedi, P. (2010). Errors in the conduct of systematic reviews of pharmacological interventions for irritable bowel syndrome. *American Journal of Gastroenterol*, 105, 280-288. doi: 10.1038/ajg.2009.658
- [9] Forestier, R., Fran?on, A., & Graber-Duvernay, B. (2005). Les paramètres de validité d'un essai thérapeutique et leur influence sur l'élaboration d'une médecine fondée sur les preuves: revue de la littérature. *Annales de Réadaptation et de Médecine Physique*, 48, 250-258. doi: 10.1016/j.annrmp.2005.02.004
- [10] GRADEpro Software Package (2012). URL (last checked 29 January 2012). <http://ims.cochrane.org/revman>.
- [11] Guyatt, G., Cairns, J., Churchill, D. et al. (1992). Evidence-based medicine: A new approach to teaching the practice of medicine. *Journal of the American Medical Association*, 268, 2420-2425. doi: 10.1001/jama.1992.03490170092032
- [12] Guyatt, G., Meade, M., Jaeschke, R., Cook, D., & Haynes R. B. (2000). Practitioners of evidence based care. *British Medical Journal*, 320, 954-955. doi: 10.1136/bmj.320.7240.954
- [13] Guyatt, G. H., Oxman, A. D., Kunz, R., Vist, G. E., Falck-Ytter, Y., & Schunemann, H. J. (2008). What is " quality of evidence" and why is it important to clinicians? *British Medical Journal*, 336, 995-998. doi: 10.1136/bmj.39490.551019.BE
- [14] Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
- [15] Hung, W. W., & Leipzig, R. M. (2008). Antihypertensive therapy with indapamide and perindopril reduced mortality in patients greater than or equal to 80 years. *ACP Journal Club*, 149, 10.
- [16] Ilic, D., & Forbes, K. (2010). Undergraduate medical student perceptions and use of Evidence Based Medicine: A qualitative study. *BMC, Medical Education*, 10, 58. doi: 10.1186/1472-6920-10-58
- [17] Kopp, I., Thole, H. T. L., Selbmann, H., & Ollenschl?ger, G. (2008). Deutsches Instrument zur methodischen Leitlinien-Bewertung (DELBI): Fassung 2005/2006. *ZaeFQ*, 99, 468-519.
- [18] Lamontagne, F., Meade, M. O. (2008). Low-dose hydrocortisone did not improve survival in patients with septic shock but reversed shock earlier. *ACP Journal Club*, 148, 6.
- [19] Letelier, L. M., Zamarin, N., Andrade, M. et al. (2007). Exploring language barriers to Evidence-based Health Care (EBHC) in post-graduate medical students: A randomised trial. *Education Health*, 20, 82.
- [20] Liberati, A., Altman, D., Tetzlaff, J. et al. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *British Medical Journal*, 339, b2700. doi: 10.1136/bmj.b2700.
- [21] Murad, M., Montori, V., Kunz, R. et al. (2009). How to teach evidence-based medicine to teachers: Reflections from a workshop experience. *Journal of Evaluation Clinical Practice*, 15, 1205-1207. doi: 10.1111/j.1365-2753.2009.01344.x
- [22] Norman, G. R., & Shannon, S. I. (1998). Effectiveness of instruction in critical appraisal (evidence-based medicine) skills: A critical appraisal. *Canadian Medical Association Journal*, 158, 177.
- [23] Plint, A. C., Moher, D., Morrison, A. et al. (2006). Does the CONSORT checklist improve the quality of reports of randomised controlled trials? A systematic review. *The Medical Journal of Australia*, 185, 263.
- [24] Porzolt, F., Bonotto, de O., Costa, I. C., & Thomaz, T. G. (2009). Advantages and limitations of Twin Assessment of Clinical Trials (TACT). *Journal of Public Health*, 17, 425-435. doi: 10.1007/s10389-009-0283-4
- [25] Rawlins, M. (2008). De testimonio: On the evidence for decisions about the use of therapeutic interventions. *Clinical Medicine, Journal of the Royal College of Physicians*, 8, 579-588.

- [26] Rosati, P., Ciampalini, P., Grossi, A., Giovannelli, L., Giustini, F., Inglese, R., Fiscarelli, E., Castellano, C., Mazziotta, M. R. M., Gentile, S., Giampaolo, R., & Porzsolt, F. (2009). An alternate evaluation of evidence: Results from a CASP workshop. In P. J. Sharek, D. Bergman, & F. M. Ducharme (Eds.), *Beclomethasone for asthma in children: Effects on linear growth*. Cochrane Database of Systematic Reviews (pp. 21-22). doi:10.1002/14651858.CD001282
- [27] Rosati, P., & Porzsolt, F. (2012). A practical educational tool for teaching child-care hospital professionals attending evidence-based practice courses for continuing medical education to appraise internal validity in systematic reviews. *Journal of Evaluation Clinical Practice*.
- [28] Schünemann, H. J., Fretheim, A., & Oxman, A. D. (2006). Improving the use of research evidence in guideline development: 9 grading evidence and recommendations. *Health Research Policy and Systems*, 4, 21. doi:10.1186/1478-4505-4-21
- [29] Schulz, K., Altman, D., & Moher, D. (2010). CONSORT 2010 statement: Updated guidelines for reporting parallel group randomised trials. *BMC Medicine*, 8, 18. doi:10.1186/1741-7015-8-18
- [30] Sprung, C. L., Annane, D., & Briegel, J. (2007). Corticosteroid therapy of septic shock (CORTICUS). *Abstract American Journal of Respiratory and Critical Care Medicine*, 175, A507.
- [31] Sprung, C. L., Annane, D., Keh, D. et al. (2008). Hydrocortisone therapy for patients with septic shock. *The New England Journal of Medicine*, 358, 111-124. doi:10.1056/NEJMoa071366