

Recommended Readings

Module 1:

1. Textbook: Hackshaw, A. A Concise Guide to Clinical Trials, BMJ Books: Wiley-Blackwell, 2009.
 - Chapters 1, 2, 4, 5, 6, 7 & 10
2. Streptomycin Treatment of Pulmonary Tuberculosis. A Medical Research Council Investigation. Br. Med. J. (1948) October 30; 2(4582): 769–782. PMID: PMC2091872
3. Thorpe K.E., Zwarenstein M., et al. A pragmatic-explanatory continuum indicator summary (PRECIS): a tool to help trial designers. CMAJ. (2009); 180(10):E47-5. PMID: PMC2679824
4. Luce B.R., Kramer J.M., Goodman S.N., et al. Rethinking randomized clinical trials for comparative effectiveness research: the need for transformational change. Ann. Intern. Med. (2009); 151(3):206-9. Epub 2009 Jun 30. PMID: 19567619
5. Schwartz D. and Lellouch J. Explanatory and pragmatic attitudes in therapeutic trials. J. Chron. Dis. (1967); 20:637-48.
6. Kravitz R.L., Duan N., and Braslow J. Evidence-based medicine, heterogeneity of treatment effects, and the trouble with averages. Milbank Q. (2004); 82(4):661-87.
7. Kent D.M. and Hayward R.A. Limitations of applying summary results of clinical trials to individual patients: the need for risk stratification. JAMA. (2007); Sep 12;298(10):1209-12. PubMed PMID: 17848656.
8. Kravitz R.L., Duan N., Niedzinski E.J., Hay M.C., Subramanian S.K., and Weisner T.S. What ever happened to N-of-1 trials? Insiders' perspectives and a look to the future. Milbank Q. (2008); Dec;86(4):533-55. PubMed PMID: 19120979.
9. Prentice R.L. Surrogate and mediating endpoints: current status and future directions. J. Natl. Cancer Inst. (2009); Feb 18;101(4):216-7. Epub 2009 Feb 10. PubMed PMID: 19211455.
10. Ray M.E., Bae K., Hussain M.H., Hanks G.E., Shipley W.U., and Sandler H.M. Potential surrogate endpoints for prostate cancer survival: analysis of a phase III randomized trial. J. Natl. Cancer Inst. (2009); Feb 18;101(4):228-36. Epub 2009 Feb 10. PubMed PMID: 19211454; PubMed Central PMCID: PMC2734115.
11. Zwarenstein M., Treweek S., et al. Improving the reporting of pragmatic trials: an extension of the CONSORT statement. Br. Med. J. (2008); Nov 11;337:a2390 PMID: 19001484

Module 2:

1. Guyatta , G.H., Oxman , A.D., Schünemann, Tugwell P, and Knottnerus, A. H.J.GRADE guidelines: A new series of articles in the Journal of Clinical Epidemiology. J. Clin. Epi. 64 (2011); 380-382.
2. Guyatta , G.H., et al. GRADE guidelines: 1. Introduction - GRADE evidence profiles and summary of findings tables. J. Clin. Epi. 64 (2011); 383-394.
3. Guyatta , G.H., et al. GRADE guidelines: 2. Framing the question and deciding on important outcomes. J. Clin. Epi. 64 (2011); 395-400.
4. Balsham.H., et al. GRADE guidelines: 3. Rating the quality of evidence. J. Clin. Epi. 64 (2011); 401-406.
5. Guyatta , G.H., et al. GRADE guidelines: 4. Rating the quality of evidence – study limitations (risk of bias). J. Clin. Epi. 64 (2011); 407-415.

6. Fenton, J.J, et al. Influence of computer-aided detection on performance of screening mammography. *N. Eng. J. Med.* (2007); 356(14):1399-1409.
7. Li, S.T. and Gates, R.L. Primary Operative Management for Pediatric Empyema: Decreases in Hospital Length of Stay and Charges in a National Sample. *Arch. Pediatr. Adolesc. Med.* (2008); 162(1):44-48.
8. Li, Z., et al. Off-Pump Bypass Surgery and Postoperative Stroke: California Coronary Bypass Outcomes Reporting Program. *Ann. Thorac. Surg.* (2010); 90:753–9.
9. Eklind-Cervenka, M., et al. Association of candesartan vs. losartan with all-cause mortality in patients with heart failure. *JAMA* (2011); 305 (2):175-182.
10. Bowker, S.L., et al. Increased cancer-related mortality for patients with type 2 diabetes who use sulfonylureas or insulin. *Diabetes Care* (2006); 29:254–258.
11. Vandenbroucke, J.P. The HRT controversy: observational studies and RCTs fall in line. Editorial. *Lancet* (2009); 373:1233-5.
12. Benson, K. and Hartz, A.J. A comparison of observational studies and randomized, controlled trials. *N. Eng. J. Med.* (2000); 342(25):1878-1886.
13. Donders, A.R.T., et al. Review: A gentle introduction to imputation of missing values. *J. Clin. Epi.* (2006); 59: 1087-1091.
14. Horton, N.J. and Kleinman, K.P. Much ado about nothing: A comparison of missing data methods and software to fit incomplete data regression models. *Am. Stat.* (2007); 61(1):79–90.
15. Lawlor, D.A., et al. Those confounded vitamins: what can we learn from the differences between observational versus randomised trial evidence? *Lancet* (2004); 363:1724-27.
16. McKinnon, A. The use and reporting of multiple imputation in medical research – a review. *J Intern. Med.* (2010); 268:586–593.
17. van der Heijden, G. Imputation of missing values is superior to complete case analysis and the missing-indicator method in multivariable diagnostic research: A clinical example. *J. Clin. Epi.* (2006); 59:1102-1109.
18. Austin, P.C. The Relative Ability of Different Propensity Score Methods to Balance Measured Covariates Between Treated and Untreated Subjects in Observational Studies. Sage Publications: <http://mdm.sagepub.com/cgi/content/abstract/29/6/661>
19. Brookhart, M.A., et al. Evaluating Short-Term Drug Effects Using a Physician-Specific Prescribing Preference as an Instrumental Variable. *Epidemiology* (2006); 17(3): 268-275.
20. Johansen, K.L. Choice of Dialysis Modality in the United States. Editorial. *Arch. Intern. Med.* (2011); 171(2):107-9.
21. Landrum, M.B. and Ayanian, J.Z. Causal Effect of Ambulatory Specialty Care on Mortality Following Myocardial Infarction: A Comparison of Propensity Score and Instrumental Variable Analyses. *Health Services & Outcomes Research Methodology* (2001); 2:221–245.
22. Mehrotra, R., et al. Similar Outcomes With Hemodialysis and Peritoneal Dialysis in Patients With End-Stage Renal Disease. *Arch. Intern. Med.* (2011); 171(2):110-118.
 - Supplementary online content: Mehrotra R., Chiu Y-W., Kalantar-Zadeh K., Bargman J., Vonesh E. Similar Outcomes With Hemodialysis and Peritoneal Dialysis in Patients With End-Stage Renal Disease. *Arch. Intern. Med.* Published online September 27, 2010. doi:10:1001/archinternmed.2010.352.
23. Rassen, J.A., et al. Instrumental variable analysis for estimation of treatment effects with dichotomous outcomes. *Am. J. Epidemiol.* (2009); 169:273–284.
24. Rassen, J.A., et al. Instrumental variables I: Instrumental variables exploit natural variation in nonexperimental data to estimate causal relationships. *J. Clin. Epid.* (2009); 62:1226-1232.

Module 3:

1. Textbook: Cooper H. Research Synthesis and Meta-Analysis: A Step by Step Approach, Applied Social Research Methods Series, Vol. 2, Sage Publications, Inc., 4th Edition, 2010.
 - Chapters 1 (starting on p. 11), 2, 3, 4, 5 (pp. 145-156, 183-196), and 6 (pp.197-201)
2. Textbook: Khan K.S., Kunz R., Kleijnen J., et al. Systematic Reviews to Support Evidence-based Medicine: How to review and apply findings of healthcare research. London: Royal Society of Medicine Press, 2nd Edition, 2003.
 - Steps 1, 2, 3, 4, and 5
3. Textbook: Petitti D. Meta-Analysis, Decision Analysis, and Cost-Effectiveness Analysis: Methods for Quantitative Synthesis in Medicine, Vol. 31, Oxford University Press, 2nd Edition, 1999.
4. Moher D. et al. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Ann. Intern. Med.* (2009); 151:264-269.
5. Chan B.K., Melnikow J., et al. Post-treatment human papillomavirus testing for recurrent cervical intraepithelial neoplasia: a systematic review. *Am. J. Obstet. Gynecol.* (2009); 200(4):422.
6. Sare G.M., Gray L.J., and Bath P.M.W. Association between hormone replacement therapy and subsequent arterial and venous vascular events: a meta-analysis. *European Heart Journal* (2008); 29:2031–2041; doi:10.1093/eurheartj/ehn299.
7. Fancher T.L., White R.H., and Kravitz R.L. Combined use of rapid D-dimer testing and estimation of clinical probability in the diagnosis of deep vein thrombosis: systematic review. *Bri. Med. J.* (2004); 329(7470):821. Epub 2004 Sep 2.
8. Li S.T., Grossman D.C., and Cummings P. Loperamide therapy for acute diarrhea in children: systematic review and meta-analysis. *PLoS Med.* (2007); 4(3):e98.
9. Wieseler B. and McGauran N. Reporting a Systematic Review. *Chest* (2010); 137(5):1240-1246.

Module 4:

1. Text: Drummond M., et al. Methods for the Economic Evaluation of Health Care Programmes. Oxford University Press, 3rd Edition, 2005.
 - Chapters 2, 3, 4, 5, 6 and 10
2. Meltzer M. Introduction to Health Economics for Physicians. *Lancet* (2001); 358:993-98.
3. Anderson G.F., et al. It's the prices, stupid: Why the US is so different from other countries. *Health Affairs* (2003); 22(3):89-105.
4. Segel J.E. Cost-of-Illness Studies—A Primer. January 2006 http://www.rti.org/pubs/coi_primer.pdf
5. Barbash G.I. and Glied S.A. New technology and health care costs – the case of robot-assisted surgery. *NEJM* (2010); 363:701-4.
6. Hiligsmann M, et al. Development and validation of a Markov microsimulation model for the economic evaluation of treatments in osteoporosis. *Value in Health* (2009); 12:687-96.
7. Taylor M. What is sensitivity analysis? *Hayward Medical Communication* (2009):1-7.
8. Garza A.G. and Wyrich K.W. Health utility measures and the standard gamble. *Acad. Emerg. Med.* (2003); 10:360-63.

9. Birch S. and Gafni A. Information Created to Evade Reality (ICER): Things we should not look to for answers. *Pharmacoeconomics* (2006); 24:1121-1131.
10. White C. The healthcare reform legislation: An overview. *The Economists Voice* (Dec. 2010)
<http://www.bepress.com/cgi/viewcontent.cgi?article=1815&context=ev>
11. Cutler D. The simple economics of health reform. *The Economists Voice* (Dec 2010)
<http://www.bepress.com/cgi/viewcontent.cgi?article=1816&context=ev>