

Some Bayesian References

- Malakoff D. Bayes offers a 'new' way to make sense of numbers. *Science*. 1999 Nov 19;286(5444):1460-4. (Review from *Science Magazine* about the rise of Bayesian analysis in *Science*.)
- Dunson DB. Practical advantages of Bayesian analysis of epidemiologic data. *American Journal of Epidemiology* 2001 Jun 15;153(12):1222-6.
- Goodman SN. Of P-values and Bayes: A modest proposal. *Epidemiology*. 2001 May;12(3):295-7.
- Gelman A, Carlin J, Stern H, and Rubin D, *Bayesian Data Analysis*, 1995, Chapman and Hall. (Excellent general book on practical Bayesian analysis. Good introduction to hierarchical models.)
- Kmetz A, Joseph L, Berger C, Tenenhouse A. Multiple imputation to account for missing data in a survey: estimating the prevalence of osteoporosis. *Epidemiology*. 2002;13(4):437-44. (Introductory article on how to handle missing data from a Bayesian viewpoint. Based on PhD thesis of McGill student Andrew Kmetz.)
- Schafer JL, Graham JW. Missing data: our view of the state of the art. *Psychol Methods*. 2002 Jun;7(2):147-77. (Another longer article on Bayesian methods for missing data.)
- Austin PC, Brunner LJ, Hux JE. Bayeswatch: an overview of Bayesian statistics. *J Eval Clin Pract*. 2002 May;8(2):277-86. (Better than the similarly titled TV show.)
- Berry D, Stangl D. *Bayesian Biostatistics*, 1996, Marcel Dekker. (Book specific to Bayesian methods for medical sciences with many practical examples).
- Spiegelhalter, L. Freedman and M. Parmar. (1995). Bayesian approaches to randomized trials. *Journal of the Royal Statistical Society, Series A* 157:387-416. (Landmark paper on clinical trials from a Bayesian viewpoint.)
- P. Fayers, D. Ashby, and M. Parmar, Tutorial in Biostatistics: Bayesian Data Monitoring in Clinical Trials, (1997), *Statistics in Medicine* 16, 1413-30. (Similar to the above, but more introductory.)
- A. Raftery. Bayesian model selection in social research. *Sociological Methodology*, 1995, 111-196. [Despite the title, it is a good paper for epidemiologists also, covering model selection in regression].

- Joseph L, Gyorkos T, Coupal L. Bayesian estimation of disease prevalence and the parameters of diagnostic tests in the absence of a gold standard. *American Journal of Epidemiology* 1995;141(3):263-272. (Diagnostic tests analysed from a Bayesian viewpoint.)
- Chaloner K. Elicitation of prior distributions. In *Bayesian Biostatistics*, edited by D. Berry and D. Stangl, 1996, Dekker, 141-156 (book chapter on how to elicit prior distributions).
- Eddy, DM, Hasselblad, V, and Shachter, R. *Meta-Analysis by the Confidence Profile Method*, Academic Press, Boston, 1991. (Meta-analysis from a Bayesian viewpoint, written for clinicians.)
- Joseph L, du Berger R, and Bélisle P. Bayesian and mixed Bayesian/likelihood criteria for sample size determination. *Statistics in Medicine*, 1997;16(7):769-781. (What to do instead of power calculations?)
- D. Ashby, J. Hutton M. McGee. Simple Bayesian analyses for case-control studies in cancer epidemiology. *The Statistician* 1993;42:385-397. (Exactly as the title says.)

Many of these articles and book chapters will be covered in the course “Bayesian Analysis in Medicine” EPID 651.