**Model Calibration in R**

Pre-workshop Readings

* Vanni, T., Karnon, J., Madan, J., White, R. G., Edmunds, W. J., Foss, A. M., & Legood, R. (2011). Calibrating Models in Economic Evaluation: A Seven-Step Approach. PharmacoEconomics, 29(1), 35–49. <https://link.springer.com/article/10.2165%2F11584600-000000000-00000>
* \*Menzies, N. A., Soeteman, D. I., Pandya, A., & Kim, J. J. (2017). Bayesian Methods for Calibrating Health Policy Models: A Tutorial. PharmacoEconomics, 35(6), 613–624. <https://www.ncbi.nlm.nih.gov/pubmed/28247184>
* \*Alarid-Escudero F, MacLehose RF, Peralta Y, Kuntz KM, Enns EA. Nonidentifiability in Model Calibration and Implications for Medical Decision Making. (2018) Med Decis Mak, 24;38(7):810–21. <https://pubmed.ncbi.nlm.nih.gov/30248276/>

*\*Open Access through PubMed Central*

Other Relevant Readings (optional)

* Stout, N. K., Knudsen, A. B., Kong, C. Y., McMahon, P. M., & Gazelle, G. S. (2009). Calibration Methods Used in Cancer Simulation Models and Suggested Reporting Guidelines. PharmacoEconomics, 27(7), 533–545. <https://www.ncbi.nlm.nih.gov/pubmed/19663525>
* Taylor DCA, Pawar V, Kruzikas D, et al. Methods of Model Calibration. Observations from a Mathematical Model of Cervical Cancer. Pharmacoeconomics. 2010;28(11):995–1000. <https://pubmed.ncbi.nlm.nih.gov/20936883/>
* Karnon, J., & Vanni, T. (2011). Calibrating Models in Economic Evaluation: A Comparison of Alternative Measures of Goodness of Fit, Parameter Search Strategies and Convergence Criteria. PharmacoEconomics, 29(1), 51–62. <https://link.springer.com/article/10.2165%2F11584610-000000000-00000>
* Enns, E. A., Kao, S. Y., Kozhimannil, K. B., Kahn, J., Farris, J., & Kulasingam, S. L. (2017). Using Multiple Outcomes of Sexual Behavior to Provide Insights into Chlamydia Transmission and the Effectiveness of Prevention Interventions in Adolescents. Sexually Transmitted Diseases, 44(10), 1–8. <https://pubmed.ncbi.nlm.nih.gov/28876313/>
* Alarid-Escudero F, Knudsen AB, Ozik J, Collier N, Kuntz KM. Characterization and Valuation of the Uncertainty of Calibrated Parameters in Microsimulation Decision Models (2022). Front Physiol. May 9;13(May):1–12. <https://www.frontiersin.org/articles/10.3389/fphys.2022.780917/full> (Open access)
* Alarid-Escudero F, Gulati R, Rutter CM. Validation of Microsimulation Models Used for Population Health Policy. In: Apostolopoulos Y, Lich KH, Lemke MK, editors. Complex Systems and Population Health: A Primer [Internet]. Oxford University Press; 2020. p. 227–40. Available from: [10.1093/oso/9780190880743.003.0016](https://doi.org/10.1093/oso/9780190880743.003.0016)