Data Analysis Project

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Introduction

$$y_{ij}|\pi_{ij} \sim Binomial(n_{ij}, \pi_{ij})$$

$$logit\pi_{ij} = \begin{cases} \mu_i - \delta_i/2 & \text{if } j = 0 \\ \mu_i + \delta_i/2 & \text{if } j = 1 \end{cases}$$

$$\mu_i|\mu_0, \sigma^2 \sim N(\mu_0, \sigma^2)$$

$$\delta_i|\delta_0, \tau^2 \sim N(\delta_0, \tau^2)$$

Setting priors

Results

Posterior distributions of δ_i show that there is a considerable variation in the difference between the two treatments, PCI being the best method in some studies, and CABG in others (Fig.1).

Appendix

Figures

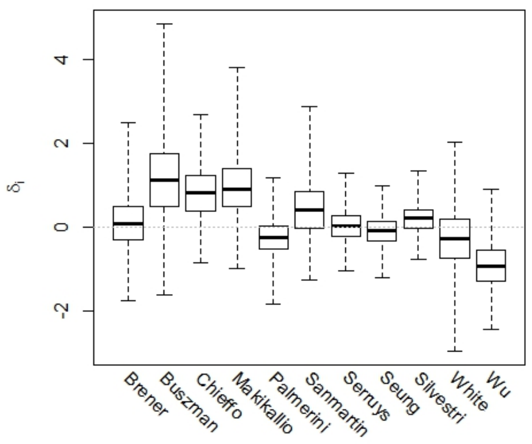

Figure 1: Posterior distributions of δ_i.

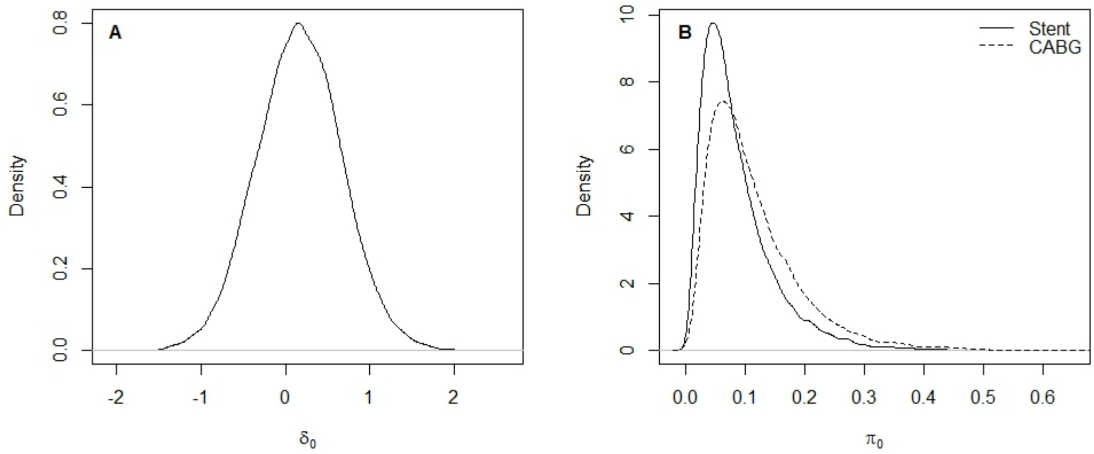

Figure 2: Posterior distributions of δ_0 (A) and π_0 for both treatment types (B).

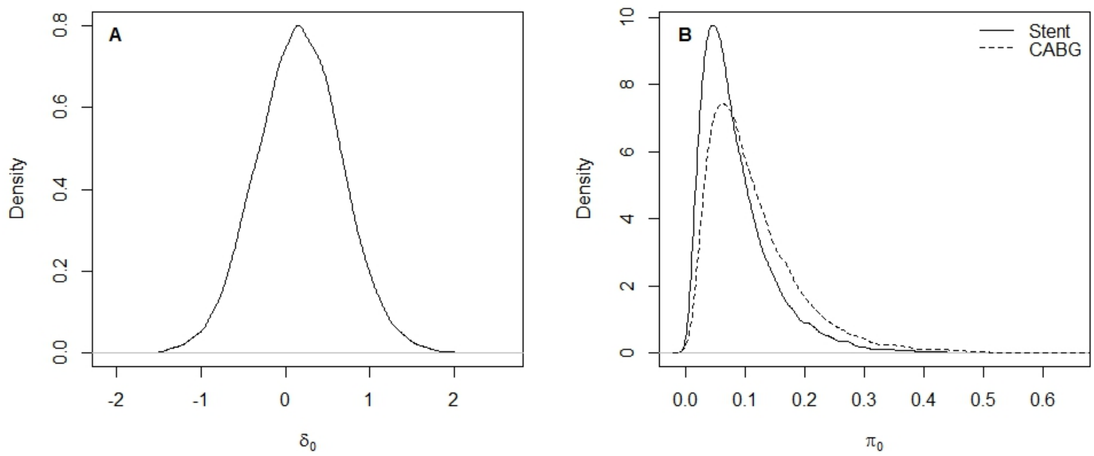

Figure 3: Posterior distribution of δ_0 as a function of wiggling one of the four parameters set for the priors: δ_0, σ^2, μ_0, and τ^2.

Tables

JAGS model