The Cost Effectiveness of Pharmacological Treatments for Generalized Anxiety Disorder

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Electronic Supplementary Material 1
Winbugs code used to estimate the probability of discontinuation due to intolerable side effects and the probability of conditional response at 8 weeks of all treatment options for GAD considered in the economic analysis

```winnen
model{
  sw[1] <- 0
  for(i in 1:NA){
    r[i] ~ dbin(p[i],n[i])  #binomial likelihood
    theta[i]<-mu[s][i]+ delta[i]*(1-equals(t[i],b[i]))  #baseline and treatment effects
    delta[i] ~ dnorm(md[i],taud[i])  #trial-specific log-hazard distributions
    taud[i] <- tau * (1 + equals(m[i],3) /3)  #precisions of log-hazard distributions
    md[i] <- d[t[i]] - d[b[i]] + equals(m[i],3) * sw[i]  #mean of random effect
    p[i] <- (1-exp(-lam[i]*ds[i]/56))  #prob of event (ds=days; 56 days = 8 wks)
    log(lam[i]) <- theta[i]  #log rates for each arm
    rhat[i] <- p[i] * n[i]  #predicted events
    dev[i] <- -2 *r[i]*log(rhat[i]/r[i])  #deviance residuals for data i
  }
  resdev <-sum(dev[])  #total deviance
  for (i in 2:NA) { sw[i] <- (delta[i-1] - d[t[i-1]] + d[b[i-1]]) /2} #adjustment for 3 arm trials

  #priors
  for(j in 1:NS){ mu[j]~dnorm(0,.0001)}  #vague priors for trial baselines
  tau <- 1/(sd*sd)  #precision
  sd~dunif(0,2)  #vague prior for random effects standard deviation
  d[1]<-0
  for (k in 2:NT){d[k] ~ dnorm(0,.0001)  #vague priors for basic parameters
    log(hazr[k]) <-d[k]  #hazard ratios
  }

  #code for absolute effect on baseline (placebo, treatment 1)
  for (i in 1:NSb) {
    rb[i] ~ dbin(pb[i],nb[i])  #binomial likelihood
    pb[i] <- (1-exp(-lamb[i]*dsb[i]/56))  #prob of event (dsb=days; 56 days = 8 weeks)
    log(lamb[i]) <- mub[sb[i]]  # log rate
  }
  for (j in 1:NSb) {mub[j] ~ dnorm(mb,tab)}  # priors for outcome and trial-specific events
  mb ~ dnorm(0,.001)
  tab <- 1/(sdb*sdb)
  sdb ~ dunif(0,2)

  #code for predicted effect at 56 days, on a probability scale. Baseline risks in new placebo trial Z
  d.new[1] <-0
  for(k in 2:NT)
    {d.new[k] ~ dnorm(d[k],tau)}
  for (k in 1:NT)
    {theta56[k] <-mub[Z] +d.new[k]
  }
}
```
\[
\log(\text{lamb}[k]) < - \theta_{56}[k]
\]
\[
p_{56}[k] < - (1 - \exp(-\text{lamb}[k]))
\]

NA = number of arms; NT = number of treatments; NS = number of studies