```
model{
for(i in 1:ns){
w[i,1] <- 0 # adjustment for multi-arm trials is zero
#for control arm
delta[i,1] <- 0 # treatment effect is zero for control
#arm
mu[i] ~ dnorm(0,.0001) # vague priors for all trial baselines
for (k in 1:na[i]) {
r[i,k] ~ dbin(p[i,k],n[i,k]) # binomial likelihood
logit(p[i,k]) <- mu[i] + delta[i,k] # model for linear predictor
rhat[i,k] <- p[i,k] * n[i,k] # expected value of the numerators
#Deviance contribution
p0[i,k]<-0.5+.999999*(p[i,k]-0.5)
r0[i,k]<-r[i,k]+0.01*equals(r[i,k],0) -0.01*equals(r[i,k],n[i,k])
r.hat[i,k]<- p0[i,k]*n[i,k] # expected value of the numerators
#Deviance calculation for binomial data with adjustments
dev[i,k]<- 2*(r0[i,k]*log(r0[i,k]/r.hat[i,k]) + (n[i,k] - r0[i,k])*log((n[i,k] - r0[i,k])/(n[i,k] - r.hat
[i,k])))
}
#Summed residual deviance contribution for this trial
resdev[i] <- sum(dev[i,1:na[i]])
for (k in 2:na[i]) {
delta[i,k] ~ dnorm(md[i,k],taud[i,k]) # trial-specific LOR distributions
md[i,k] <- d[t[i,k]] - d[t[i,1]] + sw[i,k] # mean of LOR distributions (with multi-
arm trial correction)
taud[i,k] <- tau *2*(k-1)/k # precision of LOR distributions (with
multi-arm trial correction)
w[i,k] <- (delta[i,k] - d[t[i,k]] + d[t[i,1]]) # adjustment for multi-arm RCTs
sw[i,k] <- sum(w[i,1:k-1])/(k-1) # cumulative adjustment for multi-arm
trials
} }
totresdev <- sum(resdev[]) # Total Residual Deviance
d[1]<-0 # treatment effect is zero for reference
treatment
# vague priors for treatment effects
for (k in 2:nt){ d[k] ~ dnorm(0,.0001) }
sd ~ dunif(0,5) # vague prior for between-trial SD
tau <- pow(sd,-2) # between-trial precision = (1/between-trial variance)
# pairwise ORs and LORs for all possible pair-wise comparisons
```