setwd("/Users/mballard/Desktop/Chapter\_4") Comparison 1

data <- read.csv("1.1 HIV Mortality.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote  
## = quote, : incomplete final line found by readTableHeader on '1.1 HIV  
## Mortality.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos cont\_neg  
## 1 Chang 2010 CRCT 970 366 90 880 31 335  
## 2 Jaffar 2009 CRCT 859 594 93 766 66 528  
## time ICC Iclust Cclust AvClust\_size Des\_eff n.int.ad n.cont.ad ipos.ad  
## 1 24 0.02 10 10 67 2.31600 418.8256 158.0311 38.8601  
## 2 12 0.02 22 22 33 1.64045 523.6354 362.0948 56.6916  
## ineg.ad cpos.ad cneg.ad  
## 1 379.9655 13.38515 144.6459  
## 2 466.9438 40.23275 321.8620

library("meta") #load package

## Loading 'meta' package (version 4.3-0).

result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.0173 [0.803; 1.2888] 0.142 0.8871  
## Random effects model 1.0173 [0.803; 1.2888] 0.142 0.8871  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1; I^2 = 0%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.22 1 0.6399  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "1.1 HIV\_Mort\_unadj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.0083 [0.7316; 1.3896] 0.0504 0.9598  
## Random effects model 1.0083 [0.7316; 1.3896] 0.0504 0.9598  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1; I^2 = 0%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.11 1 0.7449  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "1.1 HIV\_Mort\_adj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("1.2 HIV LTFU.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote  
## = quote, : incomplete final line found by readTableHeader on '1.2 HIV  
## LTFU.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos cont\_neg  
## 1 Chang 2010 CRCT 970 366 21 949 15 351  
## 2 Jaffar 2009 CRCT 859 594 20 839 14 580  
## 3 Selke 2010 CRCT 96 112 5 91 5 107  
## time ICC Iclust Cclust AvClust\_size Des\_eff n.int.ad n.cont.ad  
## 1 26 0.02 10 10 67 2.31600 418.82556 158.03109  
## 2 12 0.02 22 22 33 1.64045 523.63536 362.09476  
## 3 12 0.02 12 12 9 1.15333 83.23699 97.10983  
## ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 9.06736 409.75820 6.47668 151.55440  
## 2 12.19174 511.44361 8.53422 353.56054  
## 3 4.33526 78.90173 4.33526 92.77457

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7617 [0.492; 1.1793] -1.2204 0.2223  
## Random effects model 0.7617 [0.492; 1.1793] -1.2204 0.2223  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1.06 [1; 3.3]; I^2 = 11.5% [0%; 90.8%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 2.26 2 0.3231  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "1.2 HIV\_LTFU\_unadj.png",width = 10, height = 3.5, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.8231 [0.4597; 1.4736] -0.6552 0.5123  
## Random effects model 0.8231 [0.4597; 1.4736] -0.6552 0.5123  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 2.42]; I^2 = 0% [0%; 82.9%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 1.22 2 0.5442  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "1.2 HIV\_LTFU\_adj.png",width = 10, height = 3.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

Comparison 2

data <- read.csv("2.1 Under-5 mortality.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '2.1 Under-5  
## mortality.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos cont\_neg  
## 1 Kidane 2000 CRCT 6383 7294 190 6193 366 6928  
## 2 Mtango 1986 CRCT 8028 8098 260 7768 325 7773  
## 3 Pence 2007 CRCT 8218 18457 490 7728 1102 17355  
## time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad n.int.ad  
## 1 12 0.02 12 12 570 12.3775 589.29509 515.69380  
## 2 12 0.02 1 1 8063 162.2400 49.91371 49.48225  
## 3 60 0.02 1 1 13338 267.7300 68.93886 30.69510  
## ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 15.35043 500.34336 29.56978 559.72531  
## 2 1.60256 47.87968 2.00321 47.91050  
## 3 1.83020 28.86490 4.11609 64.82277

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.8549 [0.7911; 0.9237] -3.9685 < 0.0001  
## Random effects model 0.7867 [0.5848; 1.0583] -1.5855 0.1129  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0631; H = 3.64 [2.31; 5.75]; I^2 = 92.5% [81.2%; 97%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 26.55 2 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "2.1 Under\_5\_unadj.png",width = 10, height = 3.5, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.6409 [0.3702; 1.1093] -1.5894 0.112  
## Random effects model 0.6409 [0.3702; 1.1093] -1.5894 0.112  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 1.35]; I^2 = 0% [0%; 44.8%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.38 2 0.8283  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "2.1 Under\_5\_adj.png",width = 10, height = 3.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("2.3 Infant Mortality.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '2.3 Infant  
## Mortality.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos cont\_neg  
## 1 Lewycka 2013 CRCT 3891 1403 111 3780 60 1343  
## 2 Sloan 2008 CRCT 2121 2044 41 2080 41 2003  
## time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad n.int.ad ipos.ad  
## 1 36 0.02 36 12 110 3.18583 440.3871 1221.344 34.84175  
## 2 12 0.02 21 21 99 2.96333 689.7638 715.748 13.83577  
## ineg.ad cpos.ad cneg.ad  
## 1 1186.5028 18.83338 421.5537  
## 2 701.9123 13.83577 675.9280

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7561 [0.5888; 0.9710] -2.1903 0.0285  
## Random effects model 0.7770 [0.5447; 1.1084] -1.3923 0.1638  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0314; H = 1.37; I^2 = 46.4%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 1.87 1 0.1719  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "2.3 Inf\_Mort\_unadj.png",width = 9, height = 3, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7607 [0.4895; 1.1822] -1.2158 0.2241  
## Random effects model 0.7607 [0.4895; 1.1822] -1.2158 0.2241  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1; I^2 = 0%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.61 1 0.4333  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "2.3 Inf\_Mort\_adj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

Comparison 3

data <- read.csv("3.1 Stillbirths.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 6625 7249 198 6427 252  
## 2 Colbourn 2013 CRCT 10329 10247 274 10055 316  
## 3 Fottrell 2013 CRCT 9106 10204 287 308 1323  
## 4 Kumar 2008 CRCT 2681 1129 107 2574 64  
## 5 Manandhar 2004 CRCT 2972 3303 73 2899 77  
## 6 More 2012 CRCT 9155 9042 73 9082 85  
## 7 Sloan 2008 CRCT 2196 2129 75 2054 85  
## 8 Tomlinson 2014 CRCT 1798 2119 34 1764 47  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 6997 36 0.02 9 9 771 16.39556 442.1320  
## 2 9931 24 0.02 29 32 337 7.72623 1326.2614  
## 3 8881 24 0.02 9 9 1073 22.43556 454.8138  
## 4 1065 16 0.02 26 13 98 2.93385 384.8191  
## 5 3226 24 0.02 12 12 261 6.20917 531.9554  
## 6 8957 36 0.02 24 24 379 8.56208 1056.0514  
## 7 2044 12 0.02 21 21 103 3.03952 700.4387  
## 8 2072 3 0.02 15 15 131 3.59133 590.0316  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 404.0729 12.07644 391.99648 15.37002 426.7620  
## 2 1336.8746 35.46361 1301.41099 40.89964 1285.3618  
## 3 405.8736 12.79219 13.72821 58.96890 395.8449  
## 4 913.8175 36.47090 877.34662 21.81437 363.0047  
## 5 478.6472 11.75681 466.89035 12.40102 519.5544  
## 6 1069.2491 8.52596 1060.72315 9.92749 1046.1239  
## 7 722.4816 24.67492 675.76375 27.96491 672.4738  
## 8 500.6497 9.46724 491.18248 13.08706 576.9445

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=8  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.5467 [0.5076; 0.5889] -15.9203 < 0.0001  
## Random effects model 0.7230 [0.5213; 1.0029] -1.9429 0.052   
##   
## Quantifying heterogeneity:  
## tau^2 = 0.2027; H = 6.05 [5.03; 7.29]; I^2 = 97.3% [96%; 98.1%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 256.55 7 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.1 Still\_unadj.png",width = 10, height = 4.3, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=8  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7095 [0.5714; 0.881] -3.1072 0.0019  
## Random effects model 0.7141 [0.5150; 0.990] -2.0200 0.0434  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1123; H = 1.49 [1; 2.21]; I^2 = 54.7% [0%; 79.5%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 15.45 7 0.0307  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.1 Still\_adj.png",width = 10, height = 4.3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.2 Neonatal mortality.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 5400 5233 216 5184 227  
## 2 Baqui 2008 CRCT 10282 4957 386 9896 214  
## 3 Colbourn 2013 CRCT 10055 9931 286 9769 308  
## 4 Darmstadt 2010 CRCT 4616 5241 111 4505 146  
## 5 Fottrell 2013 CRCT 8819 9896 187 8632 313  
## 6 Kirkwood 2013 CRCT 7721 7898 230 7491 252  
## 7 Kumar 2008 CRCT 2609 1079 112 2497 91  
## 8 Lewycka 2013 CRCT 4738 4960 96 4642 147  
## 9 Manandhar 2004 CRCT 2899 3226 76 2823 119  
## 10 More 2012 CRCT 7944 7759 132 7812 88  
## 11 Sloan 2008 CRCT 2121 2044 97 2024 88  
## 12 Tomlinson 2014 CRCT 1821 2136 20 1801 22  
## 13 Tripathy 2010 CRCT 3110 2985 113 2997 192  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 5006 36 0.01200 9 9 591 8.07667 647.9158  
## 2 4743 36 0.01200 16 8 635 8.60750 575.8931  
## 3 9623 24 0.01200 29 32 328 4.91967 2018.6305  
## 4 5095 28 0.01200 6 6 821 10.84500 483.2642  
## 5 9583 24 0.01200 9 9 1040 13.46467 734.9606  
## 6 7646 12 0.01200 49 49 159 2.90053 2722.9501  
## 7 988 16 0.01200 26 13 95 2.12277 508.2983  
## 8 4813 36 0.00376 36 12 202 1.75592 2824.7354  
## 9 3107 24 0.00644 12 12 255 2.63710 1223.3127  
## 10 7671 36 0.01200 24 24 327 4.91375 1579.0384  
## 11 1956 12 0.01200 21 21 99 2.17800 938.4757  
## 12 2114 3 0.01200 15 15 132 2.57080 830.8698  
## 13 2793 36 0.01200 18 18 169 3.01967 988.5197  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 668.5927 26.74371 641.8489 28.10565 619.8102  
## 2 1194.5396 44.84461 1149.6950 24.86204 551.0311  
## 3 2043.8354 58.13396 1985.7014 62.60580 1956.0247  
## 4 425.6339 10.23513 415.3988 13.46243 469.8018  
## 5 654.9735 13.88820 641.0853 23.24603 711.7146  
## 6 2661.9267 79.29584 2582.6309 86.88066 2636.0694  
## 7 1229.0549 52.76127 1176.2937 42.86853 465.4298  
## 8 2698.3057 54.67230 2643.6334 83.71696 2741.0185  
## 9 1099.3130 28.81952 1070.4934 45.12530 1178.1874  
## 10 1616.6879 26.86339 1589.8245 17.90893 1561.1295  
## 11 973.8292 44.53627 929.2929 40.40404 898.0716  
## 12 708.3398 7.77968 700.5601 8.55765 822.3121  
## 13 1029.9150 37.42135 992.4937 63.58318 924.9365

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=13  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.8274 [0.7792; 0.8785] -6.1952 < 0.0001  
## Random effects model 0.8245 [0.7080; 0.9602] -2.4827 0.013   
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0622; H = 2.21 [1.71; 2.86]; I^2 = 79.5% [65.7%; 87.8%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 58.57 12 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.2 NMR\_unadj.png",width = 10, height = 5.3, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=13  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7991 [0.7074; 0.9026] -3.6098 0.0003  
## Random effects model 0.7991 [0.7074; 0.9026] -3.6098 0.0003  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1.21 [1; 1.69]; I^2 = 32.2% [0%; 64.9%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 17.69 12 0.1255  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.2 NMR\_adj.png",width = 11, height = 5.3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.3 Early NMR.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 5400 5233 143 5257 149  
## 2 Colbourn 2013 CRCT 10055 9931 224 9831 254  
## 3 Fottrell 2013 CRCT 8819 9896 148 8671 210  
## 4 Kumar 2008 CRCT 2609 1079 89 2520 67  
## 5 Manandhar 2004 CRCT 2899 3226 50 2849 70  
## 6 Tripathy 2010 CRCT 3195 3073 67 3128 138  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 5084 36 0.01200 9 9 590.7222 8.076667 647.9158  
## 2 9677 24 0.01200 29 32 327.6393 4.919672 2018.6305  
## 3 9686 24 0.01200 9 9 1039.7222 13.464667 734.9606  
## 4 1012 16 0.02000 26 13 94.5641 2.871282 375.7903  
## 5 3156 24 0.00644 12 12 255.2083 2.637102 1223.3127  
## 6 2935 36 0.01200 18 18 174.1111 3.077333 998.5919  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 668.5927 17.70532 650.8873 18.44820 629.4676  
## 2 2043.8354 45.53149 1998.3039 51.62946 1967.0010  
## 3 654.9735 10.99173 643.9818 15.59638 719.3643  
## 4 908.6533 30.99661 877.6567 23.33452 352.4558  
## 5 1099.3129 18.96021 1080.3527 26.54429 1196.7684  
## 6 1038.2366 21.77210 1016.4645 44.84402 953.7478

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=6  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7618 [0.6908; 0.8400] -5.4541 < 0.0001  
## Random effects model 0.7219 [0.5799; 0.8986] -2.9170 0.0035  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0571; H = 2.04 [1.36; 3.06]; I^2 = 75.9% [45.9%; 89.3%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 20.78 5 0.0009  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.3 E\_NMR\_unadj.png",width = 10, height = 4, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=6  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7068 [0.5685; 0.8788] -3.1232 0.0018  
## Random effects model 0.7068 [0.5685; 0.8788] -3.1232 0.0018  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1.05 [1; 2.08]; I^2 = 9.1% [0%; 76.9%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 5.5 5 0.3577  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.3 E\_NMR\_adj.png",width = 10, height = 4, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.4 Late NMR.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 5400 5233 47 5353 31  
## 2 Colbourn 2013 CRCT 10055 9931 62 9993 54  
## 3 Fottrell 2013 CRCT 8819 9896 39 8780 61  
## 4 Kumar 2008 CRCT 2609 1079 23 2586 24  
## 5 Manandhar 2004 CRCT 2899 3226 26 2873 49  
## 6 Tripathy 2010 CRCT 3195 3073 46 3149 54  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 5202 36 0.01200 9 9 590.7222 8.076667 647.9158  
## 2 9877 24 0.01200 29 32 327.6393 4.919672 2018.6305  
## 3 9835 24 0.01200 9 9 1039.7222 13.464667 734.9606  
## 4 1055 16 0.02000 26 13 94.5641 2.871282 375.7903  
## 5 3177 24 0.00644 12 12 255.2083 2.637102 1223.3127  
## 6 3019 36 0.01200 18 18 174.1111 3.077333 998.5919  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 668.5927 5.819232 662.7734 3.838217 644.0776  
## 2 2043.8354 12.602466 2031.2329 10.976341 2007.6541  
## 3 654.9735 2.896470 652.0770 4.530376 730.4303  
## 4 908.6533 8.010359 900.6430 8.358635 367.4317  
## 5 1099.3129 9.859309 1089.4536 18.581005 1204.7317  
## 6 1038.2366 14.948007 1023.2886 17.547660 981.0442

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=6  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.8388 [0.7044; 0.9987] -1.9745 0.0483  
## Random effects model 0.7991 [0.5564; 1.1477] -1.2140 0.2248  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1541; H = 1.9 [1.25; 2.88]; I^2 = 72.2% [35.7%; 88%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 17.97 5 0.003  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.4 L\_NMR\_unadj.png",width = 10, height = 4, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=6  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7616 [0.5289; 1.0969] -1.4632 0.1434  
## Random effects model 0.7616 [0.5289; 1.0969] -1.4632 0.1434  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 1.82]; I^2 = 0% [0%; 69.7%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 4.19 5 0.5231  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.4 L\_NMR\_adj.png",width = 10.5, height = 4, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.5 Perinatal mortality.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '3.5 Perinatal  
## mortality.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 5400 5233 323 5077 337  
## 2 Colbourn 2013 CRCT 10055 9931 498 9557 570  
## 3 Kumar 2008 CRCT 2609 1079 195 2414 122  
## 4 Lewycka 2013 CRCT 4738 1670 146 4592 69  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 4896 36 0.01200 9 9 590.7222 8.07667 647.9158  
## 2 9361 24 0.01200 29 32 327.6393 4.91967 2018.6305  
## 3 957 16 0.01200 26 13 94.5641 2.12277 508.2983  
## 4 1601 36 0.00376 36 12 133.5000 1.49820 1114.6709  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 668.5927 39.99175 628.6009 41.72513 606.1907  
## 2 2043.8354 101.22626 1942.6091 115.86138 1902.7691  
## 3 1229.0549 91.86114 1137.1938 57.47210 450.8262  
## 4 3162.4616 97.45027 3065.0114 46.05527 1068.6157

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=4  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.8393 [0.7741; 0.9099] -4.2505 < 0.0001  
## Random effects model 0.8119 [0.7008; 0.9405] -2.7764 0.0055  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0137; H = 1.58 [1; 2.73]; I^2 = 59.7% [0%; 86.6%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 7.45 3 0.059  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.5 Peri\_unadj.png",width = 10, height = 4, units = "in", res = 300)  
 forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=4  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.7884 [0.672; 0.925] -2.9166 0.0035  
## Random effects model 0.7884 [0.672; 0.925] -2.9166 0.0035  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 2.27]; I^2 = 0% [0%; 80.6%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 2.37 3 0.4997  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.5 Peri\_adj.png",width = 10.5, height = 4, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.6 Maternal mortality.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 6427 6997 21 6406 13  
## 2 Colbourn 2013 CRCT 10055 9931 10 10045 35  
## 3 Fottrell 2013 CRCT 8819 9896 14 8805 28  
## 4 Kumar 2008 CRCT 2609 1079 12 2597 10  
## 5 Lewycka 2013 CRCT 4738 1670 14 4724 8  
## 6 Manandhar 2004 CRCT 2899 3226 2 2897 11  
## 7 More 2012 CRCT 9082 8975 20 9062 24  
## 8 Sloan 2008 CRCT 2121 2044 1 2120 3  
## 9 Tomlinson 2014 CRCT 1748 2051 2 1746 3  
## 10 Tripathy 2010 CRCT 3110 2985 7 3103 12  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 6984 36 0.020 9 9 745.77778 15.89556 440.1859  
## 2 9896 24 0.020 29 32 327.63934 7.53279 1318.3700  
## 3 9868 24 0.020 9 9 1039.72222 21.77444 454.4777  
## 4 1069 16 0.020 26 13 94.56410 2.87128 375.7903  
## 5 1662 12 0.020 36 12 133.50000 3.65000 457.5342  
## 6 3215 24 0.020 12 12 255.20833 6.08417 530.2287  
## 7 8951 36 0.020 24 24 376.18750 8.50375 1055.4167  
## 8 2041 12 0.020 21 21 99.16667 2.96333 689.7638  
## 9 2048 3 0.020 15 15 126.63333 3.51267 583.8869  
## 10 2973 36 0.012 18 18 169.30556 3.01967 988.5197  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 404.3269 1.32112 403.0057 0.81784 439.3681  
## 2 1334.8313 1.32753 1333.5038 4.64635 1313.7236  
## 3 405.0161 0.64296 404.3731 1.28591 453.1918  
## 4 908.6533 4.17932 904.4740 3.48276 372.3075  
## 5 1298.0822 3.83562 1294.2466 2.19178 455.3425  
## 6 476.4827 0.32872 476.1540 1.80797 528.4208  
## 7 1067.9994 2.35190 1065.6475 2.82228 1052.5944  
## 8 715.7480 0.33746 715.4106 1.01237 688.7514  
## 9 497.6276 0.56937 497.0583 0.85405 583.0328  
## 10 1029.9150 2.31814 1027.5969 3.97395 984.5458

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=10  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.627 [0.4812; 0.8171] -3.4558 0.0005  
## Random effects model 0.627 [0.4812; 0.8171] -3.4558 0.0005  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1.39 [1; 2]; I^2 = 48.2% [0%; 75%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 17.38 9 0.0432  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.6 MatMort\_unadj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=10  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.5576 [0.2892; 1.0751] -1.7438 0.0812  
## Random effects model 0.5576 [0.2892; 1.0751] -1.7438 0.0812  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 1]; I^2 = 0% [0%; 0%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 1.79 9 0.9944  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.6 MatMort\_adj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.9 Clean delivery kits.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '3.9 Clean  
## delivery kits.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Azad 2010 CRCT 15695 15257 4253 11442 2823  
## 2 Manandhar 2004 CRCT 2945 3270 550 2395 154  
## 3 Tripathy 2010 CRCT 8084 7034 2594 5490 1284  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 12434 36 0.01200 9 9 1720 21.62267 705.6022  
## 2 3116 24 0.00644 12 12 259 2.66125 1228.7451  
## 3 5750 36 0.01200 18 18 509 7.09967 1248.9319  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 725.8587 196.6917 529.1669 130.55744 575.0447  
## 2 1106.6221 206.6697 899.9525 57.86751 1170.8776  
## 3 1333.5837 192.1217 1141.4620 255.08240 993.8495

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.6145 [1.5613; 1.6695] 28.0006 < 0.0001  
## Random effects model 2.1584 [1.1872; 3.9242] 2.5226 0.0116  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.2761; H = 8.19 [6.18; 10.85]; I^2 = 98.5% [97.4%; 99.2%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 134.05 2 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.9 CleanDev\_unadj.png",width = 10, height = 3.5, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.2366 [1.1003; 1.3898] 3.5636 0.0004  
## Random effects model 1.5920 [0.5978; 4.2396] 0.9304 0.3521  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.7366; H = 7.45 [5.53; 10.05]; I^2 = 98.2% [96.7%; 99%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 111.04 2 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.9 CleanDev\_adj.png",width = 10, height = 3.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("3.11 Breastfeeding initiation.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Baqui 2008 CRCT 3421 1689 2605 816 463  
## 2 Darmstadt 2010 CRCT 4616 5241 3693 923 2883  
## 3 Kirkwood 2013 CRCT 7673 7921 3742 3931 3280  
## 4 Kumar 2008 CRCT 2609 1079 1809 800 167  
## 5 Lewycka 2013 CRCT 5222 5824 4414 808 4248  
## 6 Manandhar 2004 CRCT 2899 3226 1780 1119 1718  
## 7 Penfold 2014 CRCT 256 254 68 188 53  
## 8 Sloan 2008 CRCT 2121 2044 1021 1100 783  
## 9 Tomlinson 2014 CRCT 1748 2051 561 1187 607  
## 10 Waiswa 2015 CRCT 894 893 647 247 586  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 1226 36.0 0.02 16 8 213 5.23833 322.4308  
## 2 2358 28.0 0.02 6 6 821 17.40833 301.0627  
## 3 4641 12.0 0.02 49 49 159 4.16245 1902.9663  
## 4 912 16.0 0.02 26 13 95 2.87128 375.7903  
## 5 1576 6.0 0.02 24 24 230 5.58250 1043.2602  
## 6 1508 24.0 0.02 12 12 255 6.08417 530.2287  
## 7 201 0.1 0.02 65 67 4 1.05727 240.2408  
## 8 1261 12.0 0.02 21 21 99 2.96333 689.7638  
## 9 1444 3.0 0.02 15 15 127 3.51267 583.8869  
## 10 307 36.0 0.02 31 32 28 1.54730 577.1338  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 653.0703 497.29558 155.77474 88.38689 234.0439  
## 2 265.1604 212.13978 53.02058 165.61034 135.4524  
## 3 1843.3860 898.99000 944.39596 787.99765 1114.9686  
## 4 908.6533 630.03215 278.62118 58.16217 317.6282  
## 5 935.4232 790.68518 144.73802 760.94940 282.3108  
## 6 476.4827 292.56266 183.92001 282.37228 247.8565  
## 7 242.1324 64.31642 177.81599 50.12898 190.1118  
## 8 715.7480 344.54443 371.20360 264.22947 425.5343  
## 9 497.6276 159.70772 337.91991 172.80319 411.0837  
## 10 577.7801 418.14731 159.63275 378.72384 198.4099

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=10  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.2579 [1.2418; 1.2743] 34.8858 < 0.0001  
## Random effects model 1.4905 [1.1107; 2.0002] 2.6594 0.0078  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.2216; H = 10.06 [8.94; 11.31]; I^2 = 99% [98.8%; 99.2%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 910.61 9 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "3.11 BreastInit\_unadj.png",width = 10, height = 4.5, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=10  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.2258 [1.1902; 1.2625] 13.5370 < 0.0001  
## Random effects model 1.4830 [1.1081; 1.9847] 2.6506 0.008   
##   
## Quantifying heterogeneity:  
## tau^2 = 0.2140; H = 4.88 [4.04; 5.88]; I^2 = 95.8% [93.9%; 97.1%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 214.16 9 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "3.11 BreastInit\_adj.png",width = 11, height = 4.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

Comparison 4

data <- read.csv("4.1 Depression Prevalence.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '4.1 Depression  
## Prevalence.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos cont\_neg  
## 1 Bolton 2003 CRCT 163 178 46 117 113 65  
## 2 Rahman 2008 CRCT 463 440 111 352 226 214  
## time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad n.int.ad  
## 1 2wk 0.020 15 15 11 1.207333 147.4324 135.0083  
## 2 12 0.037 20 20 23 1.798275 244.6789 257.4690  
## ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 38.10050 96.90779 93.5947 53.83766  
## 2 61.72582 195.74314 125.6760 119.00293

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.4595 [0.3943; 0.5354] -9.9654 < 0.0001  
## Random effects model 0.4595 [0.3943; 0.5354] -9.9654 < 0.0001  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1; I^2 = 0%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.09 1 0.7701  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "4.1 DepPrev\_unadj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.4574 [0.378; 0.5534] -8.0442 < 0.0001  
## Random effects model 0.4574 [0.378; 0.5534] -8.0442 < 0.0001  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1; I^2 = 0%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.06 1 0.8048  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "4.1 DepPrev\_adj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("4.2 CMD Severity.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont mean\_int sd\_int mean\_cont  
## 1 Ali 2003 RCT 70 91 18.40 7.88 23.40  
## 2 Baker-Hennigham 2005 CRCT 64 61 4.30 2.70 5.30  
## 3 Bolton 2003 CRCT 163 178 11.53 10.00 21.14  
## 4 Chatterjee 2014 RCT 167 86 66.62 17.25 70.53  
## 5 Eloff 2014 RCT 161 169 10.43 0.89 11.50  
## 6 Rahman 2008 CRCT 412 386 5.40 6.50 10.70  
## sd\_cont time ICC Iclust Cclust AvClust\_size Des\_eff n.int.ad  
## 1 8.29 2 0.000 1 1 81 1.000000 70.0000  
## 2 2.10 12 0.020 11 7 7 1.118889 57.1996  
## 3 8.19 6 0.020 15 15 11 1.207333 135.0083  
## 4 17.94 12 0.000 1 1 127 1.000000 167.0000  
## 5 0.86 18 0.000 1 1 165 1.000000 161.0000  
## 6 8.10 12 0.056 20 20 20 2.061200 199.8836  
## n.cont.ad  
## 1 91.00000  
## 2 54.51837  
## 3 147.43236  
## 4 86.00000  
## 5 169.00000  
## 6 187.26955

library("meta") #load package  
#unadjusted  
result\_meta <- metacont(n.e = n\_int, mean.e = mean\_int, sd.e = sd\_int, n.c = n\_cont, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="SMD", method.smd="Cohen", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=6  
##   
## SMD 95%-CI z p-value  
## Fixed effect model -0.7627 [-0.8545; -0.6710] -16.2884 < 0.0001  
## Random effects model -0.7189 [-1.0226; -0.4151] -4.6388 < 0.0001  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1263; H = 2.91 [2.08; 4.08]; I^2 = 88.2% [76.8%; 94%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 42.41 5 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2  
## - Cohen's d (standardised mean difference)

png(filename = "4.2 CMD Sev\_unadj.png",width = 11, height = 4, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metacont(n.e = n.int.ad, mean.e = mean\_int, sd.e = sd\_int, n.c = n.cont.ad, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="SMD", method.smd="Cohen", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=6  
##   
## SMD 95%-CI z p-value  
## Fixed effect model -0.7659 [-0.8716; -0.6602] -14.1983 < 0.0001  
## Random effects model -0.7188 [-1.0251; -0.4124] -4.5980 < 0.0001  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1267; H = 2.86 [2.03; 4.02]; I^2 = 87.7% [75.7%; 93.8%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 40.76 5 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2  
## - Cohen's d (standardised mean difference)

png(filename = "4.2 CMD Sev\_adj.png",width = 11, height = 4, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("4.3 CMD Disability.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote  
## = quote, : incomplete final line found by readTableHeader on '4.3 CMD  
## Disability.csv'

print(data)

## auth year Trial\_design n\_int n\_cont mean\_int sd\_int mean\_cont  
## 1 Bolton 2003 CRCT 163 178 6.67 6.70 9.36  
## 2 Chatterjee 2014 RCT 167 86 5.83 3.54 6.40  
## 3 Rahman 2008 CRCT 412 386 2.20 3.30 5.20  
## sd\_cont time ICC Iclust Cclust AvClust\_size Des\_eff n.int.ad n.cont.ad  
## 1 7.20 6 0.02 15 15 11 1.207333 135.0083 147.4324  
## 2 3.82 12 0.00 1 1 127 1.000000 167.0000 86.0000  
## 3 4.50 12 0.06 20 20 20 2.137000 192.7936 180.6270

library("meta") #load package  
#unadjusted  
result\_meta <- metacont(n.e = n\_int, mean.e = mean\_int, sd.e = sd\_int, n.c = n\_cont, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="SMD", method.smd="Cohen", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=3  
##   
## SMD 95%-CI z p-value  
## Fixed effect model -0.5617 [-0.6703; -0.4531] -10.1399 < 0.0001  
## Random effects model -0.4487 [-0.7998; -0.0977] -2.5054 0.0122  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0848; H = 3.12 [1.9; 5.12]; I^2 = 89.7% [72.4%; 96.2%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 19.46 2 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2  
## - Cohen's d (standardised mean difference)

png(filename = "4.3 CMD\_Dis.png",width = 10.5, height = 3.5, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metacont(n.e = n.int.ad, mean.e = mean\_int, sd.e = sd\_int, n.c = n.cont.ad, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="SMD", method.smd="Cohen", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=3  
##   
## SMD 95%-CI z p-value  
## Fixed effect model -0.4795 [-0.6139; -0.3451] -6.9937 < 0.0001  
## Random effects model -0.4422 [-0.7909; -0.0935] -2.4857 0.0129  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0805; H = 2.6 [1.52; 4.46]; I^2 = 85.2% [56.5%; 95%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 13.54 2 0.0011  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2  
## - Cohen's d (standardised mean difference)

png(filename = "4.3 CMD\_Dis\_adj.png",width = 11, height = 3.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("4.4 PTSD Sev.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote  
## = quote, : incomplete final line found by readTableHeader on '4.4 PTSD  
## Sev.csv'

print(data)

## auth year Trial\_design n\_int n\_cont mean\_int sd\_int mean\_cont sd\_cont  
## 1 Neuner 2008 RCT 111 55 6.10 6.80 10.10 8.10  
## 2 Yeomans 2010 RCT 38 38 1.97 0.45 2.11 0.54  
## time  
## 1 6  
## 2 2wk

library("meta") #load package  
#unadjusted  
result\_meta <- metacont(n.e = n\_int, mean.e = mean\_int, sd.e = sd\_int, n.c = n\_cont, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="SMD", method.smd="Cohen", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## SMD 95%-CI z p-value  
## Fixed effect model -0.4581 [-0.7239; -0.1924] -3.3787 0.0007  
## Random effects model -0.4581 [-0.7239; -0.1924] -3.3787 0.0007  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1; I^2 = 0%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 0.9 1 0.344  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2  
## - Cohen's d (standardised mean difference)

png(filename = "4.4 PTSD Sev.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("4.5 Depr Sev Ch.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '4.5 Depr Sev  
## Ch.csv'

print(data)

## auth year Trial\_design n\_int n\_cont mean\_int sd\_int mean\_cont sd\_cont  
## 1 Bolton 2007 RCT 105 104 27.8 17.20 37.30 15.90  
## 2 Ertl 2011 RCT 25 18 1.8 2.18 1.75 2.56  
## time  
## 1 1  
## 2 12

library("meta") #load package  
#unadjusted  
result\_meta <- metacont(n.e = n\_int, mean.e = mean\_int, sd.e = sd\_int, n.c = n\_cont, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="SMD", method.smd="Cohen", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## SMD 95%-CI z p-value  
## Fixed effect model -0.4708 [-0.7225; -0.2192] -3.6668 0.0002  
## Random effects model -0.3397 [-0.9091; 0.2298] -1.1691 0.2424  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1191; H = 1.75; I^2 = 67.4%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 3.06 1 0.0801  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2  
## - Cohen's d (standardised mean difference)

png(filename = "4.4 PTSD Sev.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

Comparison 5

data <- read.csv("5.2 HAZ.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '5.2 HAZ.csv'

print(data)

## auth year Trial\_design n\_int n\_cont mean\_int sd\_int mean\_cont  
## 1 Pachon 2002 CRCT 114 118 -1.66 0.94 -1.66  
## 2 Rahman 2008 CRCT 360 345 -1.10 1.02 -1.36  
## 3 Yousafzai 2014 CRCT 732 741 -1.20 1.30 -1.40  
## sd\_cont time ICC Iclust Cclust AvClust\_size Des\_eff n.int.ad  
## 1 0.88 6 0.032 6 6 19.33333 1.586667 71.84874  
## 2 1.17 12 0.032 20 20 17.62500 1.532000 234.98695  
## 3 1.20 6 0.032 40 40 18.41250 1.557200 470.07449  
## n.cont.ad  
## 1 74.36975  
## 2 225.19582  
## 3 475.85410

library("meta") #load package  
#unadjusted  
result\_meta <- metacont(n.e = n\_int, mean.e = mean\_int, sd.e = sd\_int, n.c = n\_cont, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="MD", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=3  
##   
## MD 95%-CI z p-value  
## Fixed effect model 0.1884 [0.0961; 0.2807] 4.0007 < 0.0001  
## Random effects model 0.1836 [0.0764; 0.2908] 3.3581 0.0008  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0020; H = 1.28 [1; 2.29]; I^2 = 38.6% [0%; 80.9%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 3.26 2 0.196  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2

png(filename = "5.2 HAZ\_unadj.png",width = 11, height = 3.5, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metacont(n.e = n.int.ad, mean.e = mean\_int, sd.e = sd\_int, n.c = n.cont.ad, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="MD", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=3  
##   
## MD 95%-CI z p-value  
## Fixed effect model 0.1893 [0.0743; 0.3044] 3.2256 0.0013  
## Random effects model 0.1893 [0.0743; 0.3044] 3.2256 0.0013  
##   
## Quantifying heterogeneity:  
## tau^2 < 0.0001; H = 1.02 [1; 3.16]; I^2 = 3.4% [0%; 90%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 2.07 2 0.3551  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2

png(filename = "5.2 HAZ\_adj.png",width = 11, height = 3.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("5.3 WHZ.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '5.3 WHZ.csv'

print(data)

## auth year Trial\_design n\_int n\_cont mean\_int sd\_int mean\_cont  
## 1 Pachon 2002 RCT 114 118 -1.25 0.67 -1.39  
## 2 Yousafzai 2014 CRCT 732 741 -1.00 1.20 -0.80  
## sd\_cont time ICC Iclust Cclust AvClust\_size Des\_eff n.int.ad  
## 1 0.68 6 0.02 6 6 19.33333 1.366667 83.41463  
## 2 1.30 6 0.02 40 40 18.41250 1.348250 542.92602  
## n.cont.ad  
## 1 86.34146  
## 2 549.60134

library("meta") #load package  
#unadjusted  
result\_meta <- metacont(n.e = n\_int, mean.e = mean\_int, sd.e = sd\_int, n.c = n\_cont, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="MD", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## MD 95%-CI z p-value  
## Fixed effect model -0.0807 [-0.1836; 0.0222] -1.5365 0.1244  
## Random effects model -0.0353 [-0.3683; 0.2977] -0.2078 0.8354  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0517; H = 3.09; I^2 = 89.5%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 9.55 1 0.002  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2

png(filename = "5.3 WHZ\_unadj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metacont(n.e = n.int.ad, mean.e = mean\_int, sd.e = sd\_int, n.c = n.cont.ad, mean.c = mean\_cont, sd.c = sd\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="MD", method.tau = "REML", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=2  
##   
## MD 95%-CI z p-value  
## Fixed effect model -0.0817 [-0.2015; 0.0381] -1.3373 0.1811  
## Random effects model -0.0374 [-0.3702; 0.2955] -0.2200 0.8259  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0496; H = 2.65; I^2 = 85.8%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 7.02 1 0.0081  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - restricted maximum-likelihood estimator for tau^2

png(filename = "5.3 WHZ\_adj.png",width = 11, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", "Mean Difference", "(95% CI)"), leftcols=c("studlab", "n.e", "mean.e", "sd.e", "n.c", "mean.c", "sd.c"), leftlabs=c("Study", "N", "Mean", "(SD)", "N", "Mean", "(SD)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

Comparison 6

data <- read.csv("6.1 Cur Rate.csv")  
print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Clarke 2005 CRTC 47 42 31 16 25  
## 2 Datiko 2009 CRTC 230 88 172 58 60  
## 3 Lwilla 2003 CRCT 221 301 117 104 148  
## 4 Mohan 2003 RCT 240 240 226 14 184  
## 5 Newell 2006 CRCT 549 358 465 84 319  
## 6 Zwarenstein 2000 RCT 54 58 51 3 24  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 17 5 0.02300 106 105 0.4218009 0.9867014 42.56607  
## 2 28 7 0.00052 30 21 6.2352941 1.0027224 87.76108  
## 3 153 7 0.02000 9 9 29.0000000 1.5600000 192.94872  
## 4 56 6 0.00000 1 1 240.0000000 1.0000000 240.00000  
## 5 39 8 0.02000 5 5 90.7000000 2.7940000 128.13171  
## 6 34 6 0.00000 1 1 56.0000000 1.0000000 58.00000  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 47.63346 31.41781 16.21565 25.33695 17.22912  
## 2 229.37556 171.53303 57.84253 59.83710 27.92398  
## 3 141.66667 75.00000 66.66667 94.87179 98.07692  
## 4 240.00000 226.00000 14.00000 184.00000 56.00000  
## 5 196.49248 166.42806 30.06442 114.17323 13.95848  
## 6 54.00000 51.00000 3.00000 24.00000 34.00000

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=6  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.0486 [1.0083; 1.0904] 2.3730 0.0176  
## Random effects model 1.2080 [0.9528; 1.5314] 1.5609 0.1186  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0776; H = 3.32 [2.42; 4.54]; I^2 = 90.9% [83%; 95.1%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 54.97 5 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "6.1 CurRat\_unadj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=6  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.1155 [1.0604; 1.1734] 4.2305 < 0.0001  
## Random effects model 1.2098 [0.9536; 1.5349] 1.5684 0.1168  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.0773; H = 2.83 [2.01; 3.98]; I^2 = 87.5% [75.2%; 93.7%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 39.98 5 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "6.1 CurRat\_adj.png",width = 11, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("6.2 Compl Rate.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '6.2 Compl  
## Rate.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Clarke 2005 CRTC 75 89 61 14 67  
## 2 Datiko 2009 CRTC 230 88 205 25 74  
## 3 Zwarenstein 2000 RCT 54 58 40 14 33  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 22 5 0.02000 106 105 1 0.995545 89.39827  
## 2 14 7 0.00052 30 21 6 1.002722 87.76108  
## 3 25 6 0.00000 1 1 56 1.000000 58.00000  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 75.33562 61.27297 14.06265 67.29982 22.09845  
## 2 229.37556 204.44343 24.93213 73.79909 13.96199  
## 3 54.00000 40.00000 14.00000 33.00000 25.00000

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.0849 [0.9996; 1.1776] 1.9508 0.0511  
## Random effects model 1.0849 [0.9996; 1.1776] 1.9508 0.0511  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 3.03]; I^2 = 0% [0%; 89.1%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 1.91 2 0.3855  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "6.2 CompRat\_unadj.png",width = 10, height = 3.5, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours control", label.right = "Favours CHW")  
summary(result\_meta\_adj)

## Number of studies combined: k=3  
##   
## RR 95%-CI z p-value  
## Fixed effect model 1.085 [0.9996; 1.1776] 1.951 0.0511  
## Random effects model 1.085 [0.9996; 1.1776] 1.951 0.0511  
##   
## Quantifying heterogeneity:  
## tau^2 = 0; H = 1 [1; 3.03]; I^2 = 0% [0%; 89.1%]  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 1.91 2 0.3857  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "6.2 CompRat\_adj.png",width = 10, height = 3.5, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

data <- read.csv("6.3 PnTreat Failure.csv")

## Warning in read.table(file = file, header = header, sep = sep, quote =  
## quote, : incomplete final line found by readTableHeader on '6.3 PnTreat  
## Failure.csv'

print(data)

## auth year Trial\_design n\_int n\_cont int\_pos int\_neg cont\_pos  
## 1 Bari 2011 CRCT 1017 2108 95 922 211  
## 2 Yeboah-Antwi 2010 CRCT 1857 1354 165 1692 241  
## cont\_neg time ICC Iclust Cclust AvClust\_size Des\_eff n.cont.ad  
## 1 1897 NA 0.02 15 16 101 2.996129 703.5745  
## 2 1113 NA 0.02 14 14 115 3.273571 413.6155  
## n.int.ad ipos.ad ineg.ad cpos.ad cneg.ad  
## 1 339.4380 31.70758 307.7304 70.4242 633.1503  
## 2 567.2703 50.40367 516.8667 73.6199 339.9956

library("meta") #load package  
result\_meta <- metabin(event.e=int\_pos, n.e=n\_int, event.c=cont\_pos, n.c = n\_cont, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.6383 [0.5525; 0.7374] -6.0964 < 0.0001  
## Random effects model 0.6799 [0.3683; 1.2552] -1.2334 0.2174  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1843; H = 4.15; I^2 = 94.2%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 17.21 1 < 0.0001  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

#unadjusted  
png(filename = "6.3 PnTr\_unadj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

#adjusted  
result\_meta\_adj<- metabin(event.e=ipos.ad, n.e=n.int.ad, event.c=cpos.ad, n.c =n.cont.ad, studlab=paste(auth, year, sep = ", "), data=data, sm="RR", method ="I", method.tau = "PM", label.e="Intervention", label.left = "Favours CHW", label.right = "Favours control")  
summary(result\_meta\_adj)

## Number of studies combined: k=2  
##   
## RR 95%-CI z p-value  
## Fixed effect model 0.6468 [0.5005; 0.8360] -3.3284 0.0009  
## Random effects model 0.6760 [0.3662; 1.2476] -1.2525 0.2104  
##   
## Quantifying heterogeneity:  
## tau^2 = 0.1604; H = 2.35; I^2 = 82%  
##   
## Test of heterogeneity:  
## Q d.f. p-value  
## 5.54 1 0.0185  
##   
## Details on meta-analytical method:  
## - Inverse variance method  
## - Paule-Mandel estimator for tau^2

png(filename = "6.3 PnTr\_adj.png",width = 10, height = 3, units = "in", res = 300)  
forest(result\_meta\_adj, comb.random=result\_meta$comb.random, comb.fixed = FALSE, rightcols=c("w.random", "effect", "ci"), rightlabs=c("Weight", " Risk Ratio", "(95% CI)"), text.random=("Total (95% CI)"), test.overall.random=TRUE, label.test.overall.random=paste("Test for overall effect"), text.I2 = "I²", text.tau2 = "tau²", ff.hetstat="plain", fs.hetstat=11, fs.lr=11)  
dev.off()

## quartz\_off\_screen   
## 2

```