**Simulation Study 1**

alpha=c(0.06,0.05,0.04,0.03) #Initial sample selection parameters, corresponds to strata

beta\_strata=matrix(0,4,4); #The link-tracing parameters, strata to strata

beta\_strata[1,1]=2; beta\_strata[1,2]=1; beta\_strata[1,3]=1; beta\_strata[1,4]=1

beta\_strata[2,1]=1; beta\_strata[2,2]=2; beta\_strata[2,3]=1; beta\_strata[2,4]=1

beta\_strata[3,1]=1; beta\_strata[3,2]=1; beta\_strata[3,3]=2; beta\_strata[3,4]=1

beta\_strata[4,1]=1; beta\_strata[4,2]=1; beta\_strata[4,3]=1; beta\_strata[4,4]=2

beta\_sex\_worker=2 #The link-tracing parameters, acts on indicator for sex worker (set to NA if using CSpop=595)

beta\_net\_size=-2.5 #The link-tracing parameters, acts on out-degree of respondent

num\_waves = 1 -> num\_mcmc = 250,000

num\_waves = 2 -> num\_mcmc = 500,000

**Simulation Study 2**

alpha=c(0.06,0.05,0.04,0.07) #Initial sample selection parameters, corresponds to strata

beta\_strata=matrix(0,4,4); #The link-tracing parameters, strata to strata

beta\_strata[1,1]=0; beta\_strata[1,2]=0; beta\_strata[1,3]=0; beta\_strata[1,4]=3

beta\_strata[2,1]=0; beta\_strata[2,2]=0; beta\_strata[2,3]=0; beta\_strata[2,4]=3

beta\_strata[3,1]=0; beta\_strata[3,2]=0; beta\_strata[3,3]=0; beta\_strata[3,4]=3

beta\_strata[4,1]=0; beta\_strata[4,2]=0; beta\_strata[4,3]=0; beta\_strata[4,4]=3

beta\_sex\_worker=1 #The link-tracing parameters, acts on indicator for sex worker (set to NA if using CSpop=595)

beta\_net\_size=-1.5 #The link-tracing parameters, acts on out-degree of respondent

num\_waves = 1 -> num\_mcmc = 300,000

num\_waves = 2 -> num\_mcmc = 600,000