**CDC project read me**

Load cdcProject.mat

Ydata: incidence data by month, one column per age group.

ydataNX: as above, but without multipliers.

Codes:

**[f,g,z2]=cdcPandemicSimulation([R0,gamma],xdata,plotComp,plotEpis,ydata,tswitch);**

The first argument can be changes to feed in different parameters (see “input parameters” section of code). Keep “byAge=1” when running all other codes.

Xdata is simply the months of data to plot if plotComp=1 (plot comparison – simulation with data)

plotComp=1 plots monthly aggregated simulation output with data

plotEpi=1 plots ODE solutions

ydata as above

tswitch=243 for school opening on 1st September

f is monthly aggregated incidence, g is the ODE solution (1st column=timepoints), and z2 is attack rate of second wave.

**cdcLSQfit(ydata)** – least squares fit

**cdcLhoods** – likelihoods (called by other functions)

**cdcMLE(ydataNX)** – maximum likelihood estimate

**cdcMCMC(ydataNX)** – MCMC algorithm

**cdcDCF(xsto)** – inverse CDF plot

**cdcDecision(xsto)** – currently plots predictions with and without closure for every nth entry in MCMC chain