Meeting Agenda:

1. Everyone talks about what they’ve been doing for the project so far
   1. I made a model in ARENA for the case where no preventative measures are in place – I will go over this and we can talk about any changes to be made
2. Let’s discuss next steps:
   1. Clarify the problem statement
   2. What statistical methods/hypothesis tests are we going to employ?
   3. This week’s assignments: modify the baseline model – see below for the three options
   4. Path to completion:
      1. Model building [ALL]
      2. Hypothesis testing and plotting [Gauri and Reshmaa]
      3. Literature reviews and citations [Shipli]
      4. Write-up [NAME]
      5. Proof reading and formatting [Gauri]

Basic Model – No Prevention:

*Assumptions:*

* Infectious diseases transmitted human to human
* Recovery confers long lasting resistance
* No vital dynamics (birth and death)
* Create a population of constant size
* Everyone in the population is susceptible to begin with
* 98% remain susceptible, 2% mysteriously acquire a novel infection
* Among the susceptibles, B\*I\*S get infected
* The susceptibles who get infected are now in the "exposed" compartment - they are not yet infectious but they are not susceptible anymore
* The latency period (time between getting infected and becoming infectious) is UNIF(2,4)
* Once the exposed come out of latency, they are infectious
* Infected people must remain infected for around 10 days: EXPO(10) in Arena, Exp(1/10) in usual notation
* The infectious individuals then “recover” – this includes people who actually recovered and people who died

We need 3 more models – they just need to be modified versions of this one – please choose which one you want to do:

* One model with masking and social distancing measures introduced [Shilpi]
* One model with masking and social distancing measures, and vaccination strategy A: give everyone the first dose, then give everyone the second dose [Reshmaa]
* One model with masking and social distancing measures, and vaccination strategy B: give first and after “d” days give second dose [Lisa]