1. Arrival:
   1. 10min registration period
   2. 10 slots per period
   3. 60% full, in other words, binomial distribution with n = 10 and p = 0.6
      1. 8:00-11:30: inter arrival time mean = 2min, pct = 50%
      2. 11:30-3:00: inter arrival time mean = 1.43min, pct = 70%
      3. 3:00-6:30: inter arrival time mean = 1.11min, pct = 90%
   4. Uniform distribution between [-10 10] min of scheduled time.
   5. Assume infinite queue capacity after arrival (can always wait outside the arena)
2. TSA, temp check, and paperwork
   1. Finish while waiting in queue for registration
   2. Time spent is negative exponential with mean rate of 1 per 3 minutes

Uniform [1, 2]

* 1. Capacity of the arena is considered - cannot start paperwork if queue for registration if filler.
  2. Queue capacity = 30

1. Registration
   1. 4 stations, exponential with mean = 4min
   2. Cannot start registration when registration server is full, or when queue waiting for vaccine is full (5 people)
2. Vaccination Process
   1. 5 stations, negative exponential with mean rate of 1 per 3 minute.
   2. vaccination capacity = 5
   3. cannot begin vaccination if observation area is full (60 people)
3. Recording Process
   1. Start when vaccine starts, performed by another staff
   2. Uniform [2 4]
4. Observation
   1. Starts after both vaccination and recording stops
   2. 15 min for all
   3. capacity = 60
5. Simulation Setup
   1. staff works 5 hours daily, 8:00am – 6:30pm
   2. staff will stay until all scheduled vaccination is completed.
   3. All time stamp rounded to the nearest minute, i.e. Δt = 1min.

46.25% in NH unvaccinated

30% in Dartmouth unvaccinated

Left 2000 people unvaccinated, assume 70% will come