Relational Translation:

Person(hinsurnum, DOB, occupation, name, phonenum, streetA, city, pcode, gender, DOR, priority)
Slot(Sdate, Stime, Sarea, Lname, VialNum)
Lname reference to Location
VialNum reference to Vial
Location(Lname, pcode, streetA, city, numslots)
Nurse(Nname, CanLisNum, employer)
Shift(date)
Vaccine(company, waitPeriod, numdoses)
VaccineBatch(BatchNum,Company, Expirydate, Mandate)
Company references Vaccine
Vial(Vialnum, BatchNum, Company, Sdate, Stime, Sarea)
(BatchNum, Company) reference to VaccineBatch
(Sdate, Stime, Sarea) reference to Slot
Batch go(bnum, Lname)
Bnum reference to VaccineBatch
Lname reference to Location
Assigned to(hinsurnum, Sarea, Sdate, Stime)
(Sarea, Sdate, Stime) reference to Slot
hinsurnum reference to Person
Helping at(Sarea, Sdate, Stime, CanLisNum)
(Sarea, date, time) reference to Slot
CanLisNum reference to Nurse
Allocated(Lname, date, CanLisNum)
Lname reference to Location
Date reference to Shift
CanLisNum reference to Nurse

Assumptions:

- A nurse can never be fired.
- A nurse is assigned to one location per day.
- Vials are not discarded/broken when assigned to a slot so one slot can be assigned to only one vial and one vial can only be associated to one slot, as it used and then disposed of.
- A person once assigned a slot, cannot cancel the appointment and has to get the vaccine. The purpose of this assumption is because I don't have a separate entity for the

number of doses that the person has received and have assumed that the number of times a slot is assigned to a person is the total number of dozes.
- It is assumed that the address entered is always correct as that will be used to calculate the proximity and assign people to priority 2 and 3.
- In my model, I'm assuming that the person gets the same company's vaccine after they have been given a dose once. i.e. all follow up doses will be from the same company as the first doze
- I have created a nurse and slot relationship because a nurse is designated to a vial only when a person is vaccinated so I thought just having a nurse and location would not be very precise.
- Finally, as batch numbers are inside a vial, there could be a possibility that different batches may end up having the same vial number.

Restrictions

I have not kept separate attributes for the number of vaccines for location, as the amount of vials in the batch that comes to the location will be the number of vaccinations available.

Priority of the person is entered while the person's information is entered as it has Date of birth, their address and occupation entity.Proximity can also be calculated as the address of each person is entered, we can extract all the Pcodes or StreetA for the respective priority and any person with the same pcode or streetA can be assigned their respective priorities

I also did not make a separate entity for the number of doses that have been given to a patient, as the number of slots assigned to the patient will be the total number of doses they have received as per the assumption stated in the assumption section.