Data do we need:

* Historical Data from the hospital
* Location Data: Where people came from
* Air quality
* 911 data
* Spike in keywords of twitter data
* Census data (American community survey 3-year, 5-year)

Data we wish we had

Departments:

* FDNY
* Department of Environmental Protection
* NYPD
* DCP – Pluto map, critical infrastructure (locations of hospitals, streets, etc)

What analytical approaches would you use to estimate:

Spatial clustering

Determine other events in the location

How would you use the result so f the analysis to inform decision makers:

* Determine how abnormal the issue is
* How do you manage your workforce
* Determine how to manage the situation now
* Quarantine/ evacuation

Schelliing’s Tipping Modell – How people segregate themselves in space

Physical Models(Engineers, Physicists)

* Complex, sophisticated
* Designed to work with little data
* High predictability

Operational / Statistical models

* Simple
* Requires a lot of data
* Lower predictability

Challenges of Urbanization

* Public health
* Safety
* Social equity
* Economic competitiveness

Theory of Creative Class

Jeff Wes

Four Dimensions of a city

* Resources & lifeline infrastructure
  + Energy, water, waste, transit, finance
* Quality of life & social services
  + Public health, education
* Resilience
  + Infrastructure, emergency preparedness and response
* Economic Opportunity
  + Diversity of Industries

History of urban built environment

Tragedy of the commons – Public goods are resources that do not deplete from others using it. Everyone wants to use the public good but people are not willing to pay the market price for it.

Prisoner’s dilemma – Whether one should invest due to potential harm being caused

Free rider problem – Someone believes others in the community will be able to cover their portion for servicing a good/resource

Externalities – spillover effects such as pollution from manufacturing plants

Rent stabilized – The prices of apartments cannot increase more than a certain percentage each year.

Blocks were inspired ny roman barracks. This led to buildings being able to be easily sold.

What is the ideal city

* The city beautiful – people would be happier if there was a lot of open space
* Garden City – create satellite towns around 50,000 people linked by highways
* Le Corbuseir – towers and park concept. Residential area, retail area, and etc.

Equitable buildings 1915- skyscrapers casted shadows on other buildings causing them to lose value. Those the building owners discussed ideas on how to create buildings more equitably

NYC 1916 – first zoning laws

Jane Jacobs promoted the idea that we think of cities as social activity

Surburban sprawls start in the 50’s and 60’s

* Cars were more affordable
* And people were supported financially by government
* White flight to leave cities
* Demographic shift

Can we translate ideas for cities to the suburbs and cities in developing countries