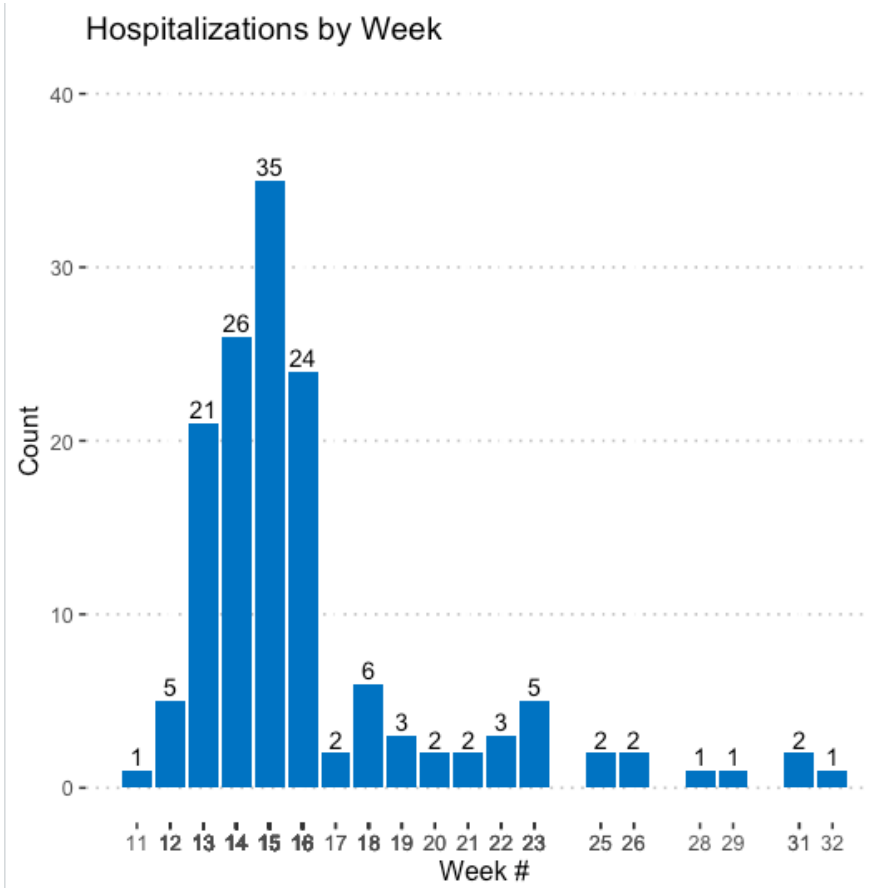
COVID in Chelsea

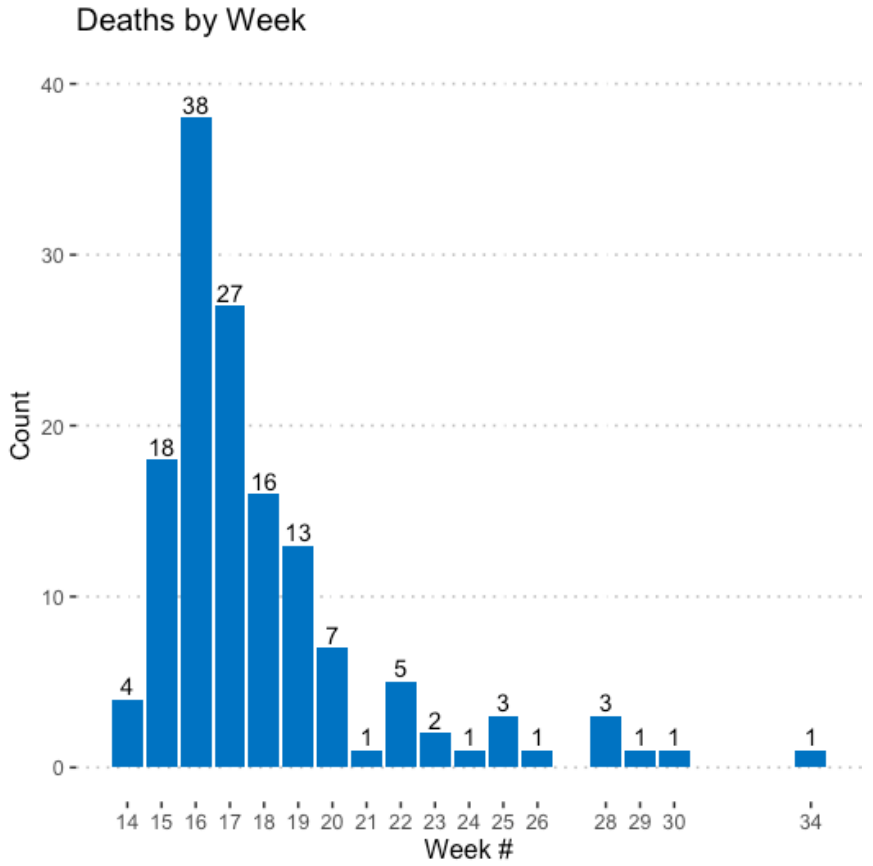
Results of the Analysis of Positive Cases March-August 2020

October 28, 2020

Goal: To conduct health equity analysis to understand the impact of COVID19 in Chelsea, MA.

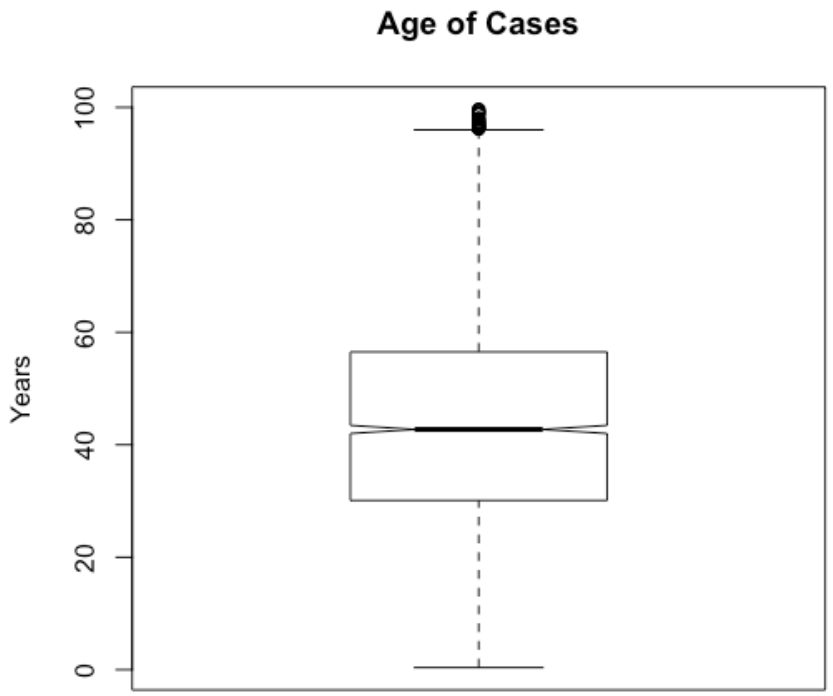
- **Total number of cases: 3302**
- **Weeks 11-32 of the calendar year (March 9-August 3, 2020)**





Events by weeks:

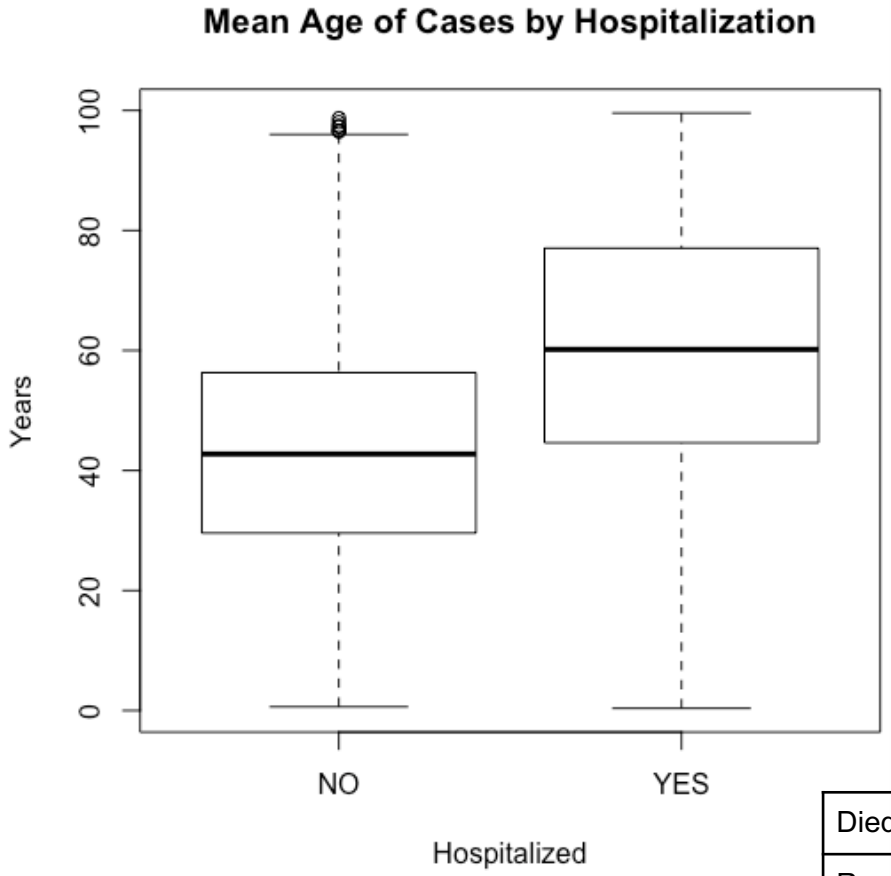
Age of cases:

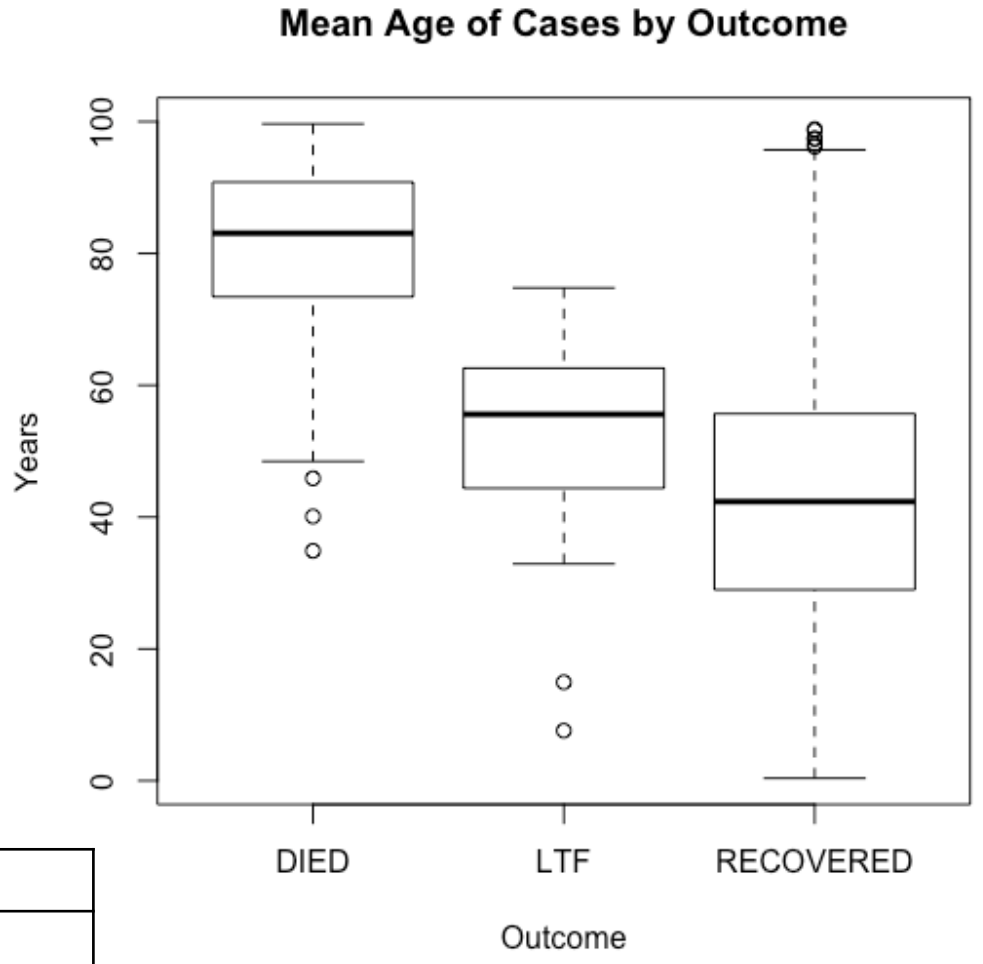


Mean age of cases: 44.2 years

Female - 44.4 years
Male - 43.9 years

Mean age of cases by outcome:





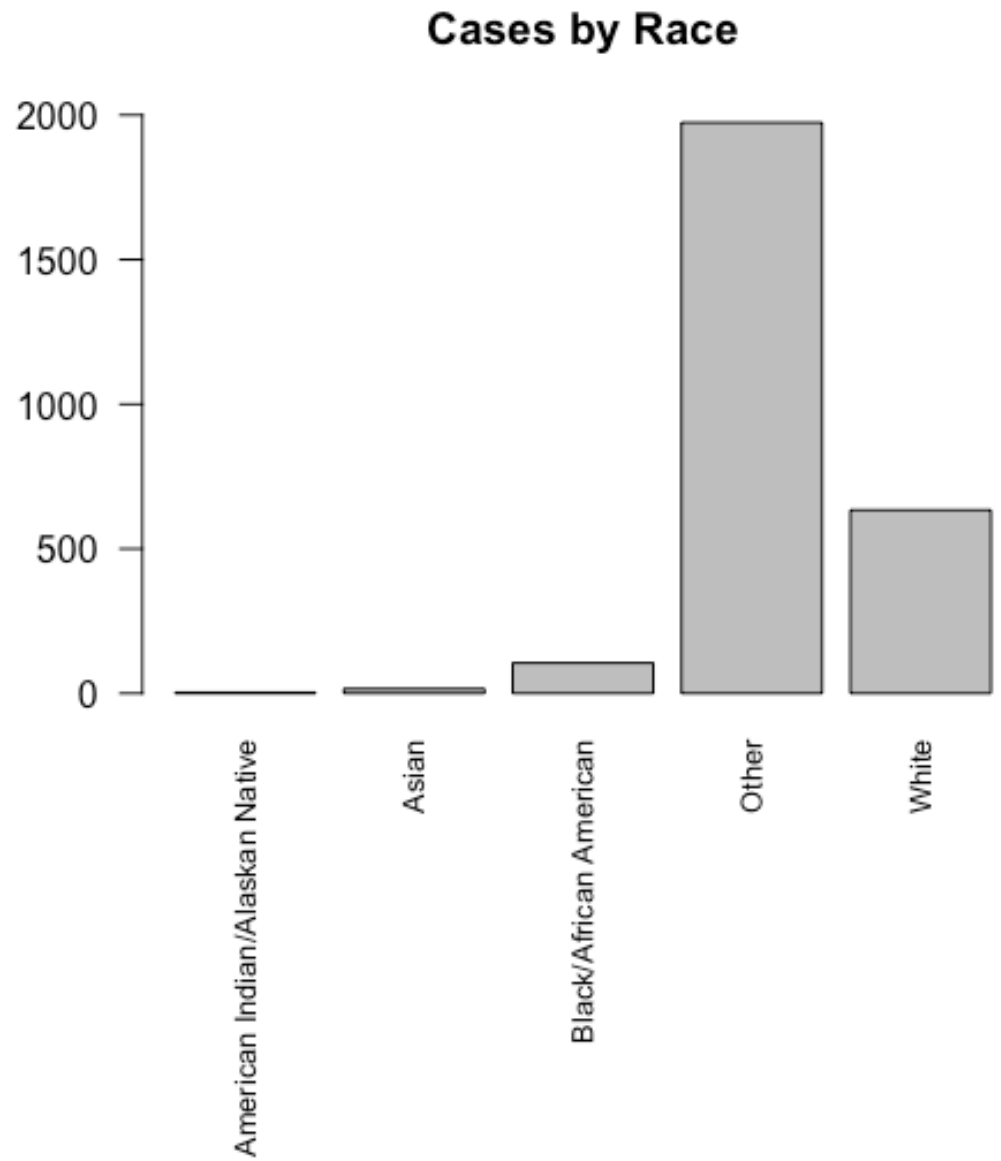
Died - 80.7 years
Recovered - 43.2 years
LTF - 49.4 years

Cases by Race:

American Indian or Alaskan Native	3 (0.1%)
Asian	16 (0.6%)
Black or African American	105 (3.7%)
White	634 (22.2%)
Other	1974 (69.1%)

Hispanic:

Yes – 1938 (59.7%)
No - 722 (22.2%)
Unknown - 642 (19.4%)



Labs used and turnaround time:

Lab	Turnaround time	Number of Tests
BIDMC	0.00 days	392
BROAD	0.96 days	300
LAPCORP NJ	2.33 days	116
MDPH	1.56 days	149
MGH	0.41 days	1113
QUEST	2.03 days	772

- 31 labs used
- **Average time between symptom onset and results in general - 7.1 days**

Symptoms:

- Symptoms:
  - **463 (35%) had no symptoms**
  - 865 (65.1%) had symptoms -
    - Single symptom - 92 (6.9%)
    - Multiple symptoms - 773 (58.2%)

No significant difference in:

Abdominal pain
Appetite loss
Cough
Chills
Diarrhea
Loss of taste and smell
Vomiting

Differences in symptoms:

Retired people

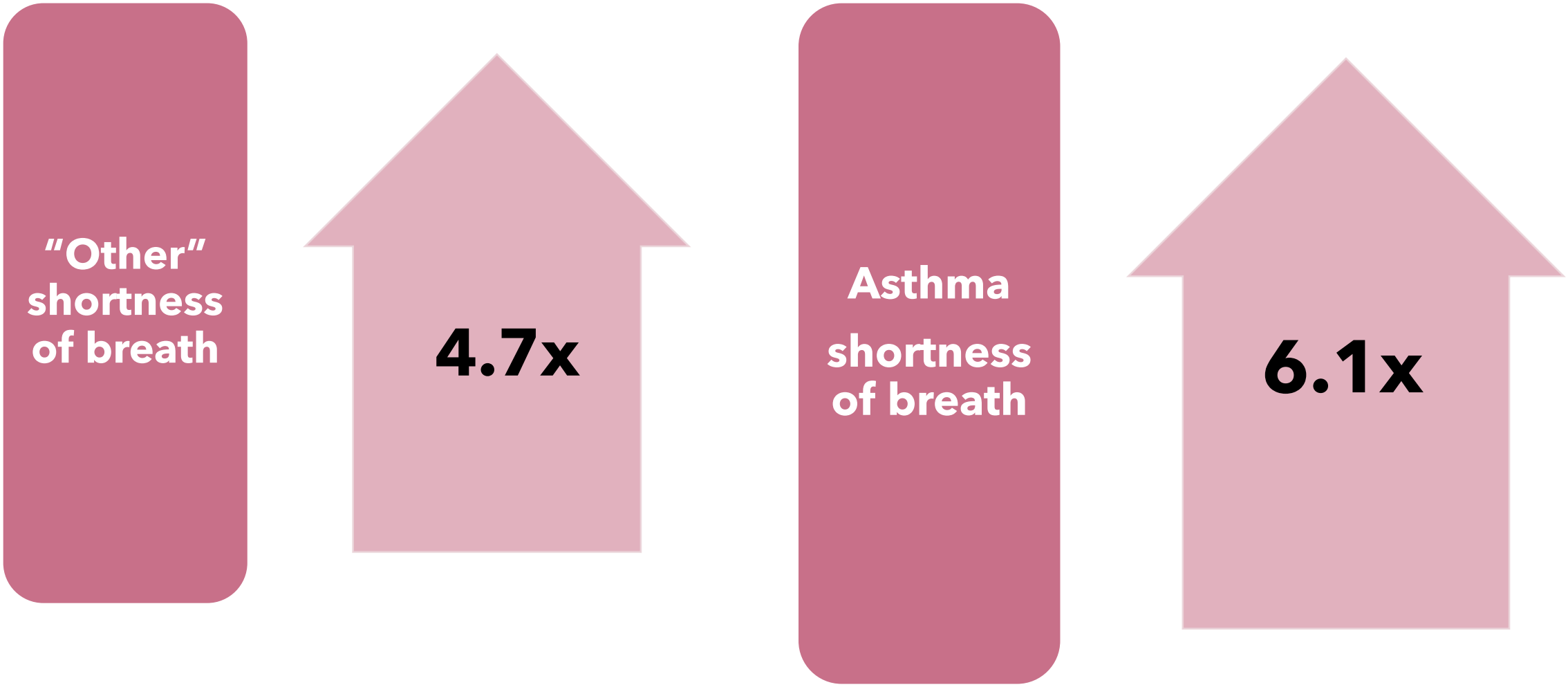
- 98% • Less likely to have chills, headache, body ache
- 85% • Less likely to have sore throat
- 76% • Less likely to have fever

Children

- 91% • Less likely to have body aches
- 84% • Less likely to have chills
- 77% • Less likely to have headache

- 65% • Diabetics have less headache

Differences in symptoms:

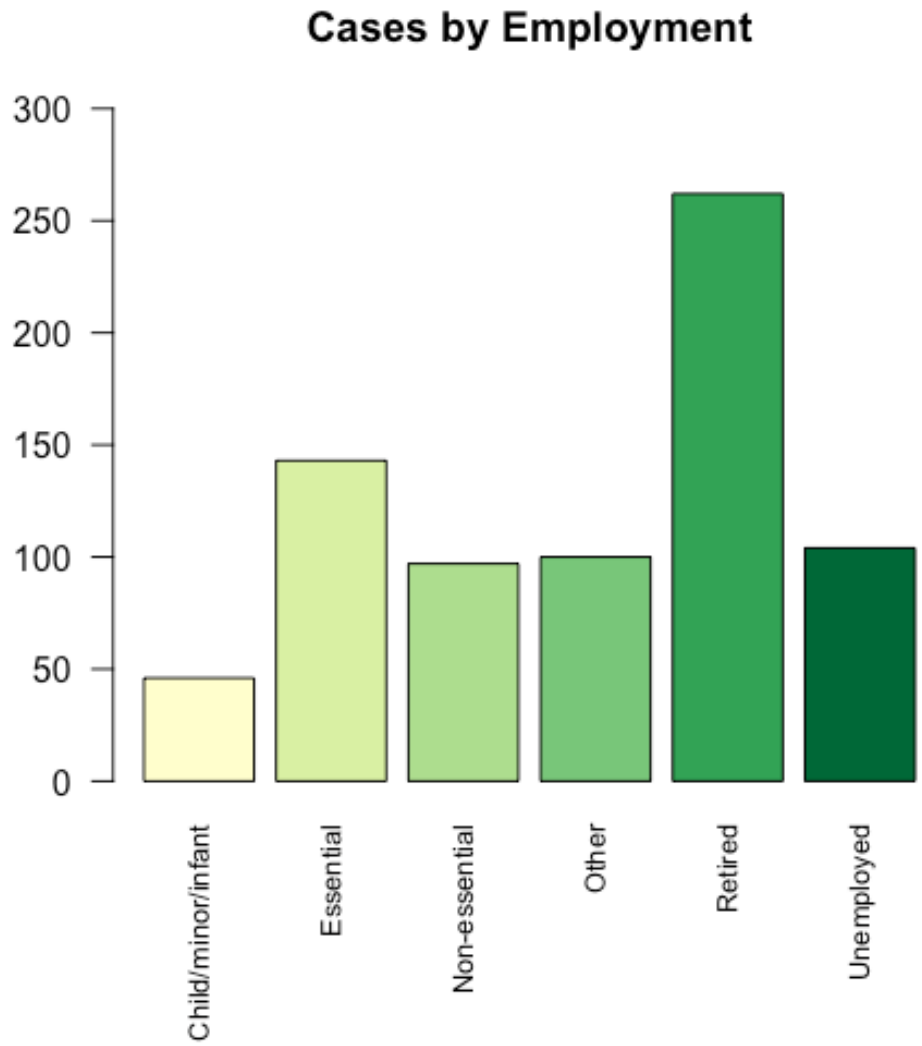


Clinical Characteristics:

- Hospitalized
  - Average hospitalization time: 7.9 days
- Outcomes
  - Recovered - 1434 (90.1%)
  - Died - 142 (8.9%)
  - Lost to Follow-up - 15 (0.9%)

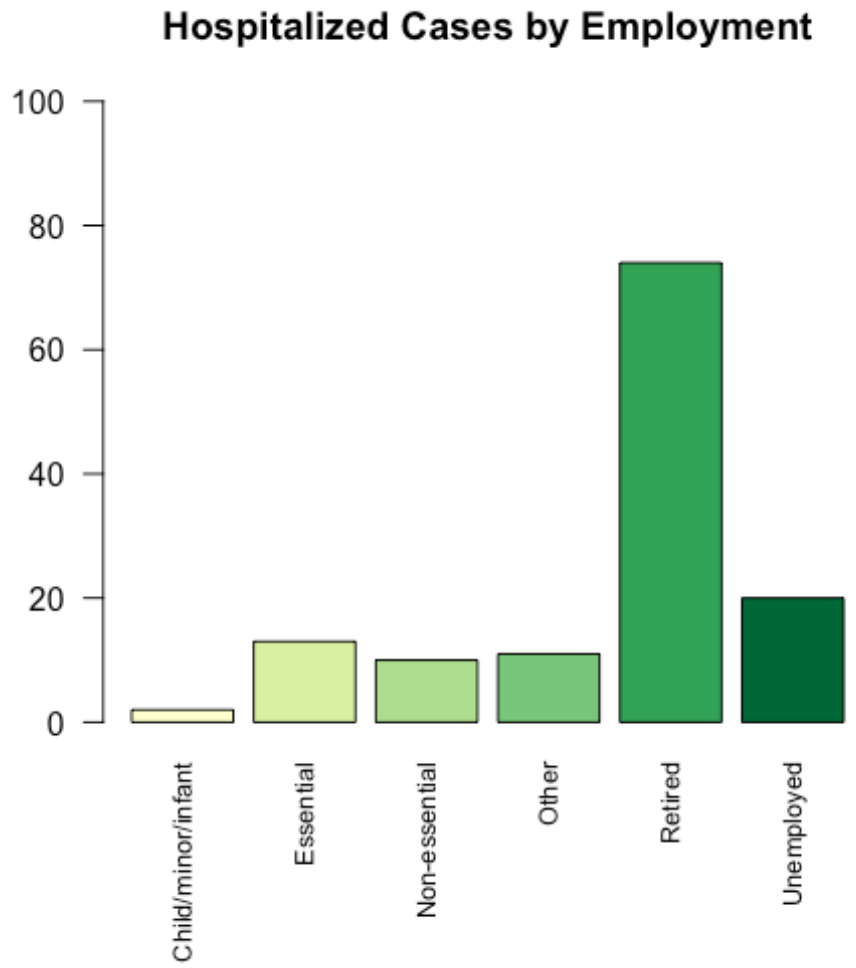
Cases by employment:

Essential	143 (19.0%)
Non-essential	97 (12.9%)
Retired	262 (34.8%)
Unemployed	104 (13.8%)
Child/minor/infant	46 (6.1%)
Other	100 (13.3%)



Hospitalization by employment:

Essential	13 (10.0%)
Non-essential	10 (7.7%)
Retired	74 (56.9%)
Unemployed	20 (15.4%)
Child/minor/ infant	2 (1.5%)
Other	11 (8.5%)



Who is more likely to be hospitalized?

62%

- Women are less likely than men to be hospitalized

27.5x

- Pregnant

17.4x

- Seniors

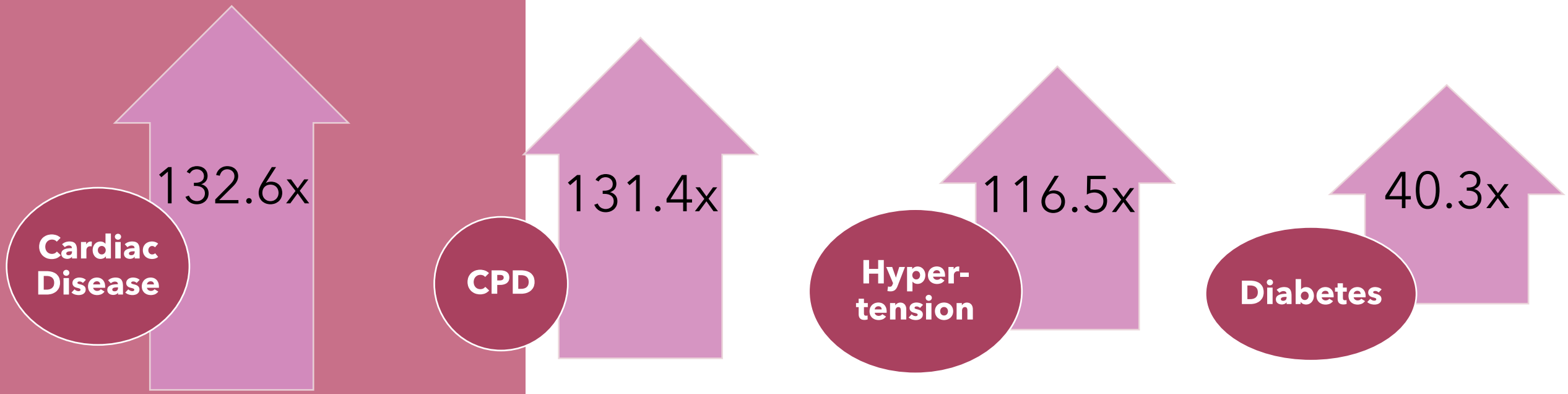
5.9x

- Unemployed

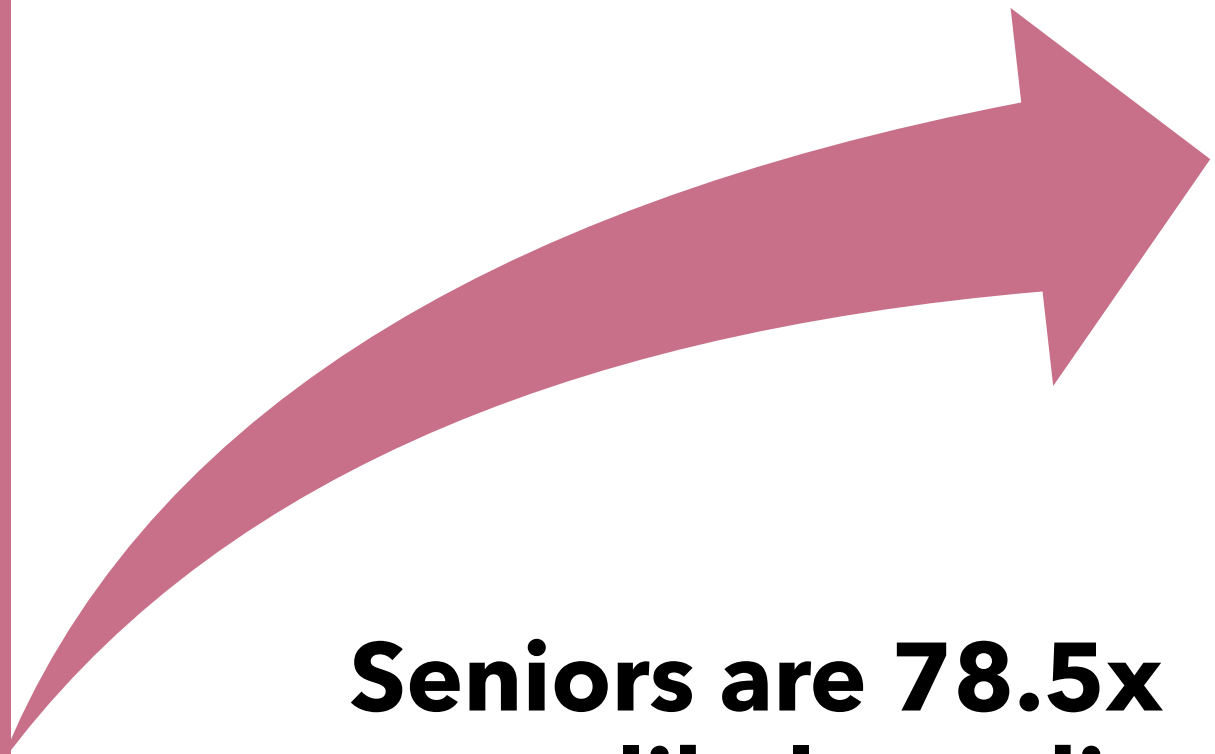
Do some diseases make us more likely to die of COVID-19?

89%

- "Other" have less probability of dying



Who is more likely to die of COVID-19?



Seniors are 78.5x more likely to die

Conclusions:

- In Chelsea, those who are most likely to get COVID are Hispanic essential workers in their 40´s and retired persons.
- Retired persons and older people are more likely to be hospitalized and die of COVID
- Patients take about 1 week between onset of symptoms to testing, which may lead to increased spreading
- Almost 35% of positive cases have no symptoms

Conclusions:

- While Hispanics are less likely to die of COVID, those with cardiac or pulmonary diseases, hypertension and diabetes are much more likely to die of COVID.
- While women are less likely than men to be hospitalized, pregnant women are highly likely to be hospitalized.
- Those with asthma, unemployed and retired persons are much more likely to be hospitalized.

Thank you,
wash your hands,
wear a mask, and
avoid social gatherings