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### A Data Scientist Looks at Covid19 Part II: Mythbusting

Anthony Breitzman

Rowan University, [breitzman@rowan.edu](mailto:breitzman@rowan.edu)

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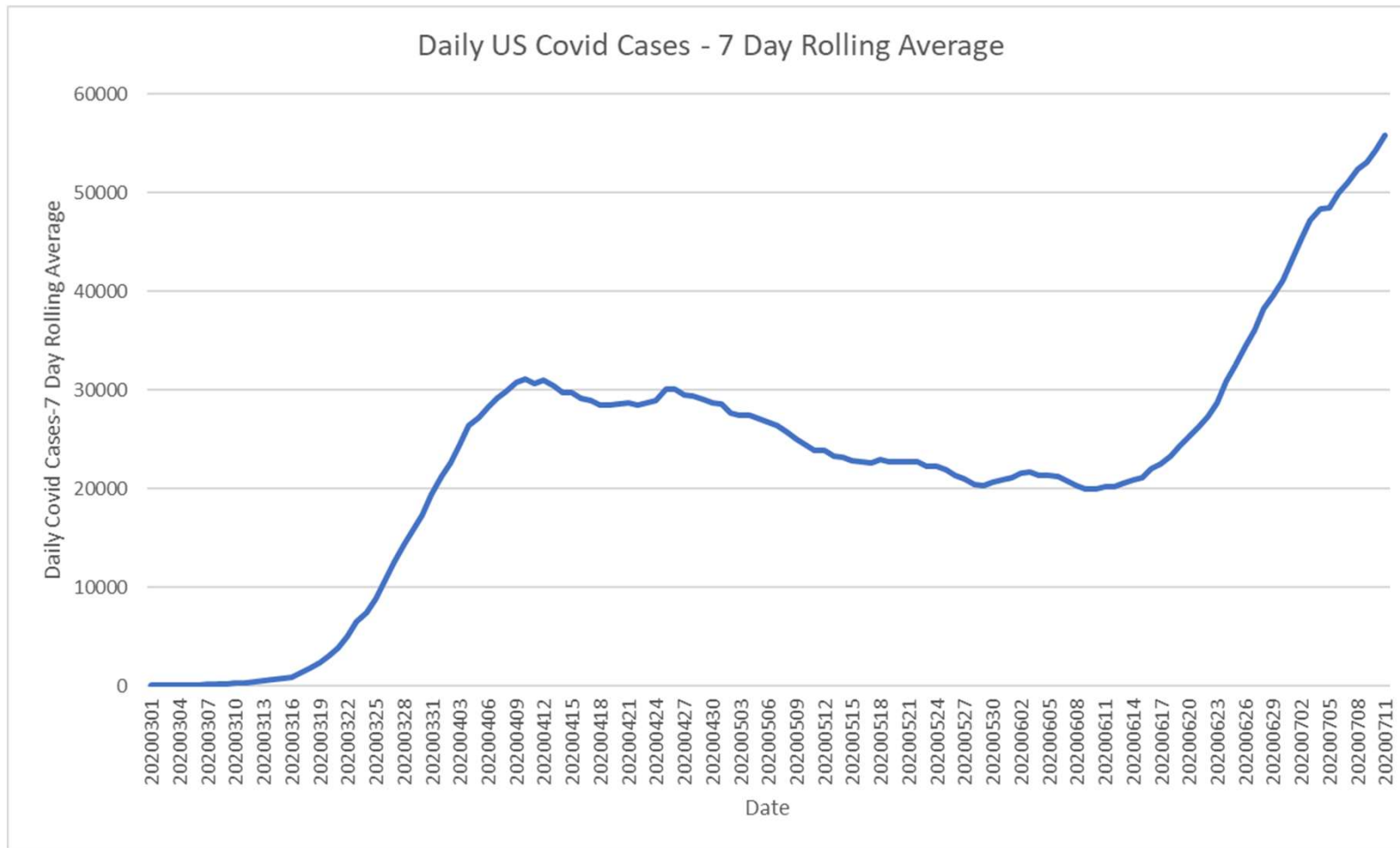
# A Data Scientist Looks at Covid19

## Part II: Mythbusting

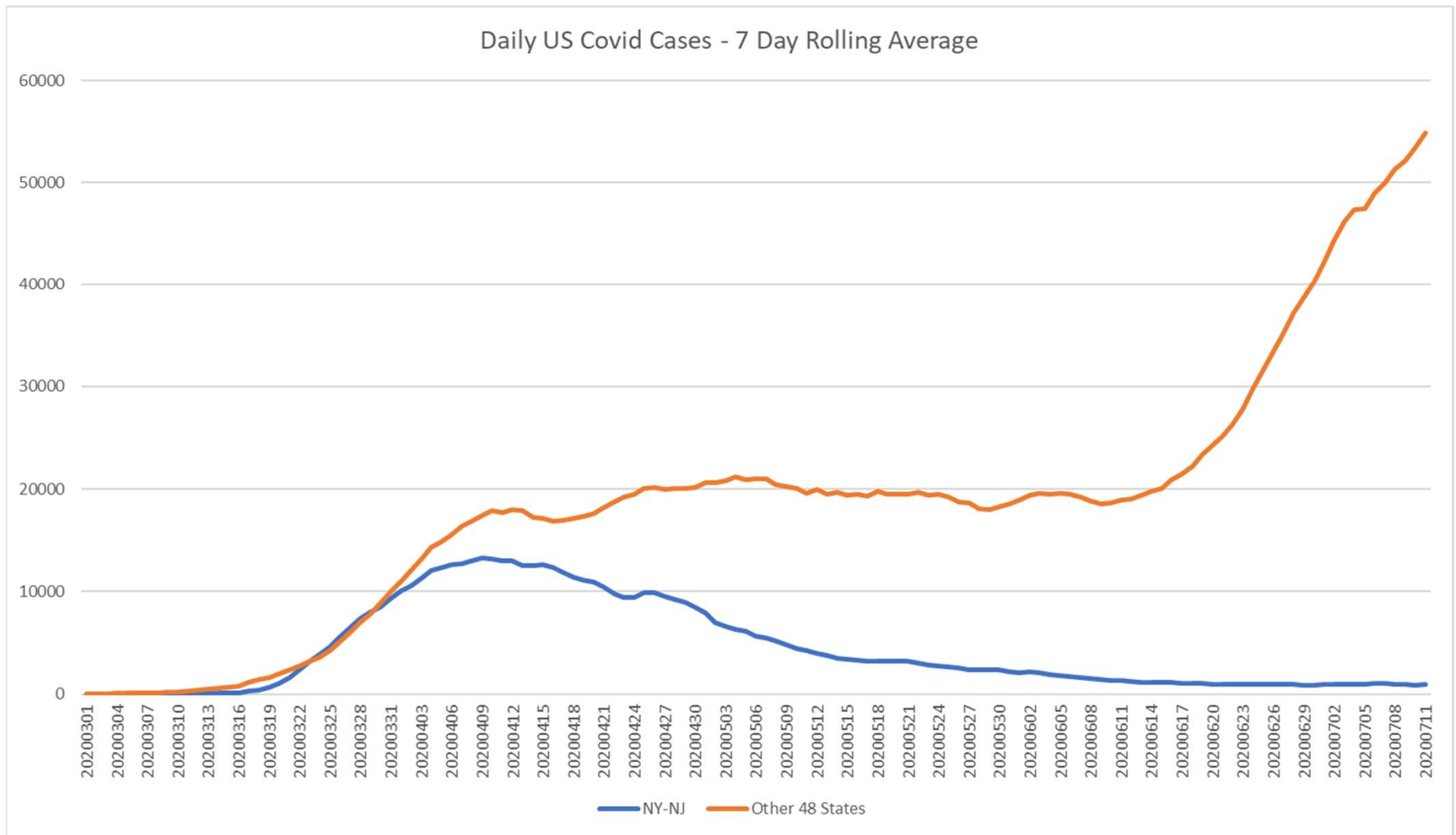
Anthony Breitzman, PhD  
Associate Professor of Data Science and Computer  
Science  
Rowan University  
7/13/2020

## Today we debunk 2 Covid19 storylines:

1. The US is in a second wave. False.
  2. We have an increase in cases because we are doing more testing. False
- Note all data comes from <https://covidtracking.com/data/api>

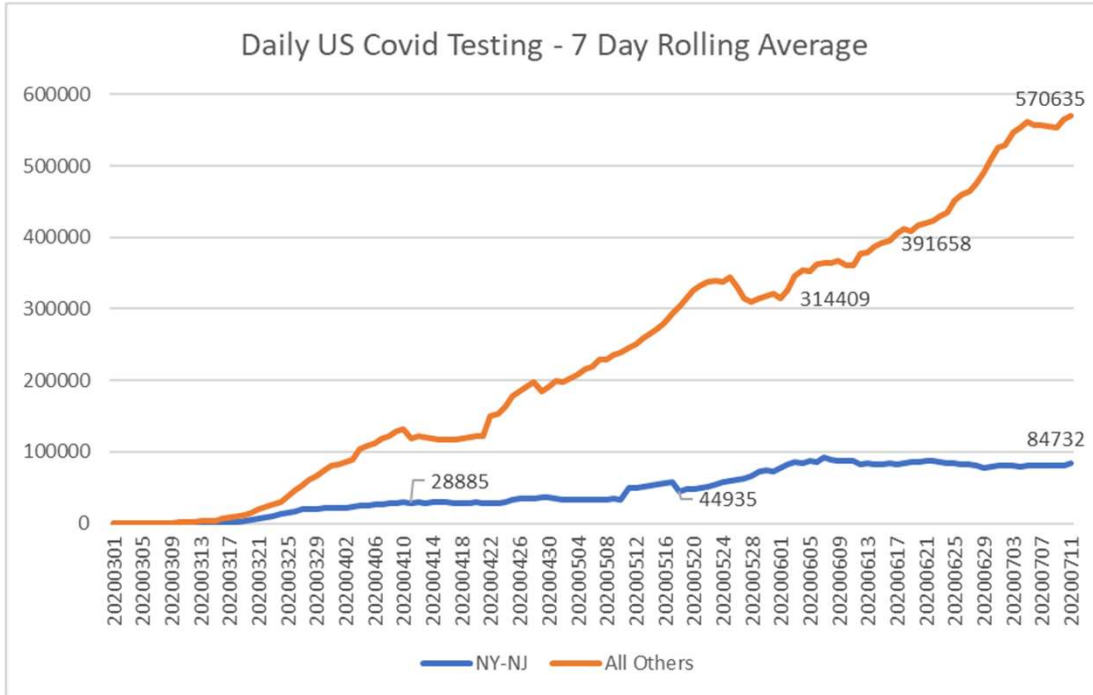
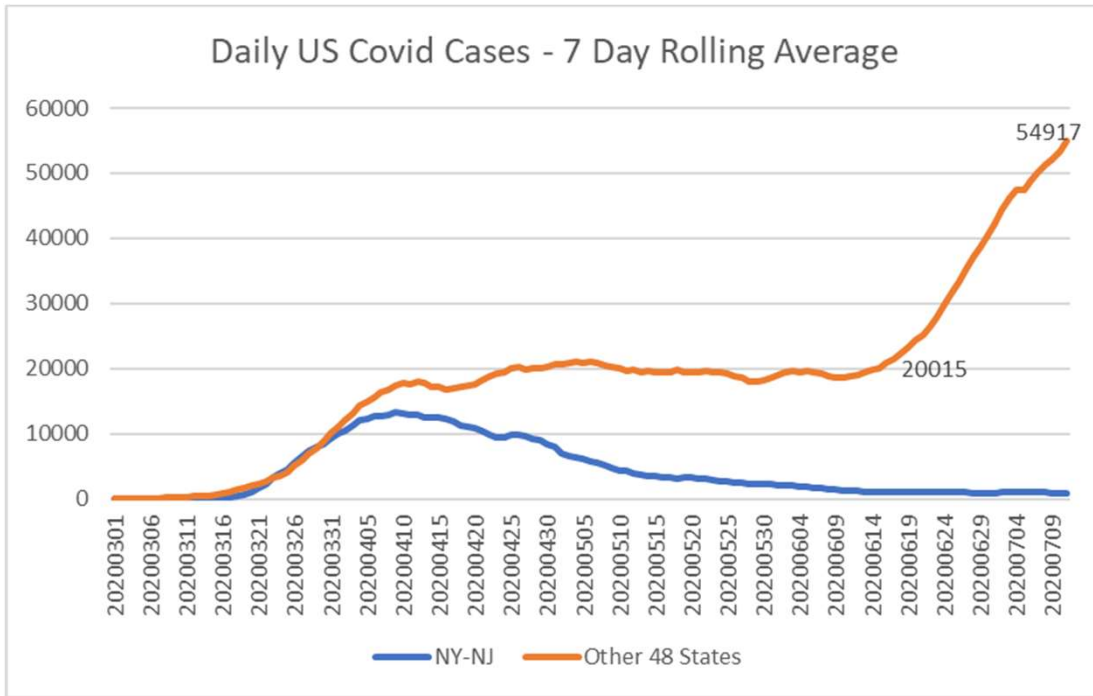


- The case for a second wave relies on the idea that cases peaked at just above 30,000 per day before dropping to about 20,000 and then turning back up.
- If it was a true wave wouldn't we expect to dip to somewhere near 0 before the upturn?



- The second wave theory completely collapses when we pull out NY and NJ. The decline from 30,000 to 20,000 was due entirely to declines in NY and NJ. The other 48 states had a plateau but no decline before the upturn. No second wave, just a continuation of the first wave

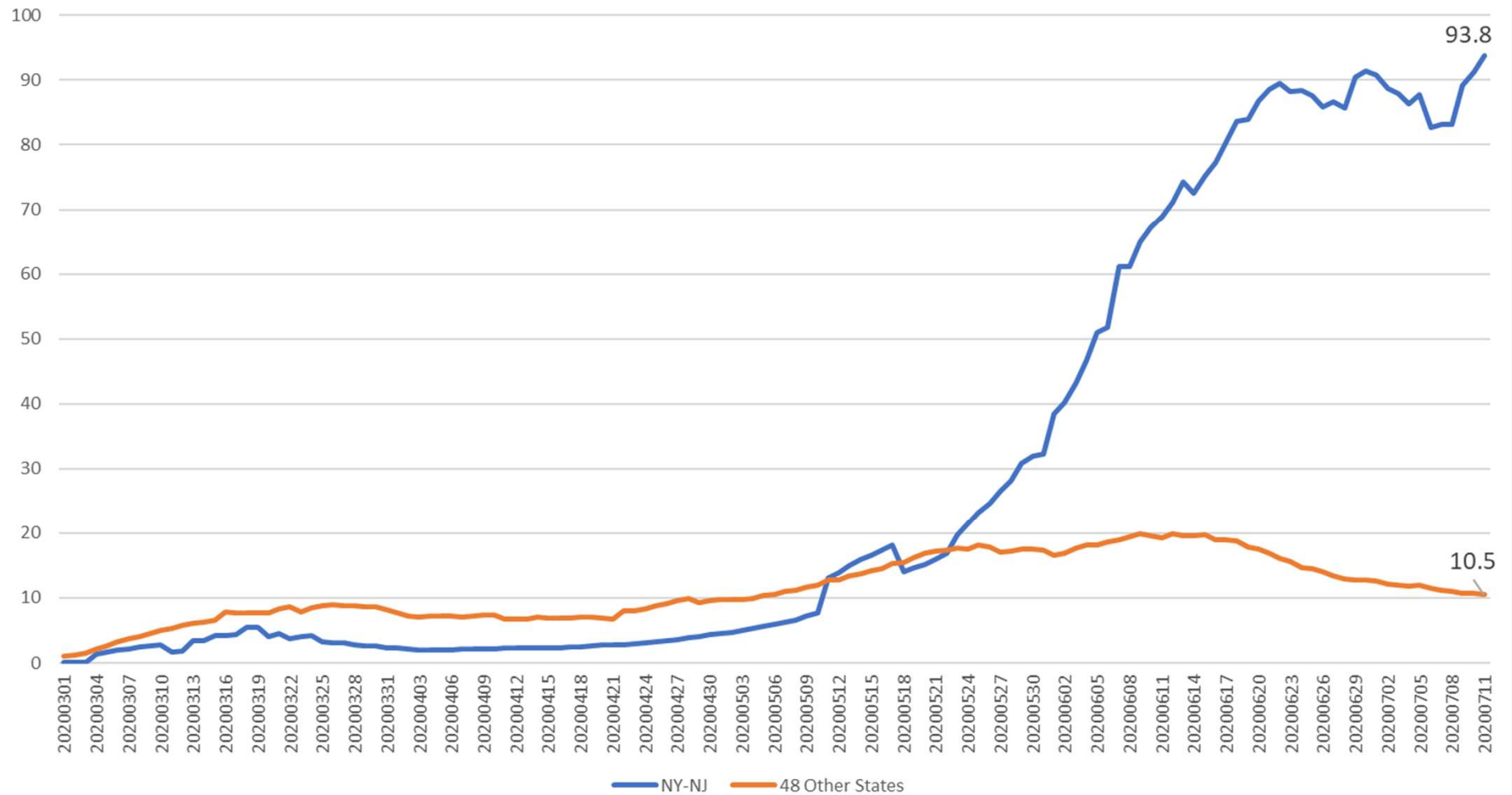
**Now let's look at whether the upturn is due to increased testing**



- NY-NJ cases peaked on April 10 and have declined ever since while testing has tripled
- The other states have had a steep increase in cases over the last 4 weeks but testing increases have not been nearly as steep
- As the table below shows in the 48 states not named NY-NJ testing has increased 70% in the last 4 weeks, but cases have increased 217%

Cases	10-Jun	11-Jul	% Increase
NY-NJ	1224	1061	-13.3%
All Others	19432	61701	217.5%
<b>Testing</b>			
NY-NJ	81734	107329	31.3%
All Others	346062	589202	70.3%

### Tests Divided by Cases - 7 Day Rolling Average



- This last chart shows that in the 48 states not named NY or NJ that testing versus positive cases was much higher 4 weeks ago than currently.
- In NY-NJ only one out of 90 tests is positive while in the other 48 states it's about one out of 10. Four weeks ago in the 48 states it was only 1 out of 20.
- If cases were increasing due to testing we would have a lower positive rate in recent weeks



## Summary

1. The US is not in a second wave
2. Cases are not increasing because of increased testing