

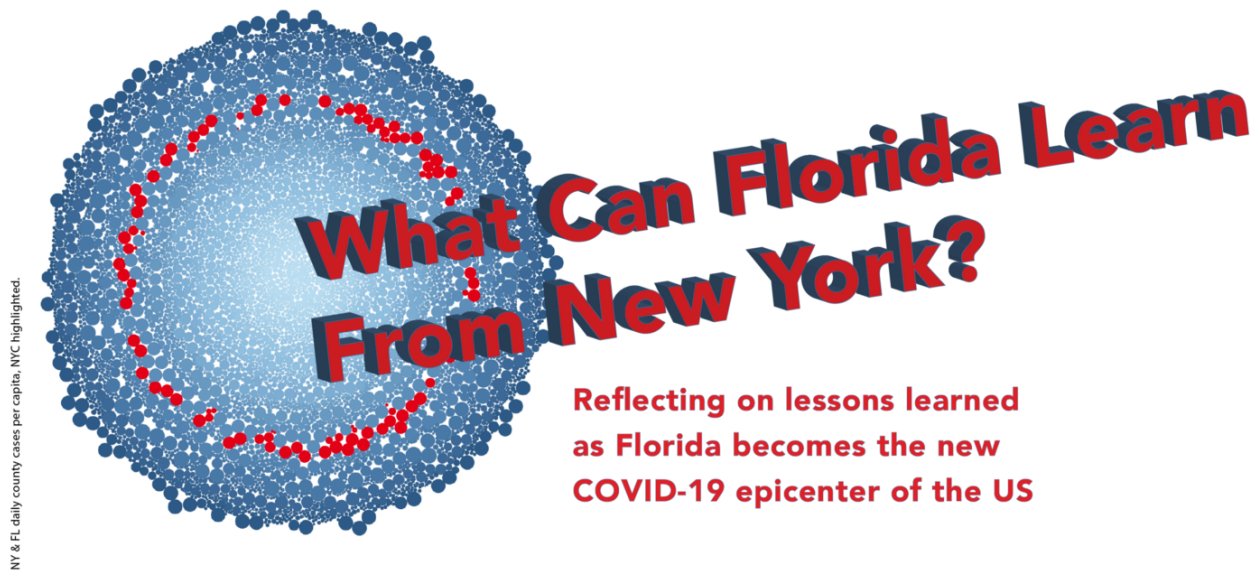
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Joaille Araujo

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by Joaille Araujo, Tyler DeGroff, Shannon Ehmsen, Erinlea McGowan-Moniz, and Kunyu Zhang

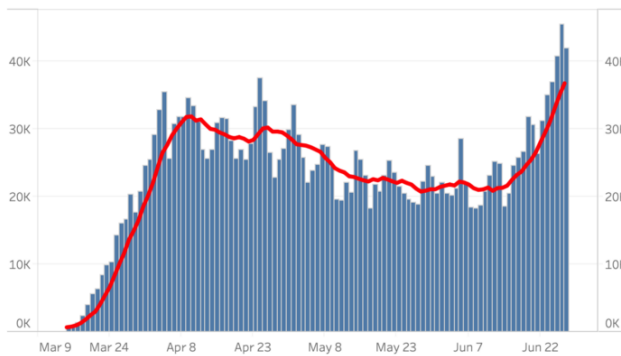
Access the COVID-19 Interactive Dashboard [here](#).

When COVID-19 (i.e., the Coronavirus) was first detected in the U.S. in early 2020, federal and state agencies were unprepared for the devastating effect it would have on the

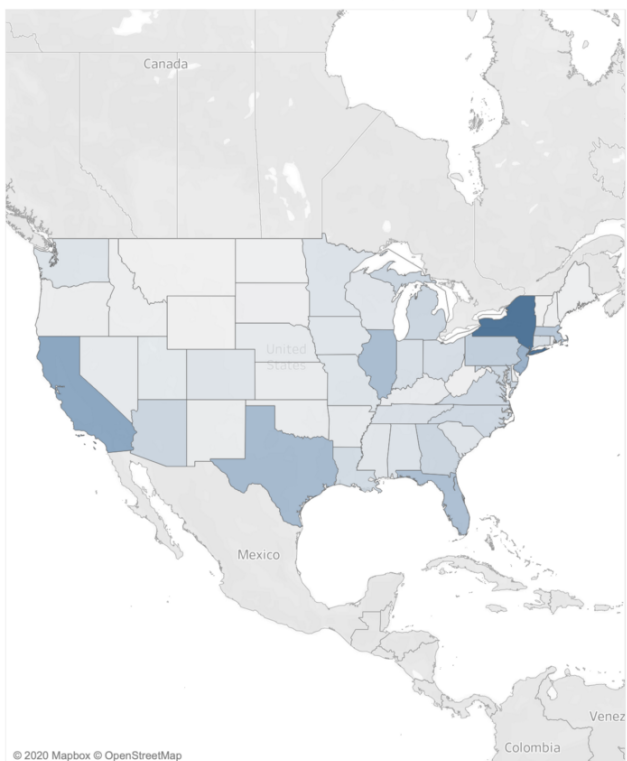
country's most vulnerable people; by June it had claimed 100,000 U.S. lives. New York state was hardest hit; its confirmed case count grew as it quickly became the epicenter of the outbreak in the U.S., and, eventually, the world. State and local governments strategized methods to keep citizens safe and slowly ramped up measures and restrictions at varying times and degrees as cases and deaths continued to climb.

Nation-Wide Perspective

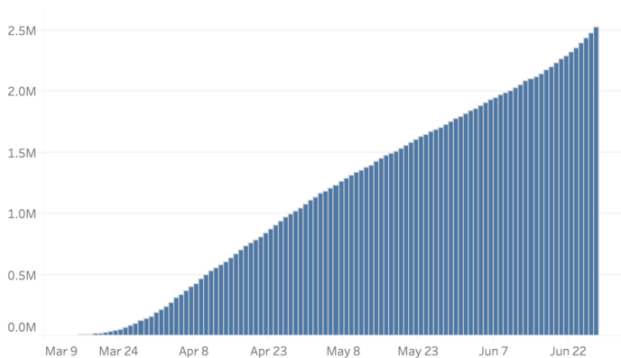
Daily New Cases with 7-Day Moving Average



State-Level Cumulative Total Cases - 6/27/2020



Cumulative Total Cases



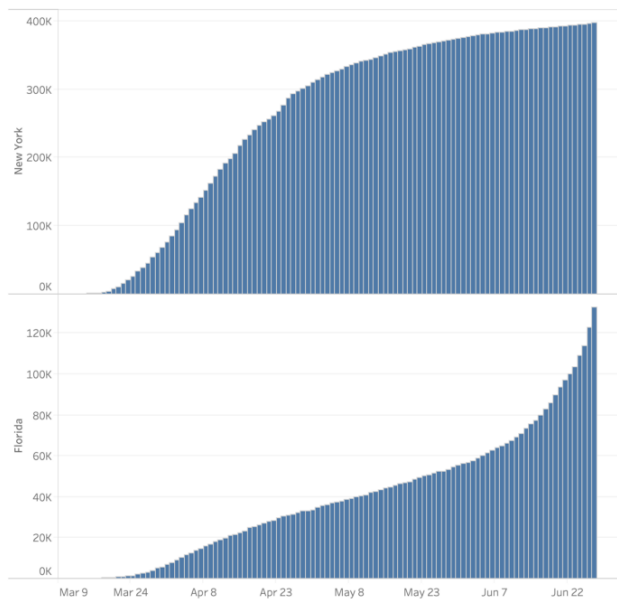
Nation-Wide Perspective Dashboard

While New York City (NYC) was considered the epicenter of the outbreak at its peak, elsewhere, cases continued to grow exponentially. Data collected shows a high rate of COVID-19 cases in NYC; however, after accounting for population density, the growth rate in other New York counties surpassed NYC in terms of

cases and subsequent deaths. Infection rates in other counties may have been influenced by visitors to NYC, due to the high number of daily commuters to the metro area and the city's status as a popular tourist destination, combined with lack of early guidance from official sources and the high contagion rate of the virus.

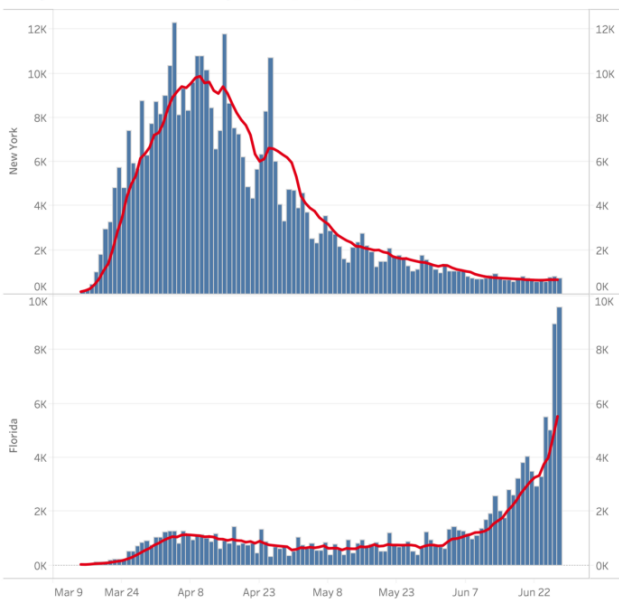
State-Wide Perspective for Notable States: New York and Florida

Cumulative Total Cases



■ Cases (Cumulative or New)
■ 7 Day Moving Average

Daily New Cases with 7-Day Moving Average

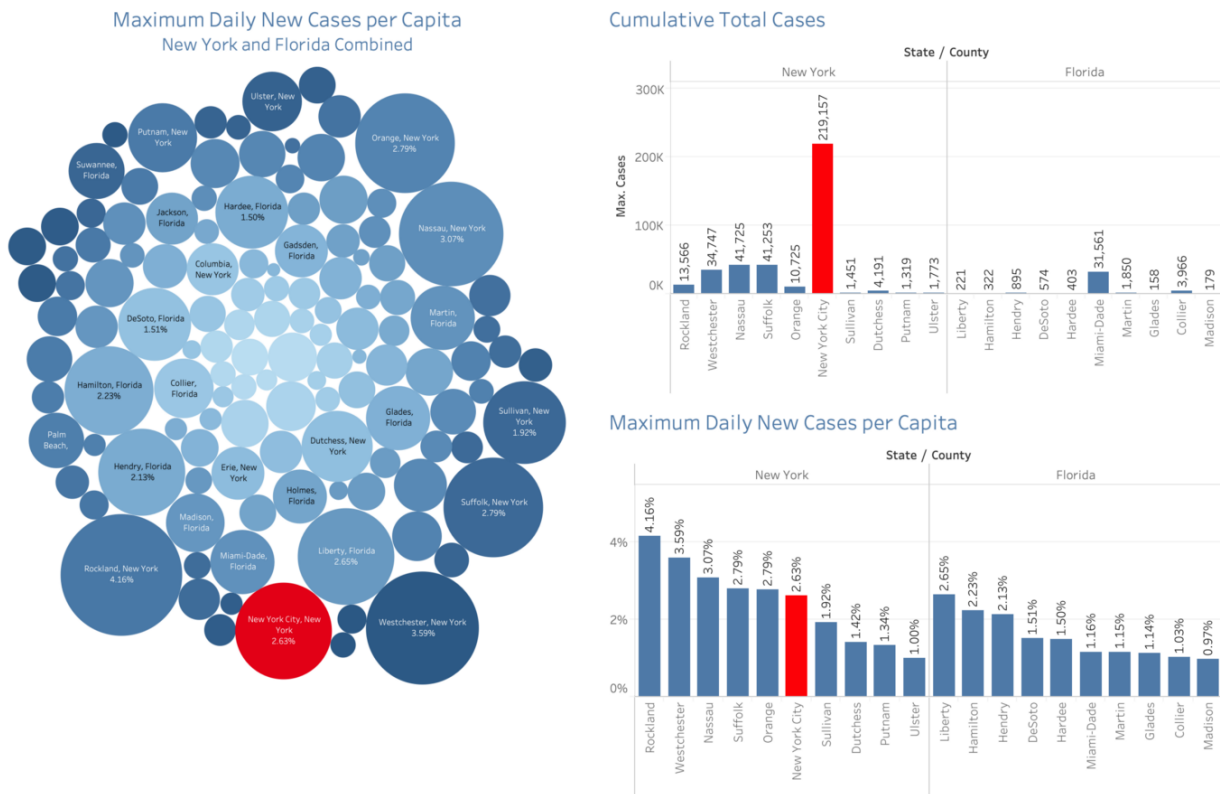


State-Wide Perspective Dashboard

New York (city and state) are still experiencing high rates of infection. Other states have seen dramatic spikes in newly diagnosed cases as they begin to re-open and many residents resist public health warnings to wear masks. Whereas New York State's COVID-19 cases peaked at 12,274 new infections reported April 4th, Florida, by contrast, set its own one-day record (9,580 new cases reported on June 27th, 2020).

As illustrated above, interesting patterns emerge. Cumulative case counts in New York state reached their inflection point at the beginning of May and have since consistently leveled off. Florida's cumulative case count curve has progressed exponentially since mid of June, suggesting the virus has spread in an unencumbered fashion. Lastly, we observed Florida's record-setting new case count on June 27th nearly doubled its previous 7-day average. Evidence suggests more dramatic case numbers may soon emerge from Florida.

County-Wide Perspective for Notable States: New York and Florida



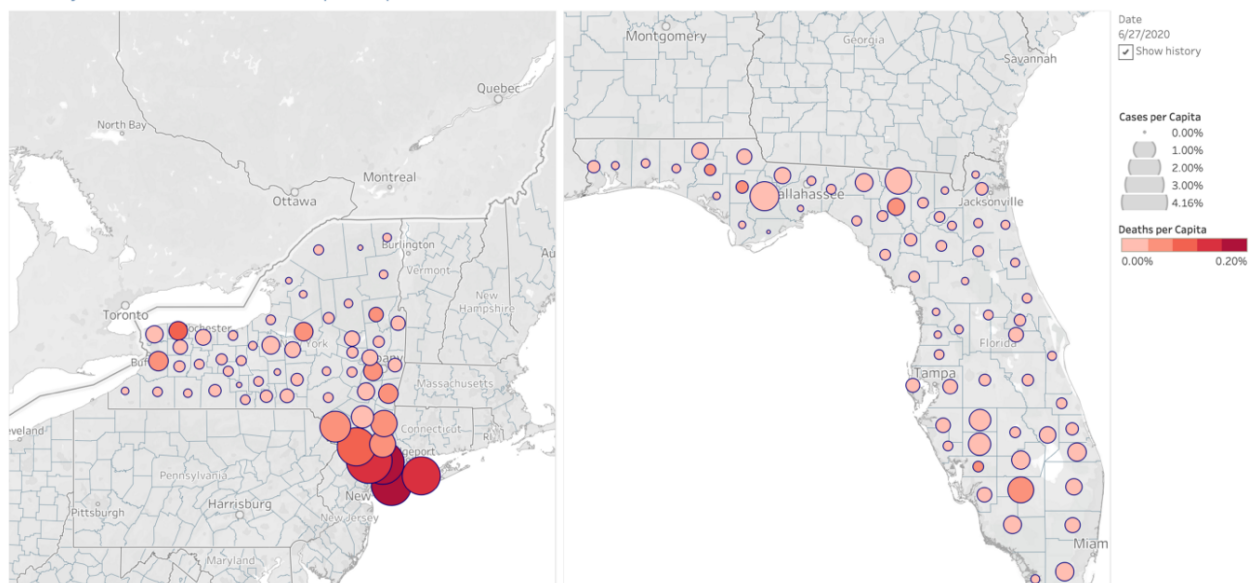
County-Wide Perspective (NY and FL) Dashboard

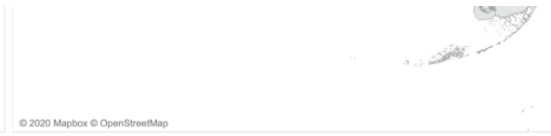
Most cases are concentrated in NYC and surrounding counties. The bigger bubble sizes represent more cases per capita, and darker red colors indicate a higher number of deaths per capita.

Rockland, Nassau, Westchester, Suffolk, and Orange are the top five New York counties with COVID-19 cases per capita surrounding New York City. Rockland has the highest cases per capita, followed by Westchester. Rockland and Orange Counties have higher concentrations of ultra-Orthodox Jewish communities; due to cultural norms within these communities, social distancing was not adopted initially in March. NYC shows a higher death rate per capita than other counties, yet fewer cases per capita. However, the high volume of infected cases (over 219,000) overwhelmed the healthcare facilities and contributed to the higher number of deaths per capita in NYC.

In Florida, which has been affected state-wide, the three most concentrated areas of infection are in the relatively small Hendry, Hamilton, and Liberty Counties. Liberty has the highest number of cases per capita, but Hendry County has the highest number of deaths per capita. The lack of resources in smaller counties may have contributed to the advanced rates of infection.

County-Level Cases and Deaths per Capita for Notable States: New York and Florida





County-Wide Cases and Deaths (NY and FL) Dashboard

As cases in Florida continue to rise, the county-level health resources available to those diagnosed with COVID-19 must be considered; as each county's division of resources may not be in proportion to the strain on their communities. The number of actual cases diverges from the value of cases per capita. As of June 27th, Liberty County in Florida reported 221 cases, or 0.02633% per capita, exceeding New York City's Cases per capita which stands at 0.02624% with a total of 219,157. While Liberty County in Florida and NYC have the same amount of cases per capita (0.026%), the former's 221 total reported cases is dwarfed by NYC's 219,157. Less-populated states without the capacity to effectively slow the spread of COVID-19 need to be examined beyond their cases numbers, as the virus hits communities of all sizes.

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