

COVID-19 SPIKES AFTER HOLIDAY WEEKENDS: AN ANALYSIS OF THE IMPACT OF MEMORIAL DAY WEEKEND

GEORGIA IS STILL IN THE RED ZONE

By Dr. Amber Schmidtke

Sept. 1, 2020

According to the White House Coronavirus Task Force, Georgia remains in the red zone with case rates and death rates that are twice as high as the national average. There are some pieces of good news -- it appears that cases are diminishing based on date of symptom onset and date of report. Testing capacity has improved in much of the state, and hospitals are opening up more beds. Reported hospitalizations are currently at their lowest rate since July, though there has been a decline in hospitals that are reporting data to the federal government.

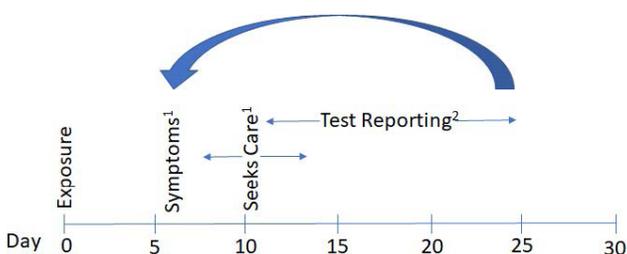
We need to protect the gains we've made in Georgia. This is not the time to lose our focus on measures we know can reduce the spread of COVID-19. Here's why: As we head into the Labor Day weekend, a month after schools began to reopen in Georgia, it is prudent to look back on a recent holiday weekend — Memorial Day — that may have contributed to a surge in cases in June and July.

That surge in cases was accompanied by a surge in hospitalizations that strained our healthcare infrastructure across the state. It is therefore important that we take steps over Labor Day to limit disease transmission to protect the fragile gains that have been made.

CHOICES MADE TODAY AFFECT THE NUMBER OF CASES IN A FEW WEEKS

The typical course of illness, from a public health perspective, is provided below. The Georgia Department of Public Health provides case graphs based on date of case report and date of symptom onset. For the latter type of graph, cases are backdated from the date they are reported to the date on which a patient first began experiencing symptoms, when known.

Graph 1: Typical Course of COVID-19 By Day



¹<https://www.cdc.gov/coronavirus/2019-ncov/hcp/planning-scenarios.html>

²<https://www.13wmaz.com/article/news/local/central-georgia-sees-delays-in-covid-19-test-results/93-579762bd-5e9f-4a9e-bc8a-f01b091f6073>

This timeline helps us to better understand some of the delays in reporting, but also that the choices we do or do not make today have impacts on cases two weeks from now and deaths three to four weeks from now.

If we look at the way the pandemic has unfolded in Georgia, Memorial Day travel and gatherings may have been an important contributor to our summer surge in cases. We experienced our previous “peak” in cases around April 24 when Georgia reopened. That peak is minor in comparison to the recent number of reported cases. After the reopening, cases looked relatively okay for a time. Then Memorial Day weekend happened.

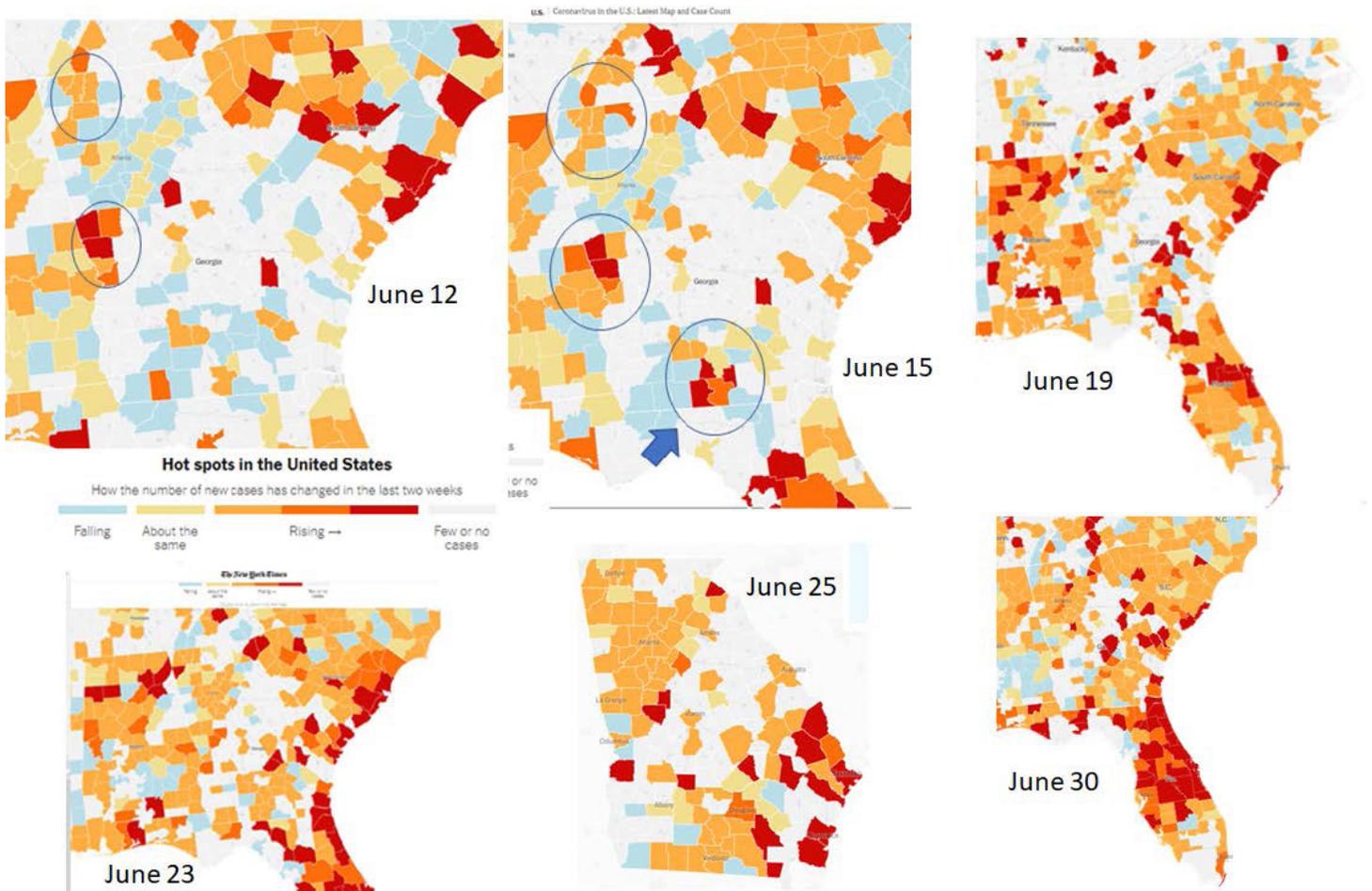
Graph 2: Two Weeks After Memorial Day



The summer surge in cases began around the second week of June, two weeks after the holiday. At that time, cases were falling in the Atlanta metro. Meanwhile, cases were increasing most dramatically in areas along the Georgia borders. As time progressed, the gains seen in the Atlanta metro were reversed and cases began to increase. On Memorial Day (May 25), the 7-day average case count was 605.9 according to the Georgia Department of Public Health. At the peak of the case surge on July 11, the seven-day average case count was 4,342.

In other words, the surge resulted in a 616% increase in daily cases.

Graph 3: Hot spots occurred in areas noted for tourism and hospitality industries

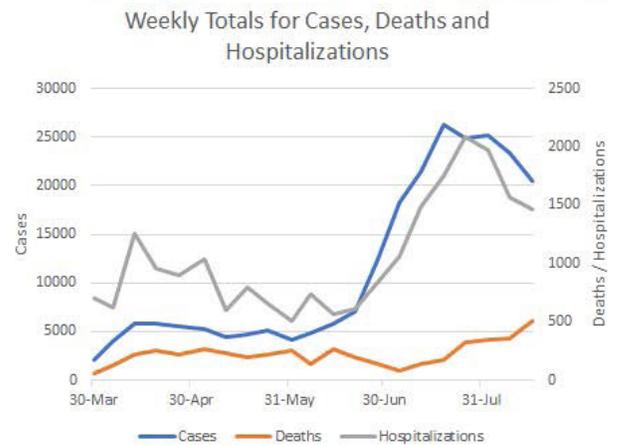
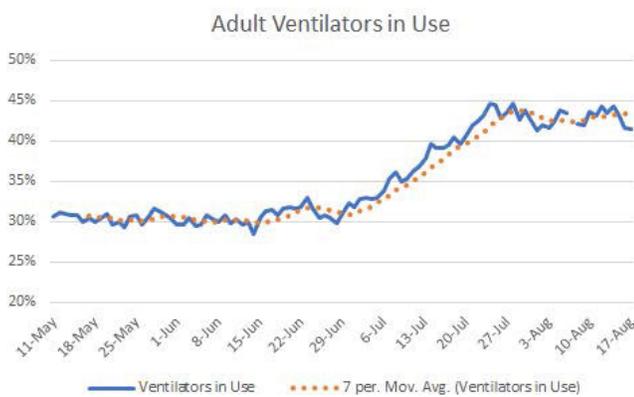
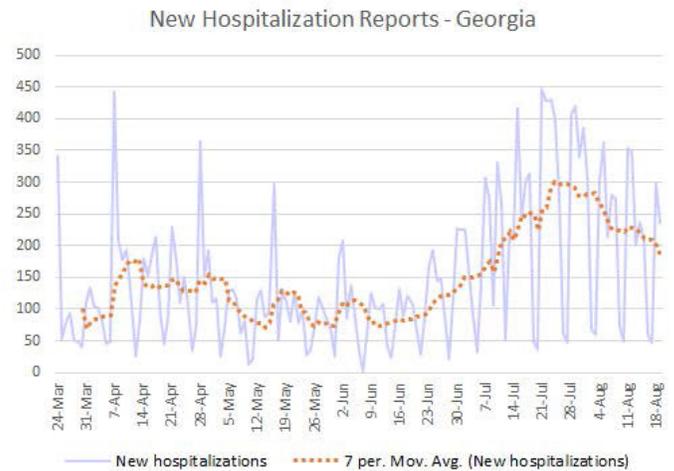


Screen shots from the New York Times Coronavirus Tracker

Memorial Day is also the date on which George Floyd was killed, an event that sparked nationwide protests, including in Georgia. However, it doesn't appear that the protests were a large driver of disease transmission. The disease hot spots were along the Georgia borders, areas noted for tourism and hospitality industries. On the other hand, the counties that featured the largest protests (Fulton and DeKalb counties) saw modest increases during the case surge; but they weren't hot spots like other areas, despite their population density.

As these cases accumulated, so did hospitalizations and ventilator usage, to rates not previously observed in the pandemic. Current hospitalizations increased 169% from June 26-July 29. Ventilator use was stably around 30% prior to the surge, then climbed to a maximum of 45%. It has remained around 43% ever since the surge.

Graph 4: Cases, Hospitalizations and Deaths in Georgia



The graph on the bottom right shows us the weekly trend for cases, hospitalizations and deaths. The takeaway is that when cases surge they are followed shortly by hospitalizations. The increase for deaths started about three weeks after the surge in cases. The surge in deaths took us from an average daily death count of 19.4 on July 3 to 51.6 on July 27, or 166% increase.

The Fourth of July holiday did not appear to have as significant of an impact on disease transmission as Memorial Day weekend. It is possible that news reports of overwhelmed hospitals discouraged many from participating in their usual Fourth of July festivities, which aided in limiting disease transmission. It is an important reminder of the power we have as individuals to interrupt the spread of this illness in our communities.

As a reminder, the things we do or don't do today to limit disease transmission will have impacts on cases two weeks from now and deaths three to four weeks from now. For that reason, I am imploring Georgia's citizens to make smart decisions about Labor Day weekend. The virus depends on people to travel to its next human host. Here are some tips on how to do your part to limit disease transmission during the holiday weekend.

- 1.** Limit social gatherings to 10 people or fewer. Ideally, hold these events outside and encourage people to be self-contained. Bring your own food and drinks, keep at least 6 feet away from each other and enjoy one another's company from a safe distance. As a reminder, you are only as safe as the most exposed person in your social circle. If one person in your gathering is exposed to many people for work or other reasons, your entire social group shares that exposure risk.
- 2.** If you're going on vacation, make plans to be as self-contained as possible. This might mean doing one (masked) grocery-store run when you arrive and then preparing your own meals or ordering takeout from restaurants in the local area. We can support small businesses while staying safe.
- 3.** Wear masks any time you are around people who don't live with you. Consider keeping a journal of who you and your family encounter. This can aid contact tracing investigators who might be overwhelmed and falling behind. In addition, your contacts are more likely to take a call from you than from a random number.
- 4.** Flu shots are already available in some areas. Make a commitment now to get the flu shot. We know that COVID-19 and influenza co-infections are possible.

Dr. Amber Schmidtke provides daily analysis of COVID-19 data trends in Georgia that helps to provide context over time and region, plus comparisons to national trends, research updates and weekly summaries. Dr. Schmidtke has a Ph.D. in Medical Microbiology and Immunology. She has worked at Creighton University, the Centers for Disease Control & Prevention, and Mercer University School of Medicine.