



Analysis of COVID-19 Trends in the United States

W. Capra Data Analytics Team

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Introduction

Across the globe, the COVID-19 pandemic has quickly changed business landscapes across all verticals in unprecedented fashions. Cases and deaths are accelerating, as well as business closures and job losses. In an effort to keep W. Capra, our clients, and other external partners up-to-date on the latest trends across the United States, we publish this report on state-by-state COVID-19 data trends. Our goal is to identify:

- How states' handlings of COVID-19 develop over time
- Which states are approaching "containment," and
- What environmental, regulatory, and cultural factors drive containment

As we look at state-by-state analyses, there are many factors to keep in mind, such as population density, success at social distancing, healthcare networks, lock-down dates, weather, etc. All of these appear to have some effect on the transmission and successful containment of the disease.

Trends we consider to be important indicators as to how the pandemic is affecting states:

- **Testing Volume and Capacity:** Indicates the accessibility of testing and the state's ability to meet testing demand
- **Case Velocity:** Number of new cases reported each day
- **Death Velocity:** Number of new deaths reported each day
- **Positive Case Rate:** Percentage of tests performed that end in a positive result. Testing rates are skewed towards symptomatic patients due to testing policies. This helps to express success of controlling the transmission of the disease
- **Disease Death Rate:** Percentage of positive cases that lead to death. This is driven by the performance of healthcare systems and the general health of underlying population.
- **Case Acceleration:** Change in Case Velocity. If Case Acceleration is positive, a state is reporting a greater number of new cases day over day. If negative, Case Velocity is decreasing, and the state is reporting a lesser number of new cases day over day.
- **Death Acceleration:** Change in Death Velocity. If Death Acceleration is positive, a state is reporting a greater number of new deaths day over day. If negative, Death Velocity is decreasing, and the state is reporting a lesser number of new deaths day over day.

Disclaimer

The W. Capra Data Analytics Team is comprised of data scientists and analysts. We are not medical professionals nor policy makers. As such, this report is not to be construed as providing guidance. We are data-driven professionals that are interested in seeing how we can leverage data to understand the trajectory of states in the COVID-19 pandemic. As such, we advise that you make your own assessment as to actions to take based on this information. Please carefully consider local laws and follow the advice of medical professionals and policy makers at local and national levels.

Data Sources

Data has been gathered from the following sources. The most recent observations are from June 17. In general, the numbers seen here lag behind The New York Times and John Hopkins University, which are automated trackers. Instead, The COVID Tracking Project manually gathers and double checks all data to "emphasize accuracy and context over speed". Because of this, case and death counts are about 5% smaller here than what you see reported by other automated sources.

- The COVID Tracking Project, <https://covidtracking.com/>

- New York Times COVID Data, <https://github.com/nytimes/covid-19-data>
- COVID-19 Community Mobility Reports, Google, <https://www.google.com/covid19/mobility/>
- Annual Estimates of the Resident Population for Counties in the United States, U.S. Census Bureau, https://www.census.gov/data/datasets/time-series/demo/popest/2010s-counties-total.html#par_textimage_739801612
- Normalized Maximum Heatmap by Sergy Bryl', <https://analyzecore.com/2020/05/04/the-spread-of-covid-19-across-countries-visualization-with-r/>

Benchmarks

We understand that states are experiencing and will pass through various states of their handling of the pandemic. Obviously, positive outcomes for states occur as new daily cases and deaths begin to drop; this is commonly referred to as the “peak” for a particular region. However, we are also interested in tracking the acceleration rates of cases and deaths. We see that consistent reduction in acceleration is an early indicator of positive outcomes. From global trends, we expect velocity and acceleration rates (both new cases and deaths) to follow a trend similar to the one depicted in Figure 1.

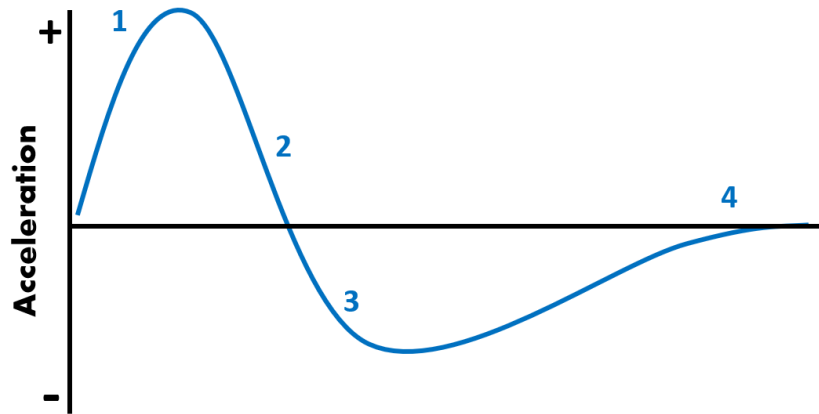


Figure 1: Acceleration Curve

- 1 - Exponential Stage: New daily cases and deaths are increasing. Velocity and acceleration are positive.
- 2 - Linear Stage: New daily cases and deaths are flat. Velocity is positive while acceleration is approaching zero.
- 3 - Improvement Stage: New daily cases and deaths are decreasing. Velocity is decreasing while acceleration is negative.
- 4 - Containment Stage: Zero or few new daily cases and deaths. Velocity is near zero, while acceleration is slightly negative or zero.

Later in the report we will take a closer look at measuring and ranking accelerations. First, let’s take a look at some basic rates across the country to help form the foundations of how to look at and discuss COVID-19.

Analysis

Testing Rates

Inconsistent testing data reinforces that testing is still not being performed at the paces desired by most states. The ability to test wide populations quickly will be crucial to not only achieving containment but

also maintaining it. Initial decelerations of cases and deaths is good sign; however, until states have the capacity to test people at the appropriate scales, states will continue to be at risk of resurgences in COVID-19 cases/deaths.

Currently, 7.63% of the entire US population has been tested. This is rather small from a sampling perspective, but not too far off from the rest of the world. Keep in mind that this is measuring number of tests administered, so it is likely that the true population rate is lower as some individuals have been tested more than once. The distribution of these tests is also rather uneven.

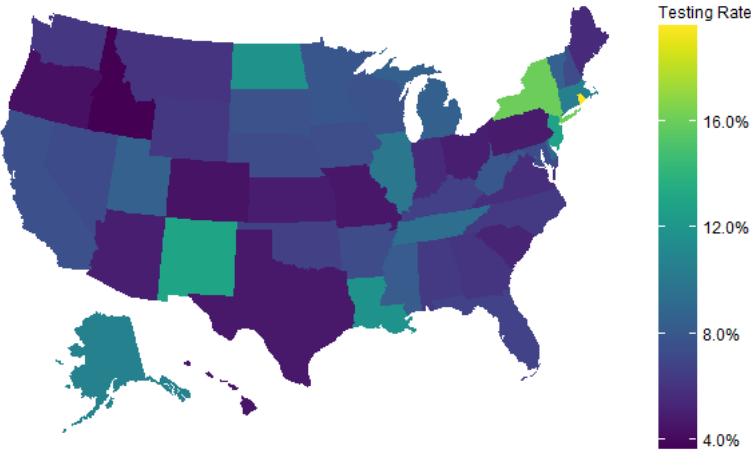


Figure 2: Testing Rates

Positive Case Rates

Case rates, or the rate of tests which are positive for COVID-19, vary across the US and have reached higher than 45%. A large driver behind this is self-quarantine directives: Patients with symptoms were told to stay home as long as the symptoms are manageable. Once severe enough, patients were told to see a doctor and get a test. The true rate is probably much lower, but because we cannot test every individual at this time, this is an unknown. However, testing has increased significantly over the past few weeks, opening up capacity for most people (including asymptomatic patients and healthy individuals) to get tested. This has lowered the positive case rate down.

In the heatmap below (Figure 3), we can see that much of New England has high positive test rates. This aligns with macro-level trends as this region represents the US “epicenter,” where population density is quite high and transmission rates tend to be higher as well.

Disease Death Rates

The Disease Death Rate, or the Case Fatality Rate, is currently 5.2% for the United States. It tends to be higher for populations with comorbidities and advanced ages. In the heatmap below (Figure 4), there are a few interesting points. MI is currently experiencing the highest rate, 9.1%, the worst hit county being Wayne at 12.3%. WA used to have a higher death rate as the disease progressed through elderly populations early on, but has since spread more evenly across other age groups.

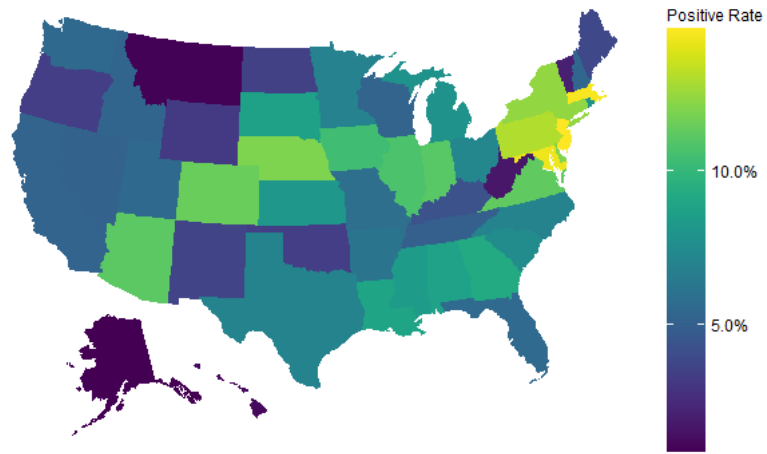


Figure 3: Positive Rates

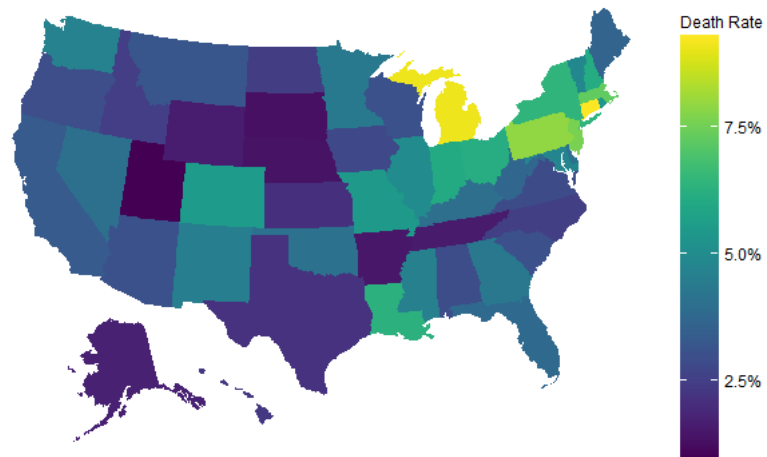


Figure 4: Death Rates

Measuring Acceleration

The rate at which new observations are growing each day represents the acceleration metrics. We use this to measure states' progressions along the disease growth curve, and these metrics will help flag states that are starting to slow in growth and reverse course towards containment. To measure acceleration, we first need to smooth out the data as reporting on tests, cases, and deaths is not linear. It is common for states to see large daily swings in tests, cases, and velocities that are caused by a variety of unknown forces. To solve for this issue, we apply Weighted Moving Averages ("WMA") velocities and accelerations. The smoothing period for velocity and acceleration WMA is set to fourteen (14) days to smooth out weekly reporting differences in the data. Here is an example on how the WMA approach changes the trend for NY.

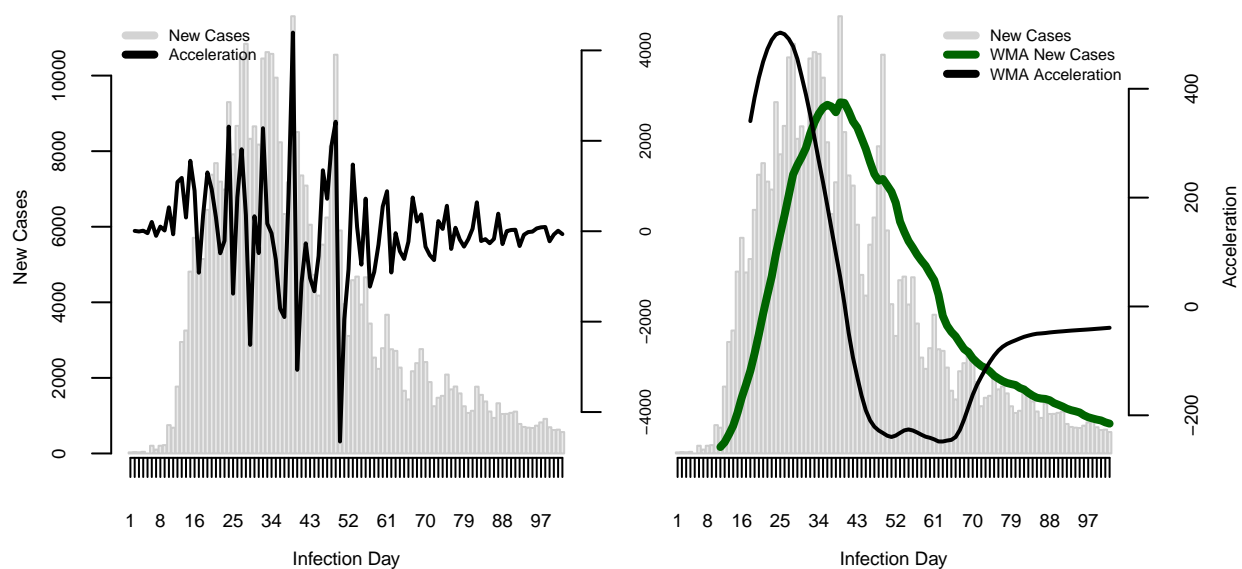
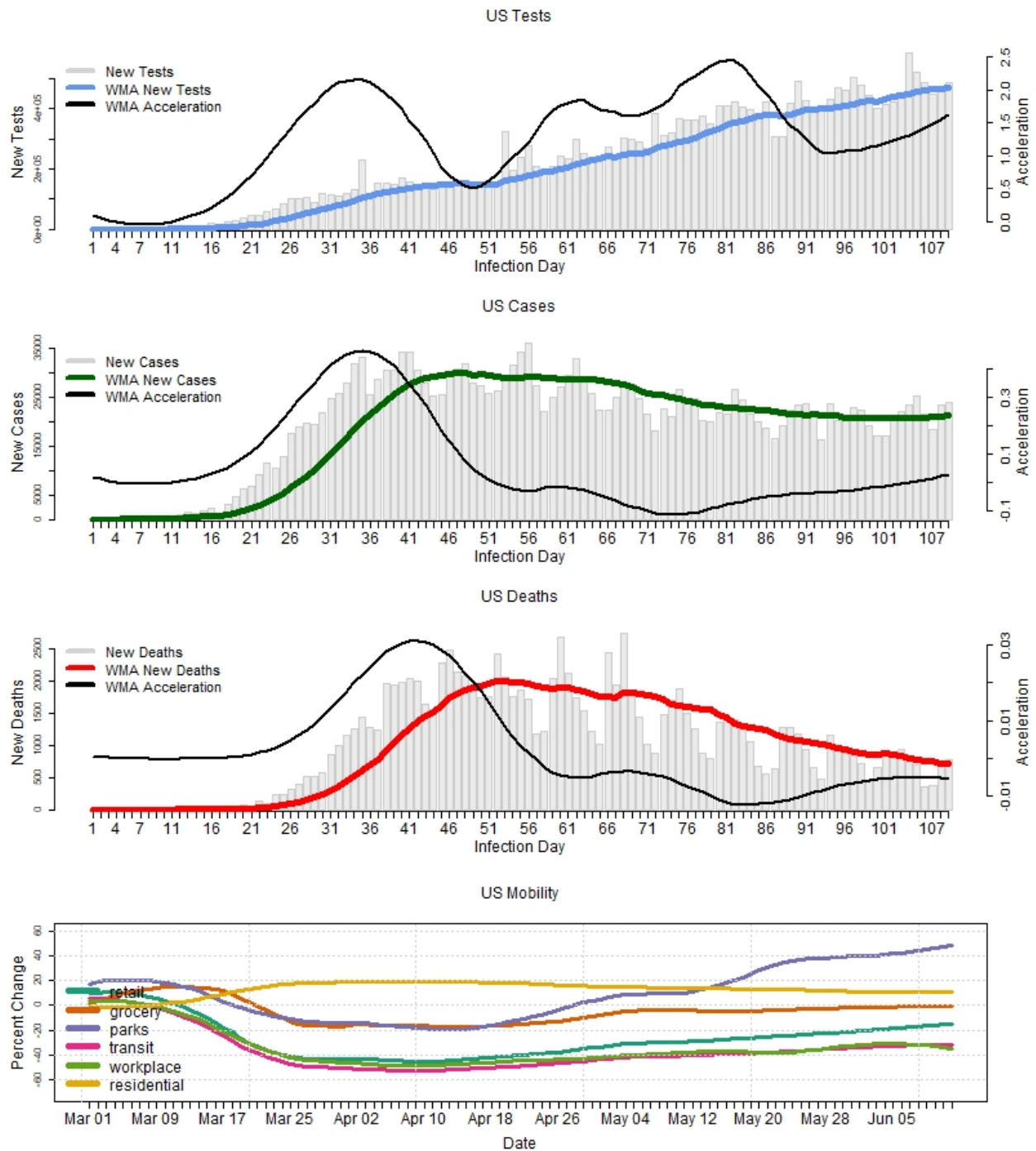


Figure 5: Noisy Data vs. Weighted Moving Average for NY case data

Acceleration in the United States

The United States ("US") appears to have peaked in terms of cases over two months ago, with deaths following a week after. However, the decline has flattened over the last two weeks, and the 14-day WMA has even seen a slight increase. One influential factor here is that testing has continued to increase steadily for months. There is a lag time between testing and receiving results (and secondly, when the case gets reported), but we want to see significant growth in tests with cases growing at a slower rate. With testing capacity opening up, the health care system has started testing asymptomatic patients and healthy individuals. This gives us a better picture of what is happening across the population, and more confidence in different rate measurements. As shown later in this report, there are many states that are contributing to this recent stall in the decline of daily reported cases.

US



State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
US	24937877	2150932	111477	8.6	5.2	23885	782

Figure 6: United States Acceleration and Mobility Data

Acceleration charts for all states for tests, cases, and deaths can be found in the appendix.

State Comparisons

We now compare the velocity and accelerations of tests, cases, and deaths on a per-capita basis using 100,000 to normalize. The following graphs show the outliers for each category after plotting both the velocity and acceleration of the most recent observation. Velocity is a weighted moving average of new daily observations, while acceleration is the rate of change of the velocity. We would expect states to follow this path: going from the origin to top-right (Stage 1 of Figure 1), then to top-left as acceleration turns negative (Stage 2 and 3), and back down to the origin as the velocity of new observations shrinks to zero (Stage 4).

Testing

With testing, states are currently split between increasing and decreasing capacity. A handful of states that are accelerating in cases are now seeing drops in testing, which is potentially dangerous. This group includes KS, MO, NM, OK, SC, and SD.

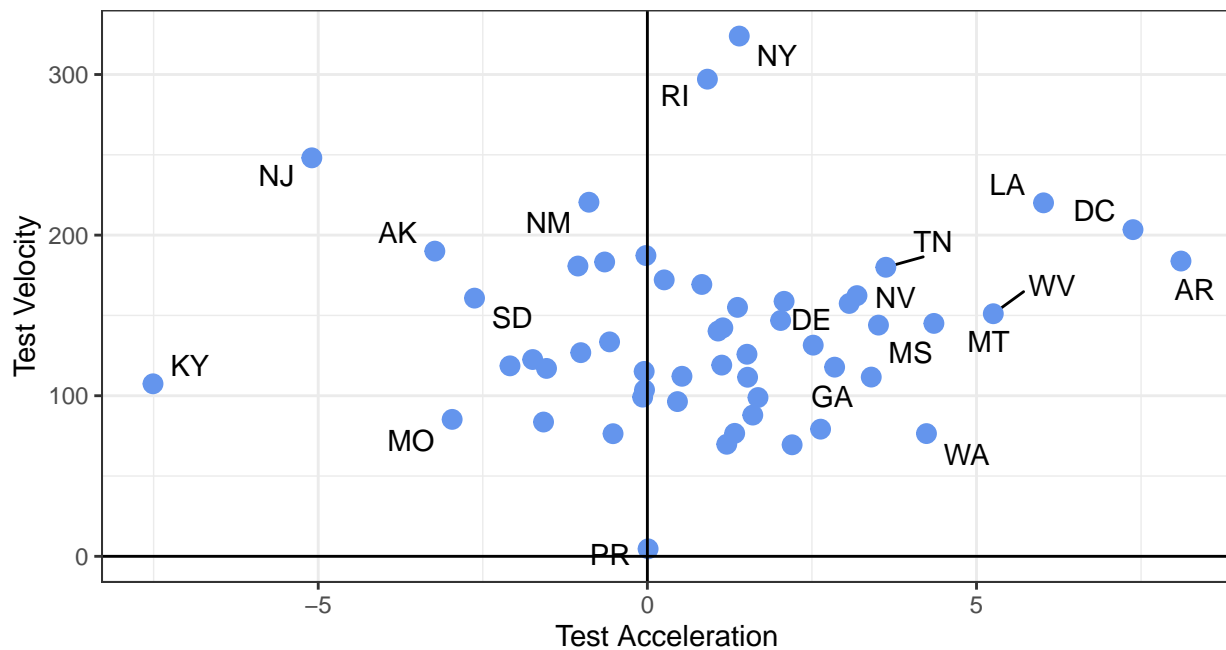


Figure 7: Test Acceleration and Velocity

Cases

For cases, New England and some Midwestern states stand out as quickly entering an improving phase, indicating that they are starting to get things under control. MA, MD, NJ, NY, and other states are decelerating in terms of cases, while AR, AZ, AL, UT, SC and NC are starting to accelerate again. In fact, many southern states are seeing their cases accelerate. With the surge in testing over the past month, we expect to see new cases accelerate for some states.

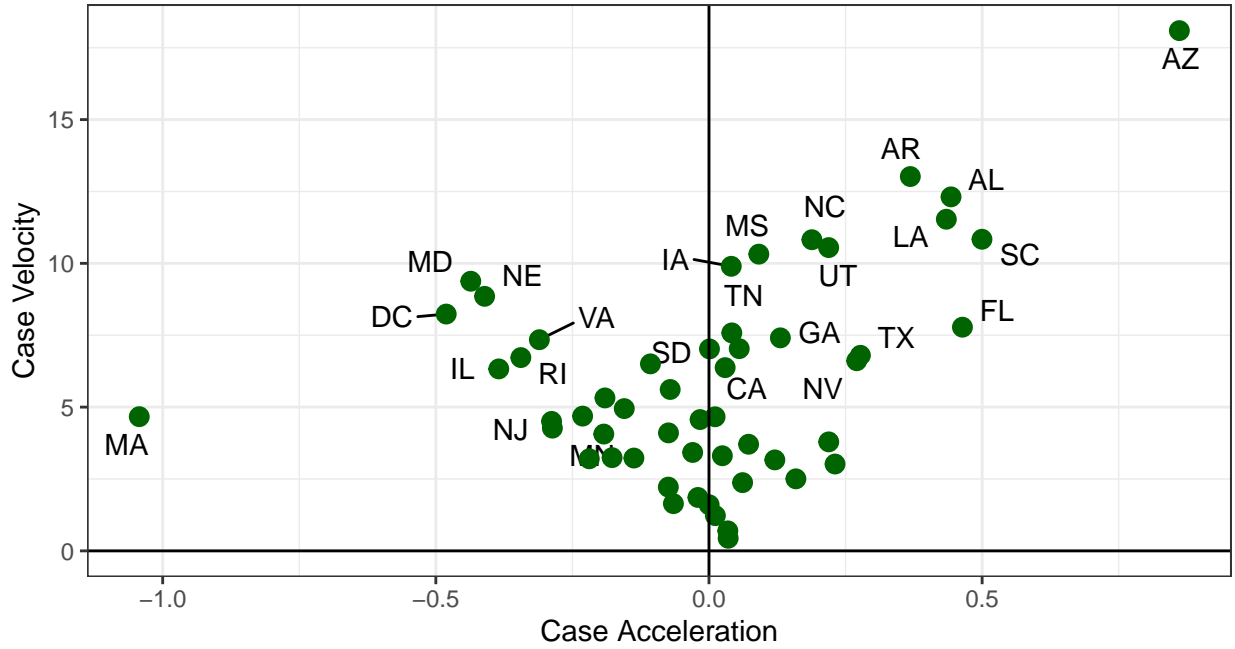


Figure 8: Case Acceleration and Velocity

Deaths

A majority of states are experiencing a rapid deceleration in deaths, but with recent increases of cases in certain states, we expect some to accelerate slightly.

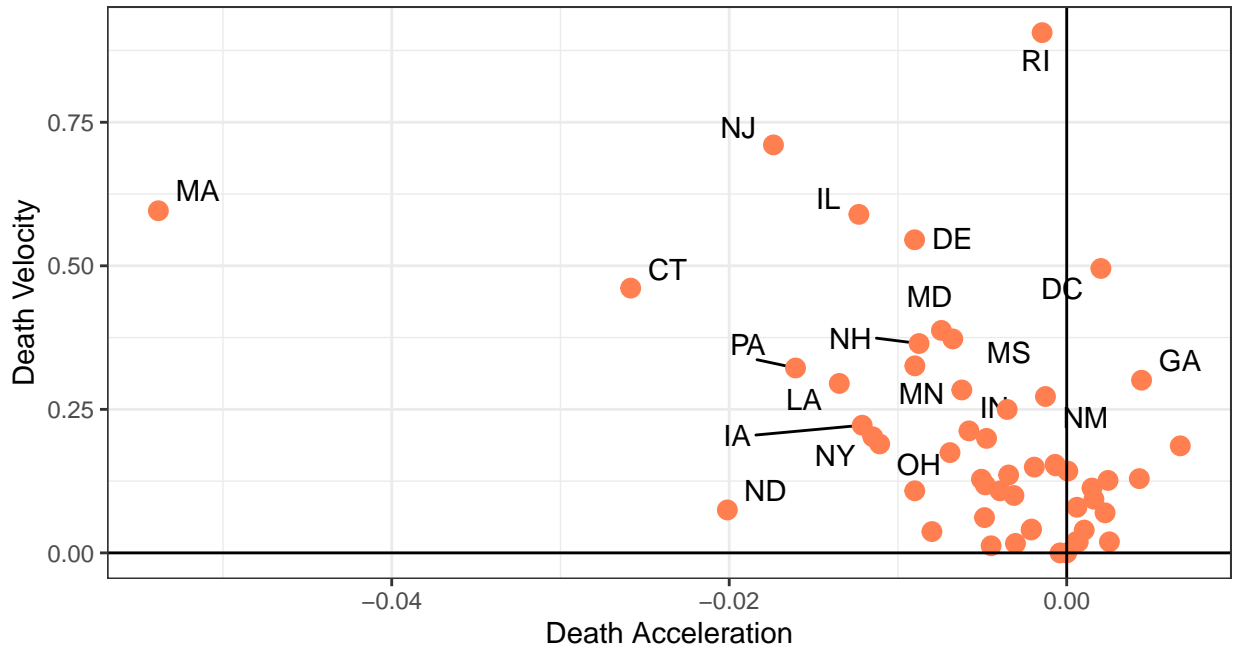


Figure 9: Death Acceleration and Velocity

We can now assign states to each stage of the acceleration curve using new cases. The main driver for assigning these categories is per-capita WMA acceleration, considering the history of acceleration for each state:

- Exponential: Acceleration is positive. If acceleration nearing zero, acceleration must be at maximum (or else is considered “Linear”)
- Linear: Acceleration is positive but nearing zero. Acceleration is not at its maximum (or else is considered “Exponential”)
- Improving: Acceleration is negative.
- Containment: Acceleration is near zero, is not the minimum or maximum, and must have low velocity (i.e. New Cases have peaked).

From this, we can see some macro trends. The Midwest is starting to enter the Improving stage after some quick exponential growth, while New England has been improving for a while. A majority of states are in the Linear or Improving stage as new daily cases are either flat or decreasing. Many southern states (including AZ, TX, SC, FL, and others) have reverted to exponential growth as they have recently seen new daily cases growing. On the West Coast, CA and OR are accelerating. New daily cases in NY, NJ and other New England states have been falling for months and have reached early containment.

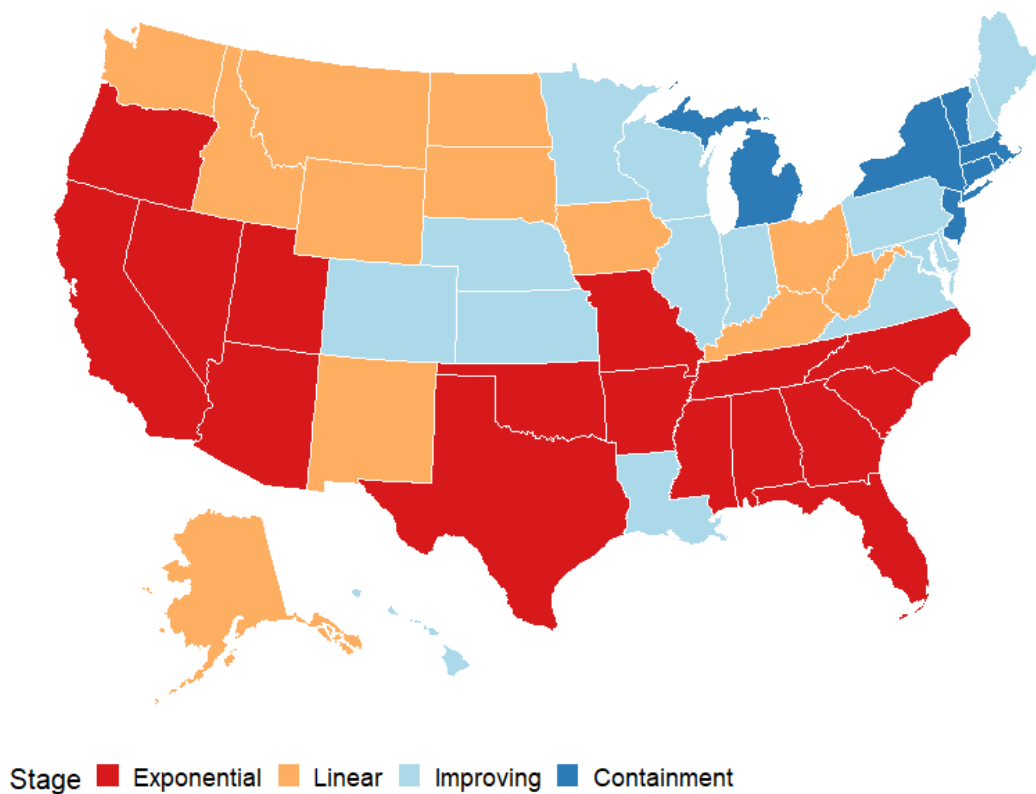


Figure 10: Case Acceleration Stage by State

Another helpful tool for determining progression is to normalize Case Velocity against the maximum seen in each state (Figure 11). In the following plot we compare the last 100 days for all states, ranked by how recently they saw a max in their WMA Case Velocity. States like VT and LA hit their maximum in early April, and have quickly improved. States with lots of red and orange tiles are still struggling to move away from the maximum. The United States overall, which has stayed relatively flat since hitting the maximum

around April 15th is one example. CA is rather high on this plot, indicating that they are close to the maximum in daily new cases, but because of the slow acceleration due to flatten-the-curve policies, they are assigned to the Linear stage for now.

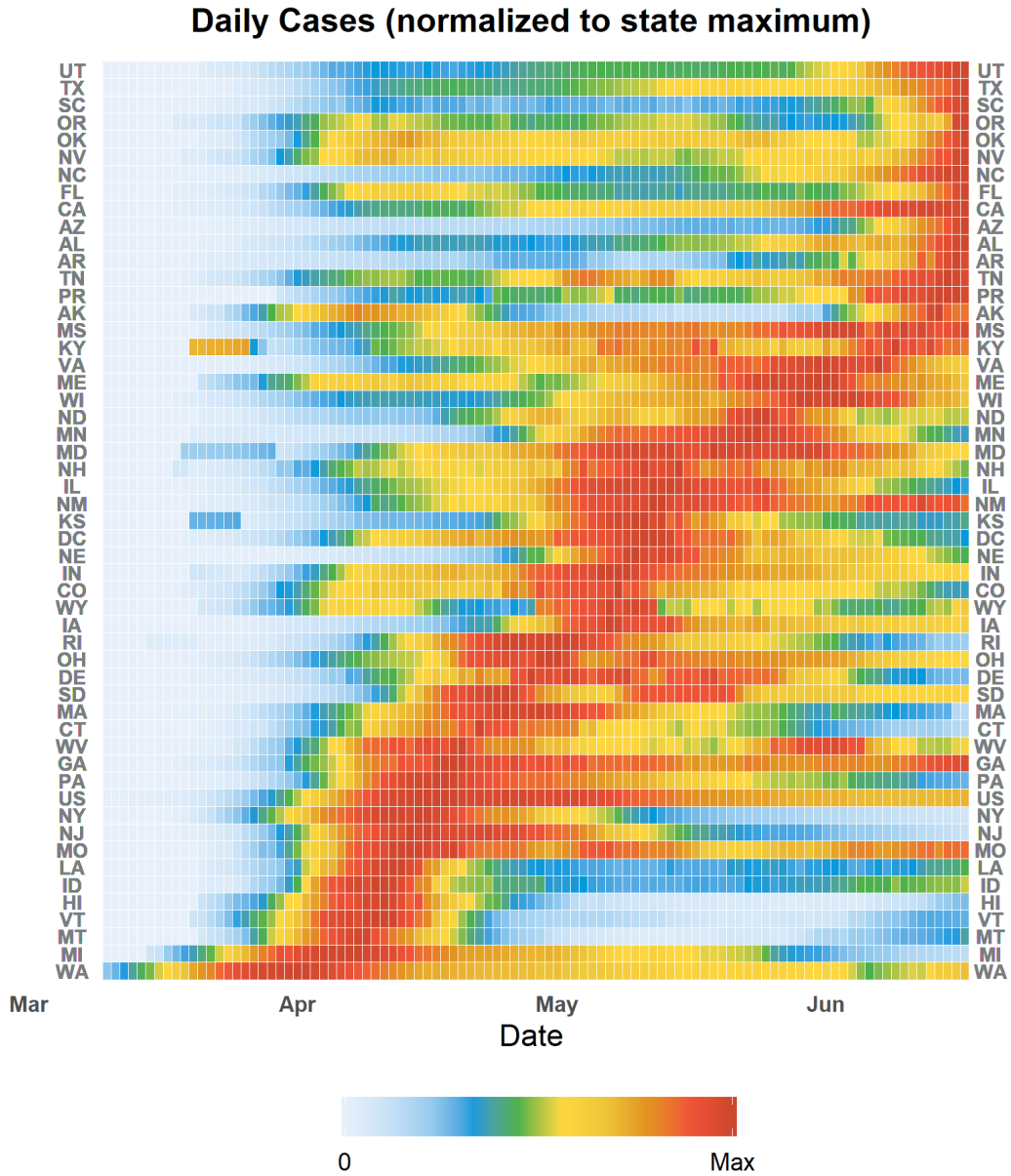


Figure 11: Case Velocity Normalized to Max

Daily Deaths (normalized to state maximum)

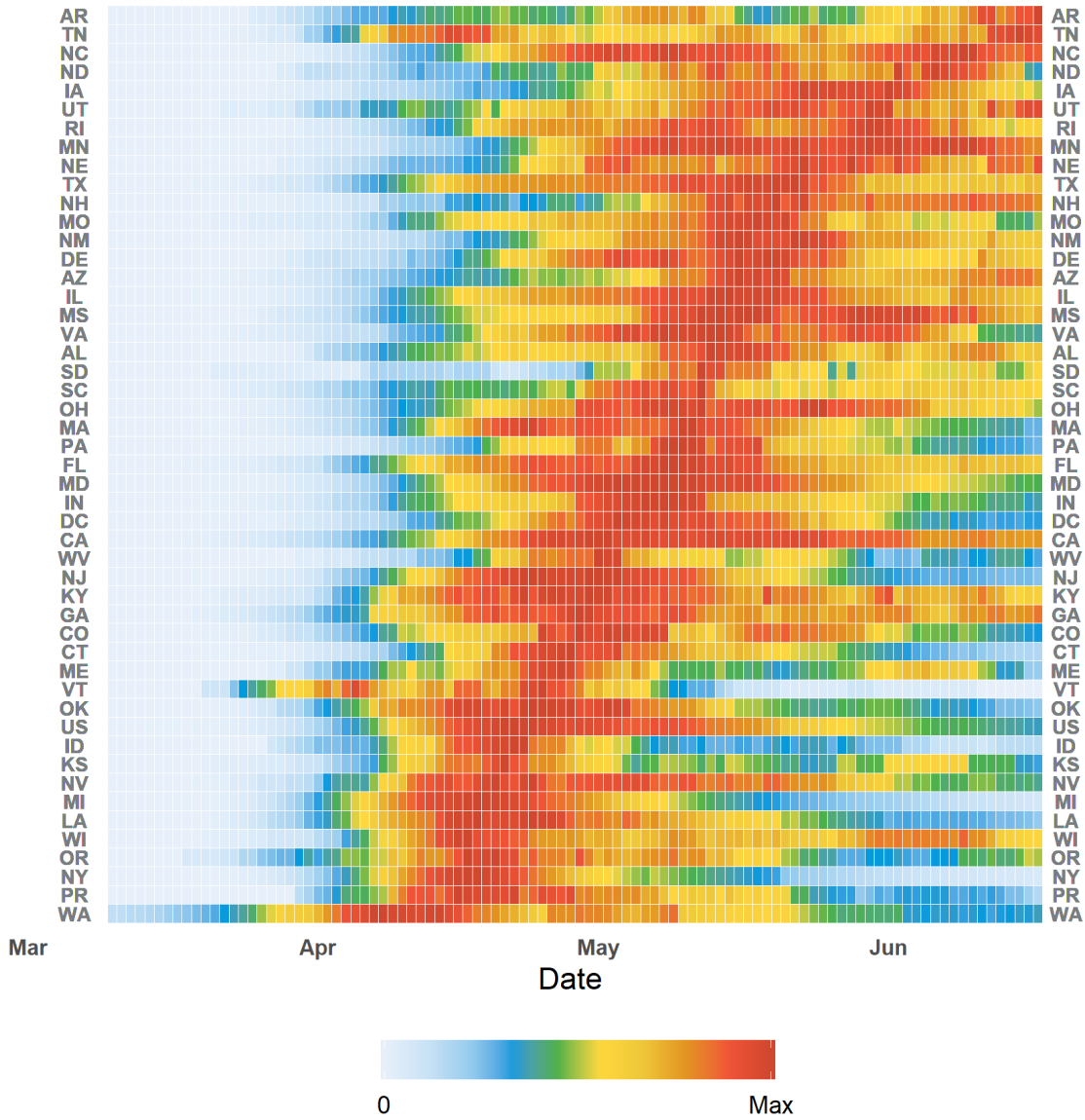


Figure 12: Death Velocity Normalized to Max

Second Wave Potentials

A topic often discussed is if (and when) we will see a second wave of new COVID-19 cases later this summer or fall. We can use this data to look for the warning signs that a second wave is already underway. The heat tiles for cases seen above is a great visual tool for finding this, and some stick out right away, such as FL, TN and AK. These are states that hit their maximum in daily new cases many weeks ago, but are starting to accelerate again after a period of deceleration.

County Comparisons

Here is our first look at county data. The table lists the top 100 counties in terms of case load. Unfortunately, we do not have access to testing data yet, so we can only see cases and deaths. Wayne, MI and Hartford, CT stand out as having the highest death rates. The county map visual points to what we saw in the state stage map: Many New England and Midwestern counties are starting to see a lot of containment, while many southern counties are starting to struggle with growing cases loads.

Metrics as of 2020-06-18

State	County	Cases	Deaths	Death Rate (%)	Stage
AZ	Maricopa	20775	568	2.7	1
AZ	Pima	4329	226	5.2	1
CA	Los Angeles	75084	2959	3.9	2
CA	Riverside	11694	395	3.4	1
CA	San Diego	9793	323	3.3	2
CA	Orange	8999	233	2.6	2
CA	San Bernardino	7796	229	2.9	1
CA	Alameda	4502	112	2.5	2
CA	Imperial	4389	51	1.2	2
CO	Denver	6401	363	5.7	4
CO	Arapahoe	4826	338	7.0	4
CT	Fairfield	16359	1350	8.3	4
CT	New Haven	12078	1046	8.7	4
CT	Hartford	11261	1330	11.8	4
DE	Sussex	4428	150	3.4	4
DE	New Castle	4386	190	4.3	3
FL	Miami-Dade	22740	847	3.7	1
FL	Broward	9498	358	3.8	1
FL	Palm Beach	9260	438	4.7	1
FL	Hillsborough	4029	103	2.6	1
GA	Gwinnett	5451	156	2.9	1
GA	Fulton	5148	295	5.7	4
GA	DeKalb	4411	152	3.4	3
IA	Polk	5210	163	3.1	3
IL	Cook	85538	4253	5.0	4
IL	Lake	9147	386	4.2	4
IL	DuPage	8501	432	5.1	4
IL	Kane	7223	234	3.2	4
IL	Will	6207	303	4.9	4
IN	Marion	10950	699	6.4	4
IN	Lake	4246	245	5.8	3
LA	Jefferson	8468	471	5.6	1
LA	Orleans	7428	522	7.0	4
LA	East Baton Rouge	4301	260	6.0	4
MA	Middlesex	23269	1765	7.6	4
MA	Suffolk	19367	952	4.9	4
MA	Essex	15667	1052	6.7	4
MA	Worcester	12014	877	7.3	4
MA	Norfolk	8892	891	10.0	4
MA	Plymouth	8514	629	7.4	4
MA	Bristol	7940	520	6.5	4
MA	Hampden	6503	642	9.9	4
MD	Prince George's	17992	644	3.6	3

State	County	Cases	Deaths	Death Rate (%)	Stage
MD	Montgomery	13749	698	5.1	3
MD	Baltimore	7269	427	5.9	3
MD	Baltimore city	6790	304	4.5	3
MD	Anne Arundel	4760	194	4.1	2
MI	Wayne	21828	2677	12.3	4
MI	Oakland	11372	1069	9.4	2
MI	Macomb	7330	896	12.2	4
MI	Kent	4477	116	2.6	3
MN	Hennepin	10323	724	7.0	3
MN	Ramsey	4033	192	4.8	3
NC	Mecklenburg	7468	134	1.8	1
NE	Douglas	5957	68	1.1	3
NJ	Bergen	18901	1673	8.9	4
NJ	Hudson	18744	1255	6.7	4
NJ	Essex	18388	1751	9.5	4
NJ	Passaic	16664	1006	6.0	4
NJ	Middlesex	16474	1085	6.6	4
NJ	Union	16320	1130	6.9	4
NJ	Ocean	9279	826	8.9	4
NJ	Monmouth	8786	687	7.8	4
NJ	Mercer	7381	522	7.1	4
NJ	Camden	7040	417	5.9	4
NJ	Morris	6599	640	9.7	4
NJ	Burlington	4929	364	7.4	4
NJ	Somerset	4767	438	9.2	4
NV	Clark	9157	380	4.1	1
NY	New York City	215342	21619	10.0	4
NY	Nassau	41290	2676	6.5	4
NY	Suffolk	40738	2005	4.9	4
NY	Westchester	34357	1537	4.5	4
NY	Rockland	13460	468	3.5	4
NY	Orange	10595	392	3.7	4
NY	Erie	6852	582	8.5	4
NY	Dutchess	4075	155	3.8	4
OH	Franklin	7289	334	4.6	2
OH	Cuyahoga	5271	318	6.0	3
PA	Philadelphia	24591	1518	6.2	4
PA	Montgomery	7950	778	9.8	3
PA	Delaware	6991	674	9.6	4
PA	Bucks	5452	544	10.0	4
PA	Berks	4341	338	7.8	4
PA	Lehigh	3973	271	6.8	4
PA	Lancaster	3802	333	8.8	4
RI	Providence	12363	637	5.2	1
TN	Davidson	7357	90	1.2	1
TN	Shelby	7104	155	2.2	1
TX	Harris	17707	289	1.6	2
TX	Dallas	14843	293	2.0	1
TX	Tarrant	7642	198	2.6	1
TX	Bexar	4888	89	1.8	1
TX	Travis	4771	106	2.2	1
TX	El Paso	3948	109	2.8	2

State	County	Cases	Deaths	Death Rate (%)	Stage
UT	Salt Lake	7644	96	1.3	1
VA	Fairfax	13103	428	3.3	3
VA	Prince William	6621	127	1.9	3
WA	King	8857	597	6.7	4
WA	Yakima	5830	124	2.1	2
WI	Milwaukee	9678	352	3.6	3

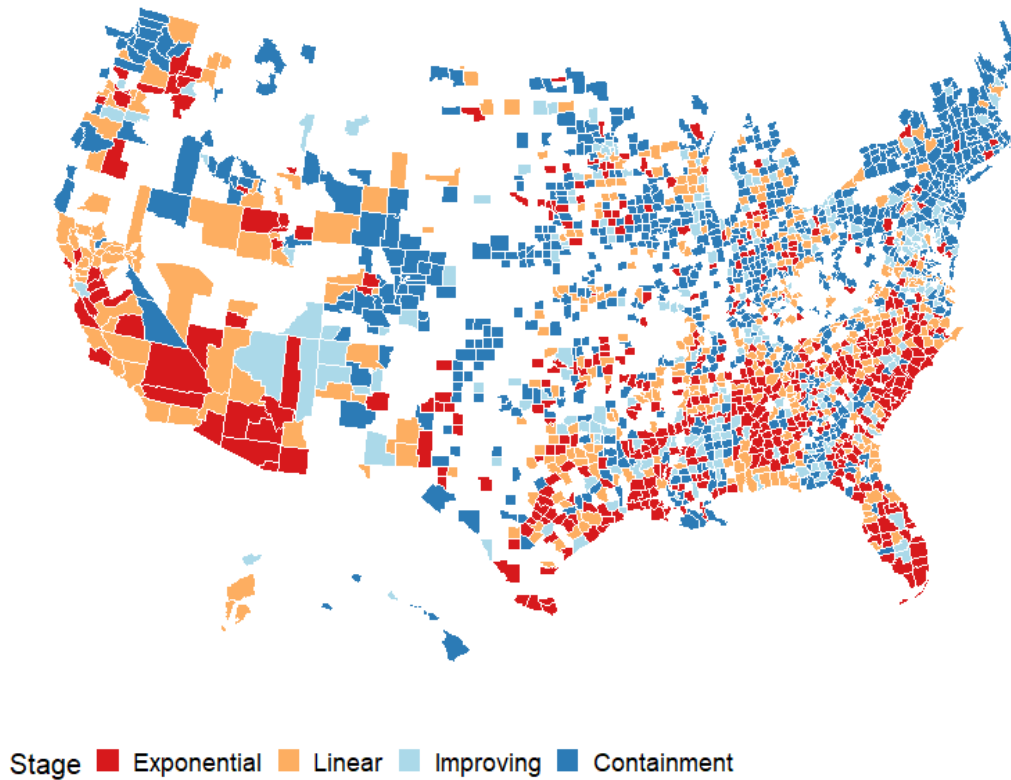


Figure 13: Case Acceleration Stage by County

Conclusions

- Overall, New Cases in the United States have stopped declining and have even increased slightly over the past few days as many states are struggling to keep disease spread under control and a continued growth in national testing capacity. Particularly, southern states are beginning to struggle and experiencing aggressive case growth while northern states are continuing to improve. With all the recent protests happening across the country and many states removing lockdown restrictions, we expect to see cases grow.
- Early indications from New Case Velocity and Acceleration following the initial US “peak” are that the deceleration of new cases will take place over a much longer period of time than the rapid acceleration of new cases that led to the “peak.” In simpler terms, it appears that the recovery following the initial “peak” will take significantly longer than the duration of the Exponential Growth and Linear Growth stages. This trend is in line with what other countries across the world experienced with COVID-19.

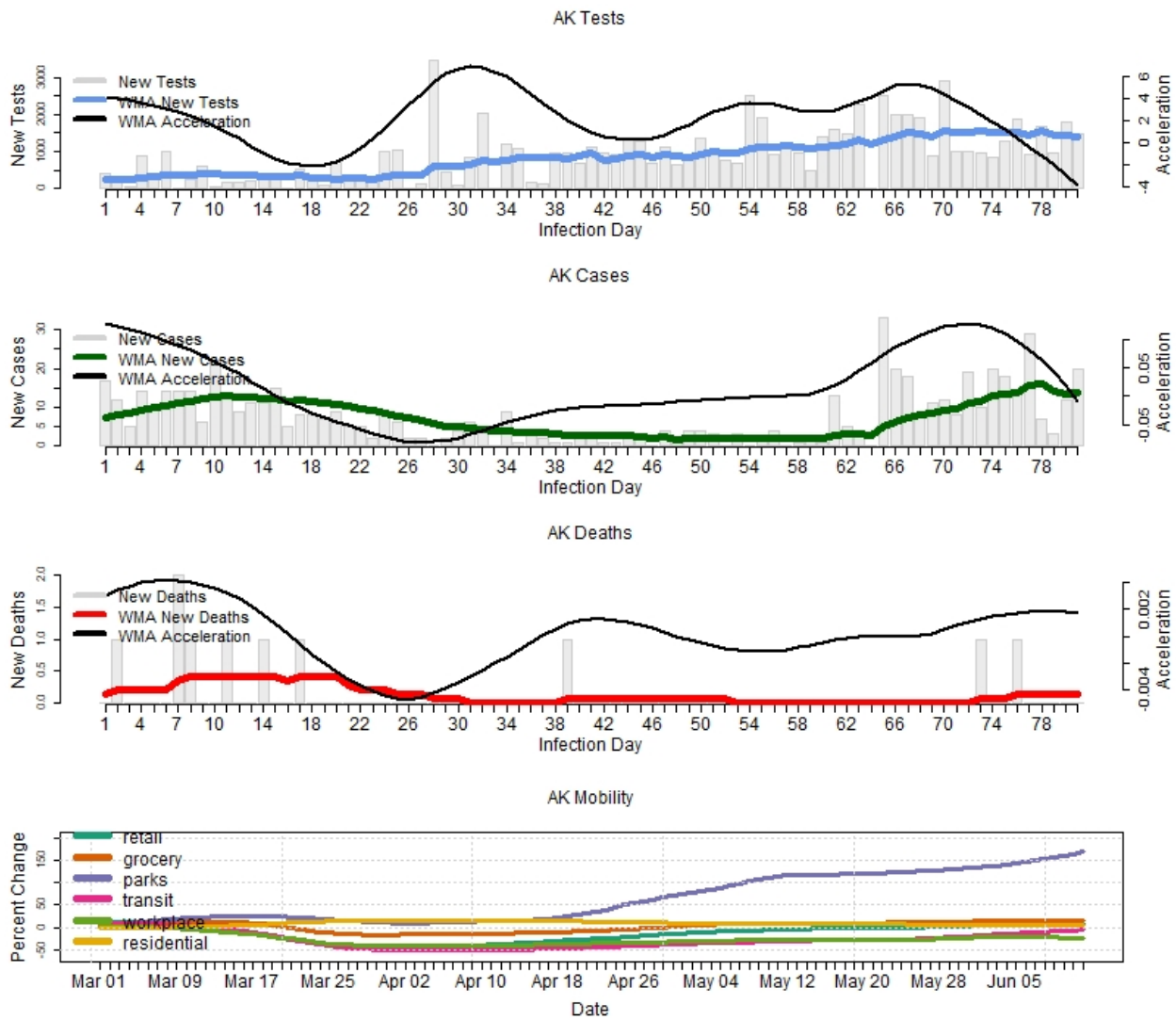
- In terms of new cases, the majority of states are currently in Stage 1 (Exponential Growth) and Stage 3 (Improving). Several states, particularly in New England and the Midwest, have entered or are soon to enter Stage 3 (Improving), as their New Case Accelerations have fallen below zero. A growing group of states have reached Stage 4 (Containment) based on our definition. This includes New York, New Jersey, Massachusetts, Rhode Island, Connecticut, Vermont, Delaware, and Michigan. Many southern states have reverted to Stage 1 (Exponential Growth), including Arizona, Texas, Florida, North and South Carolina, and others. On the West Coast, California and Oregon are also experiencing case acceleration and in Stage 1.
- A few states are showing signs of a Second Wave of new cases; including Florida, Alaska, and Tennessee.
- Georgia, Florida and Texas were a few of the first populous states to re-open their economies two weeks ago. All states have since reverted to Stage 1 after some aggressive growth in new daily cases.

Appendix

State Data

The following graphs show how new tests, cases, and deaths are changing from day to day. They are smoothed using a Weighted Moving Averaged of 14 days for the velocity and 7 days for the acceleration. The fourth plot shows change in mobility from pre-COVID to today. This data expresses how movement in each state have decreased or increased post-COVID. In general, traffic is down across the board except for the Parks and Residential categories. Finally, we show the most recent cumulative and differenced data for each state.

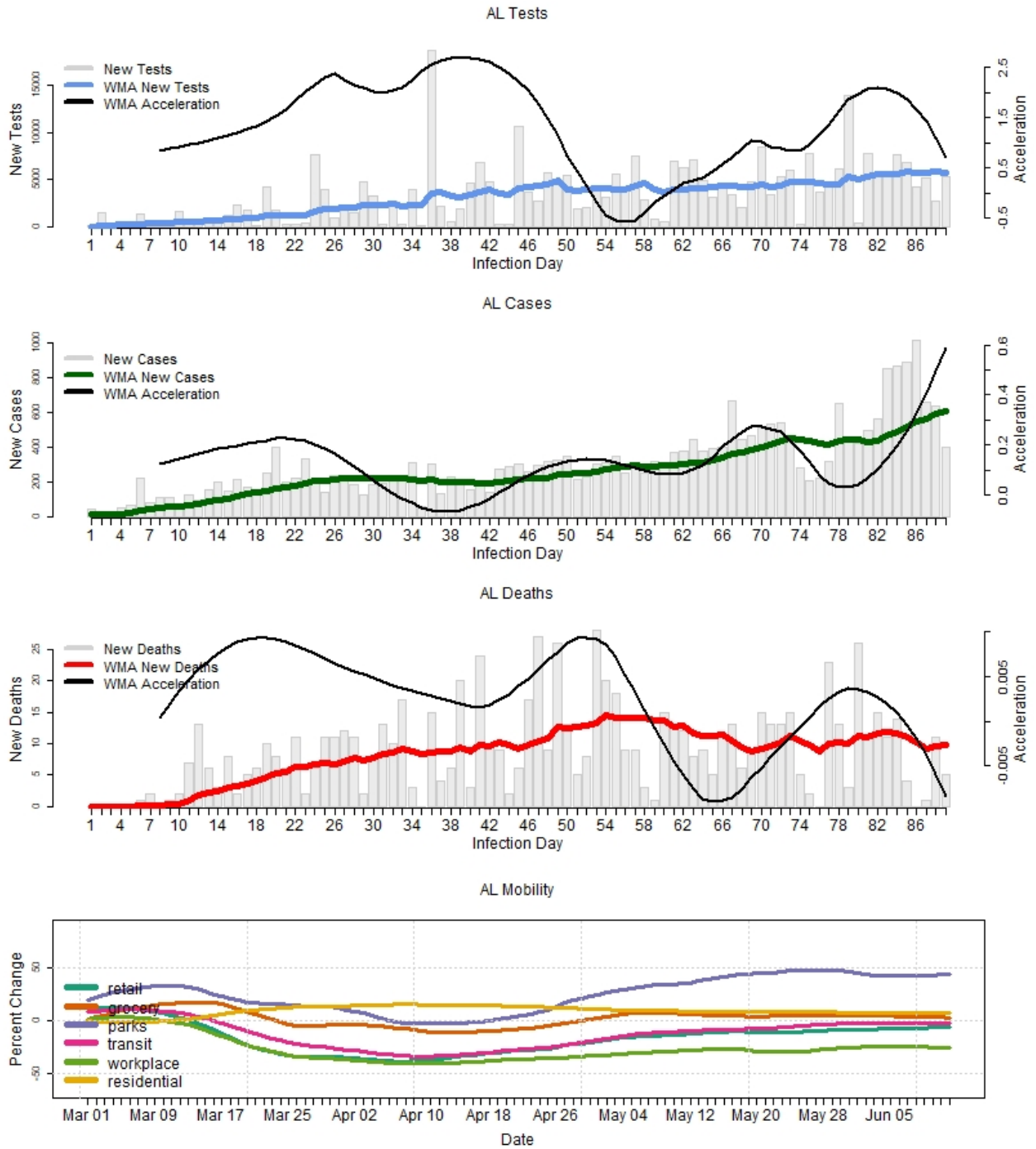
AK



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
AK	77709	696	12	0.9	1.7	20	0

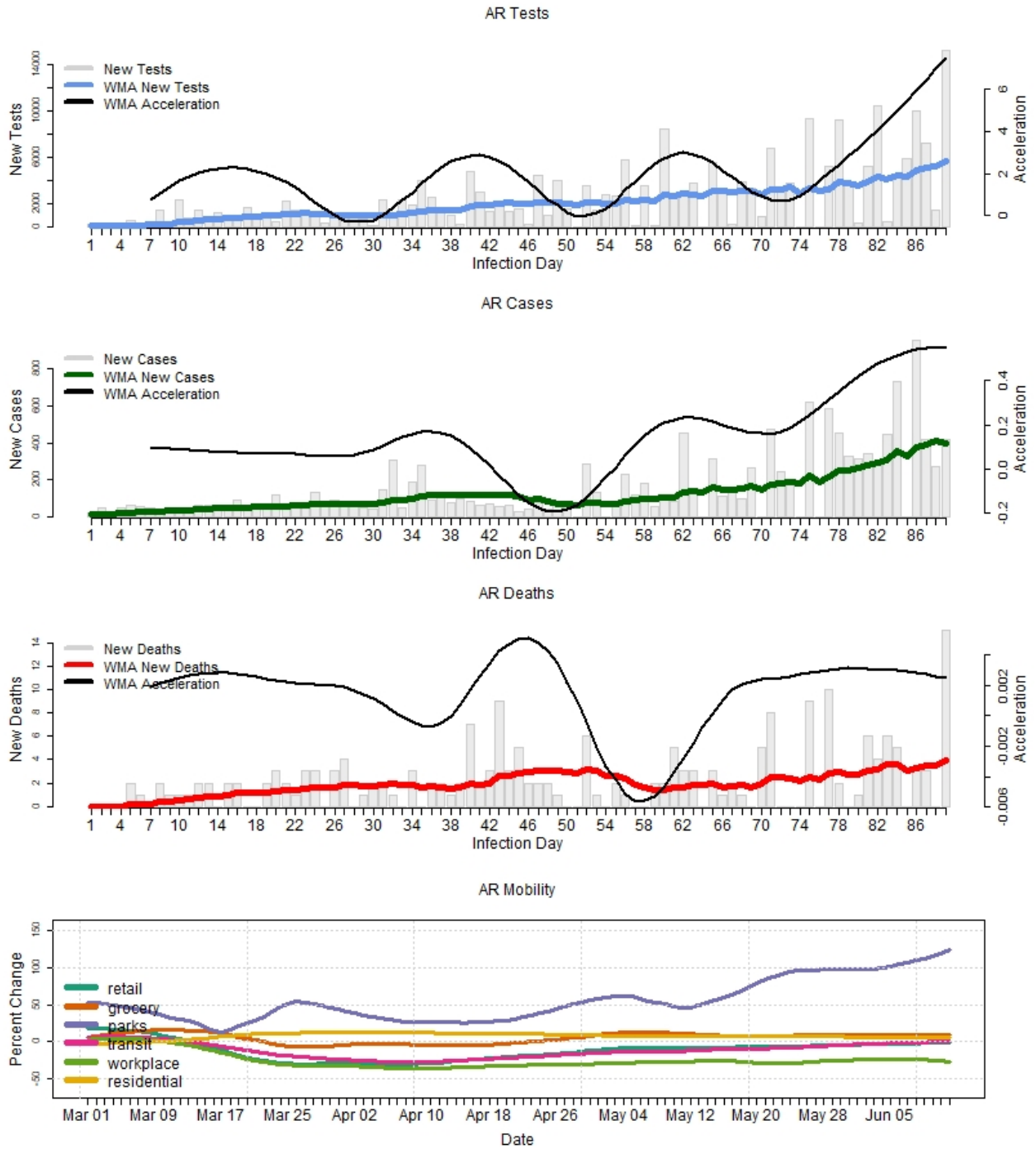
AL



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
AL	310723	27312	790	8.8	2.9	400	5

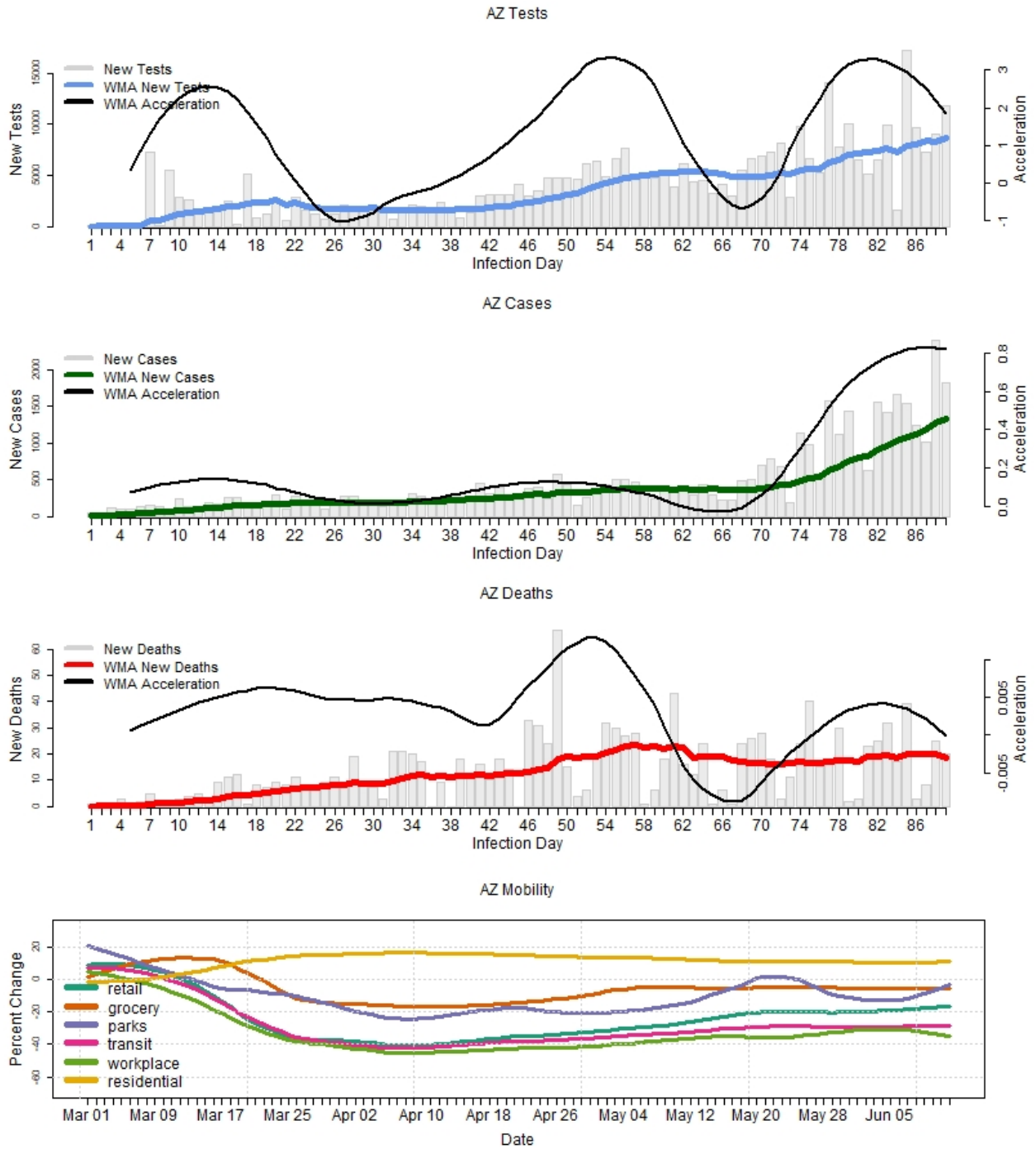
AR



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
AR	220699	13606	197	6.2	1.4	415	15

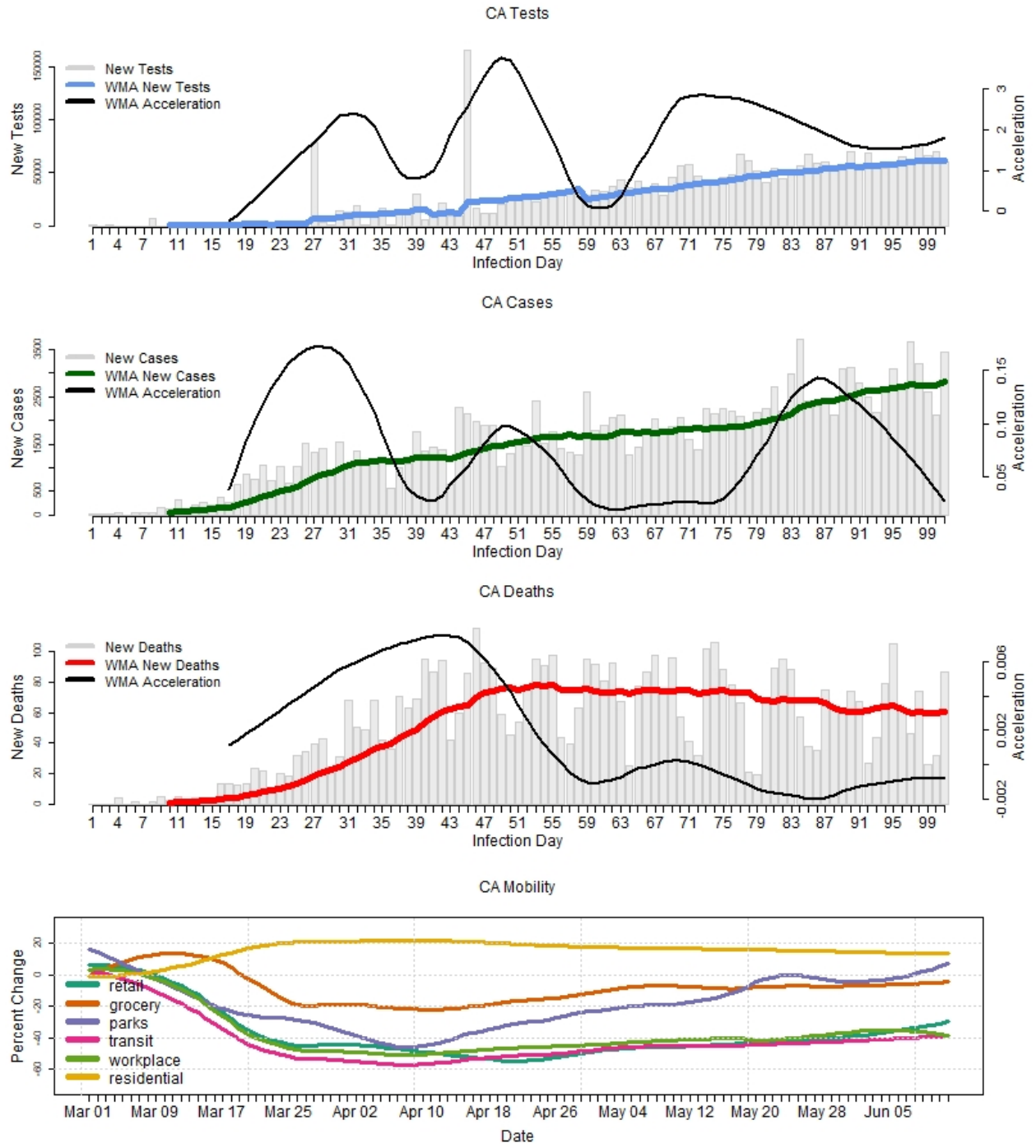
AZ



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
AZ	366193	40924	1239	11.2	3	1827	20

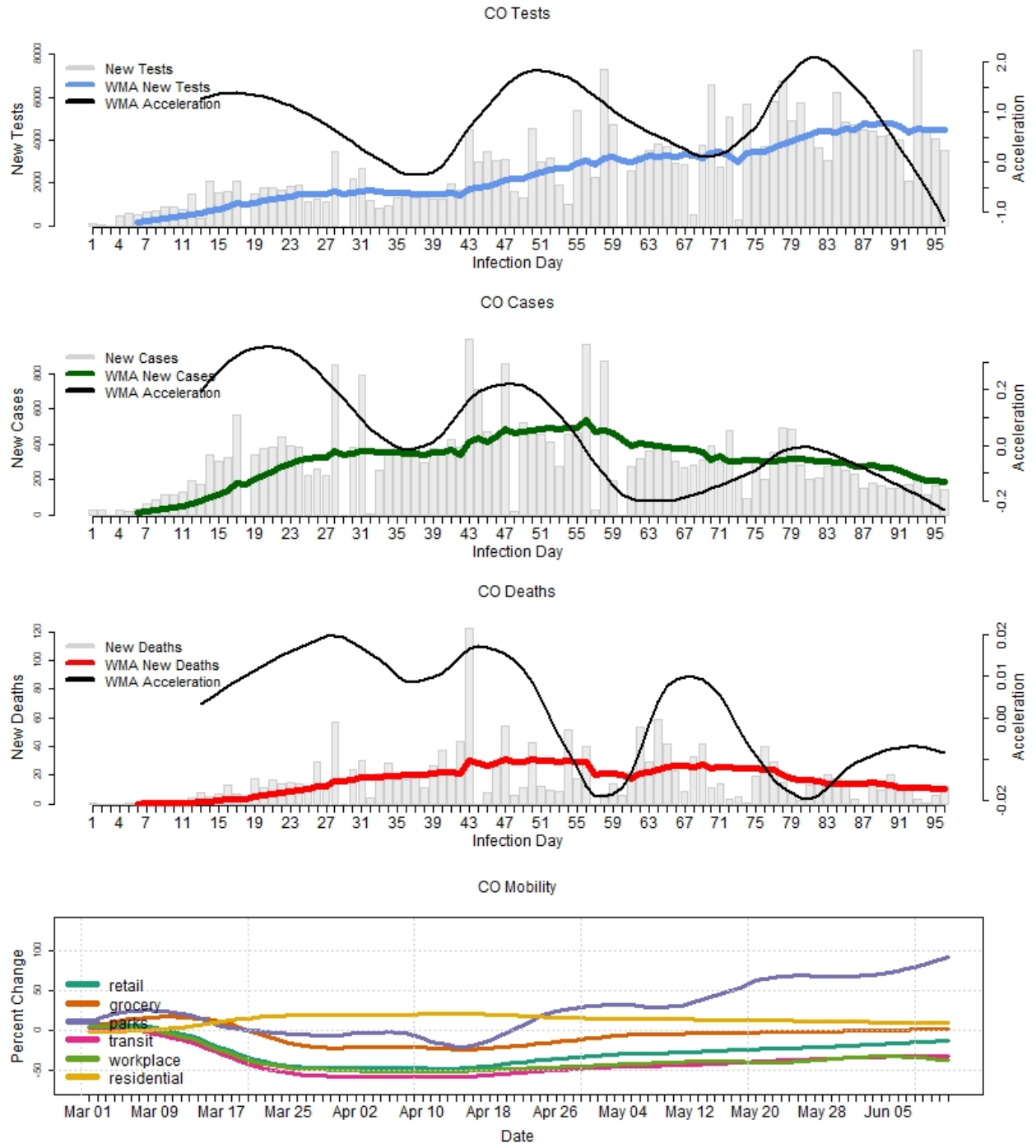
CA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
CA	2997988	157015	5208	5.2	3.3	3455	87

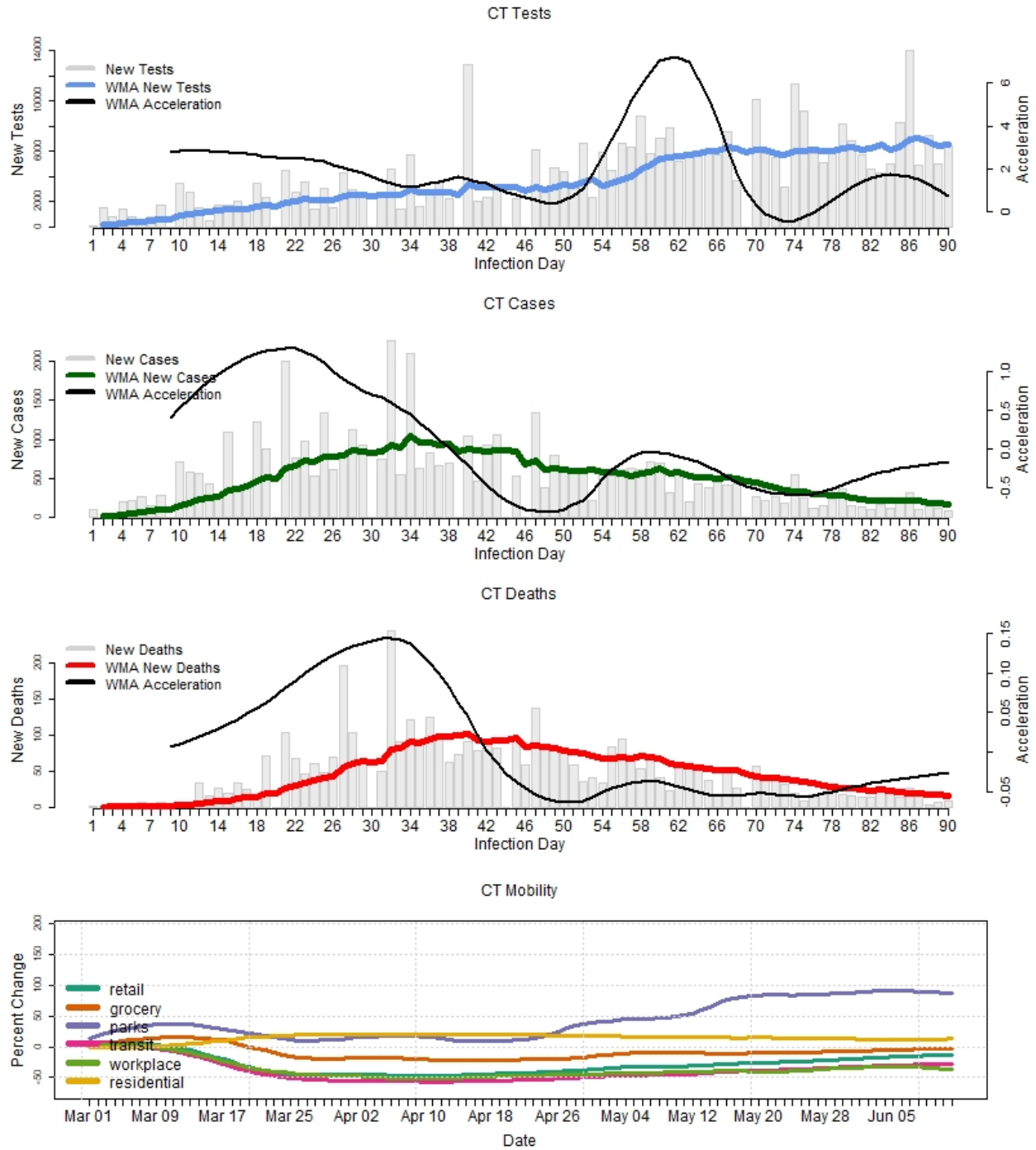
CO



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
CO	256667	29442	1617	11.5	5.5	143	12

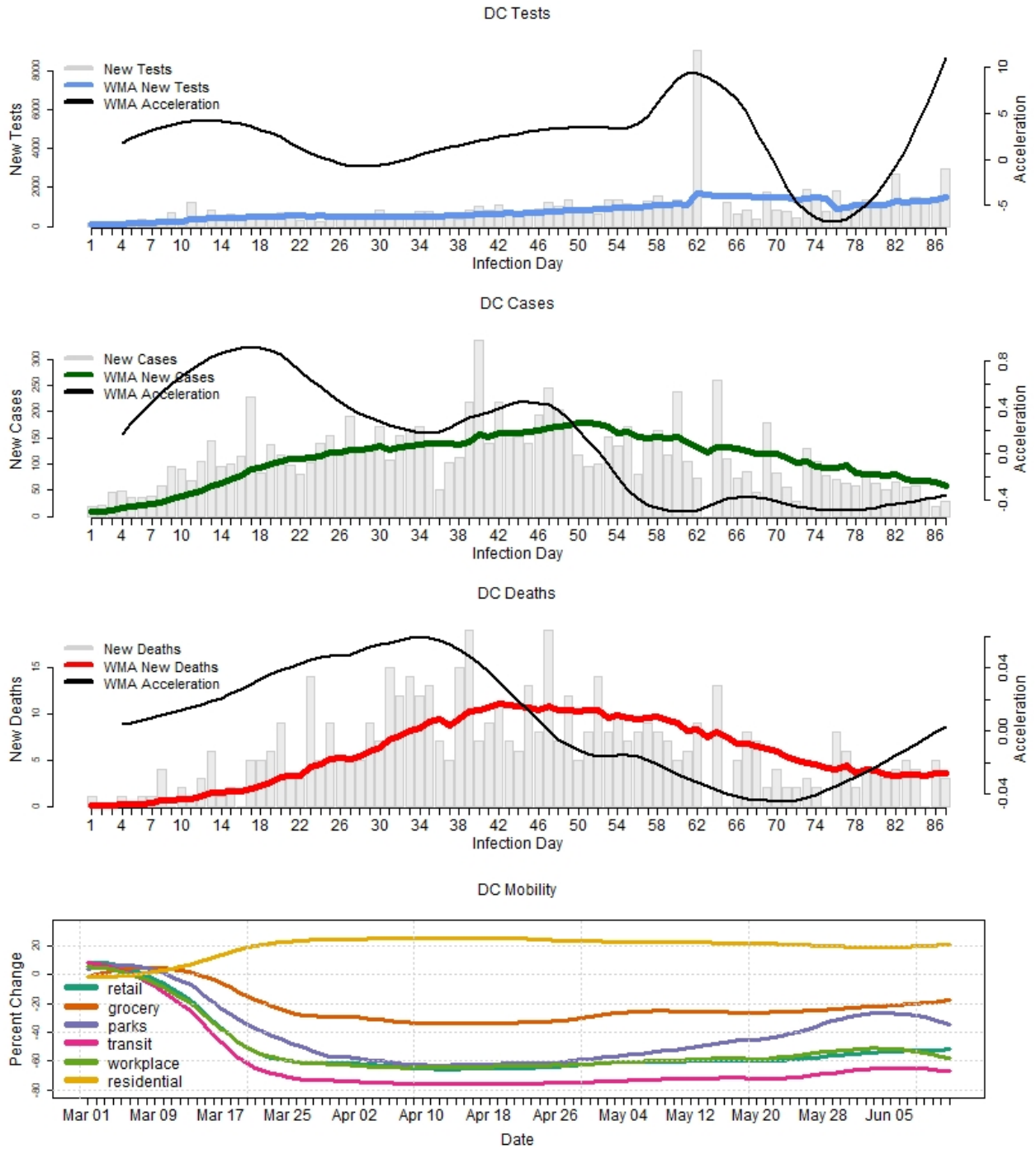
CT



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
CT	367858	45429	4219	12.3	9.3	80	9

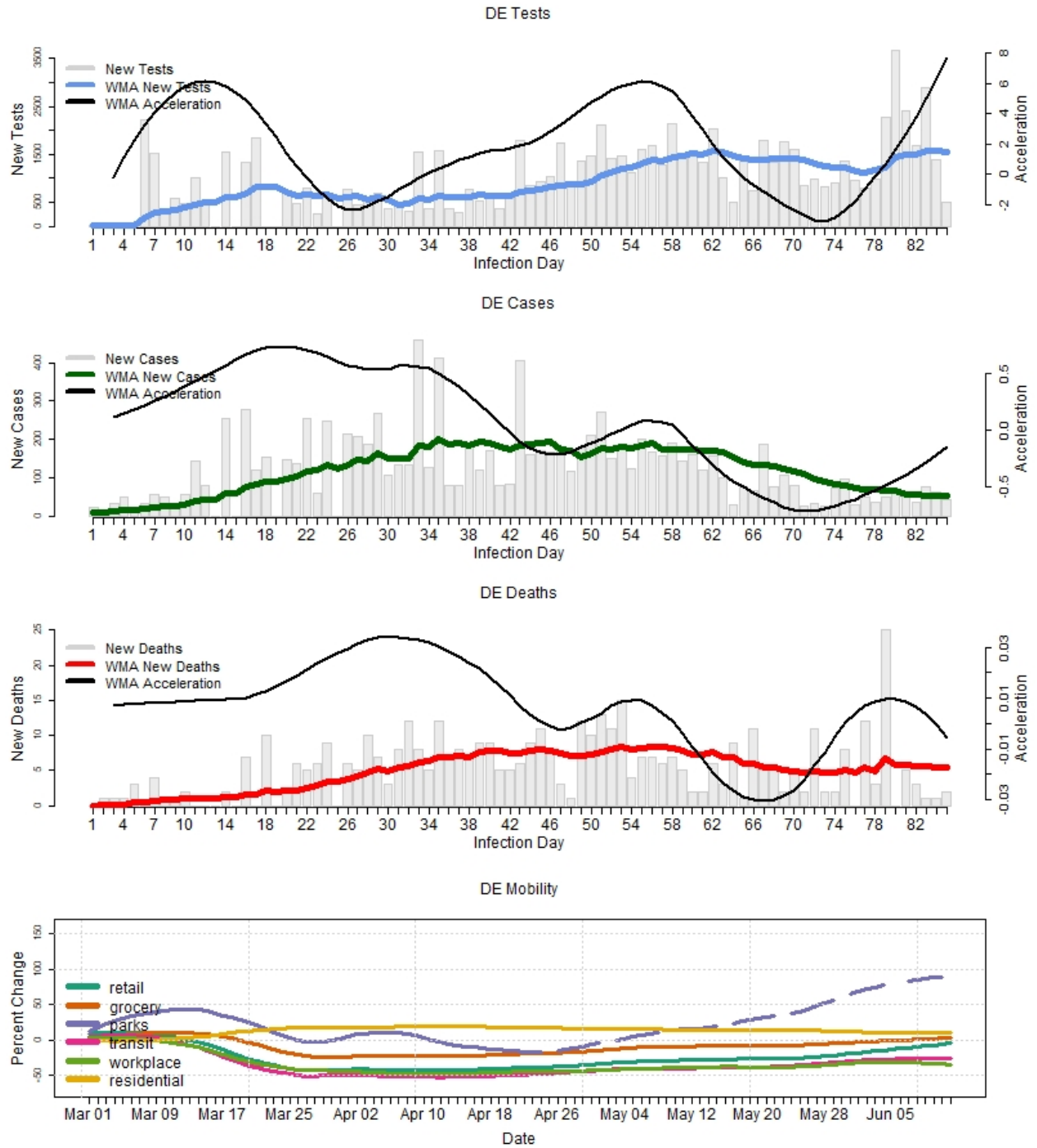
DC



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
DC	70086	9847	523	14	5.3	29	3

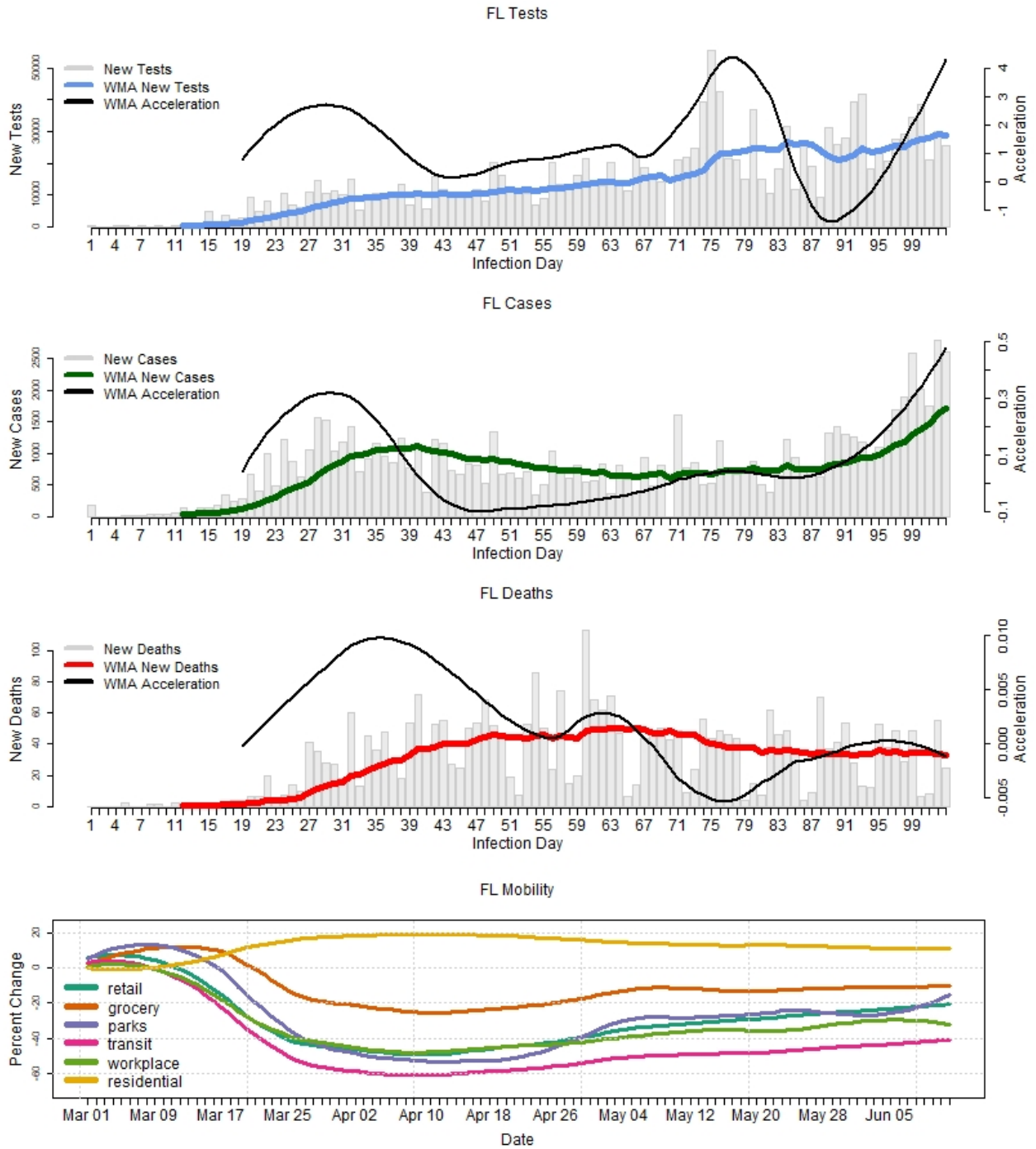
DE



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
DE	86587	10444	426	12.1	4.1	41	2

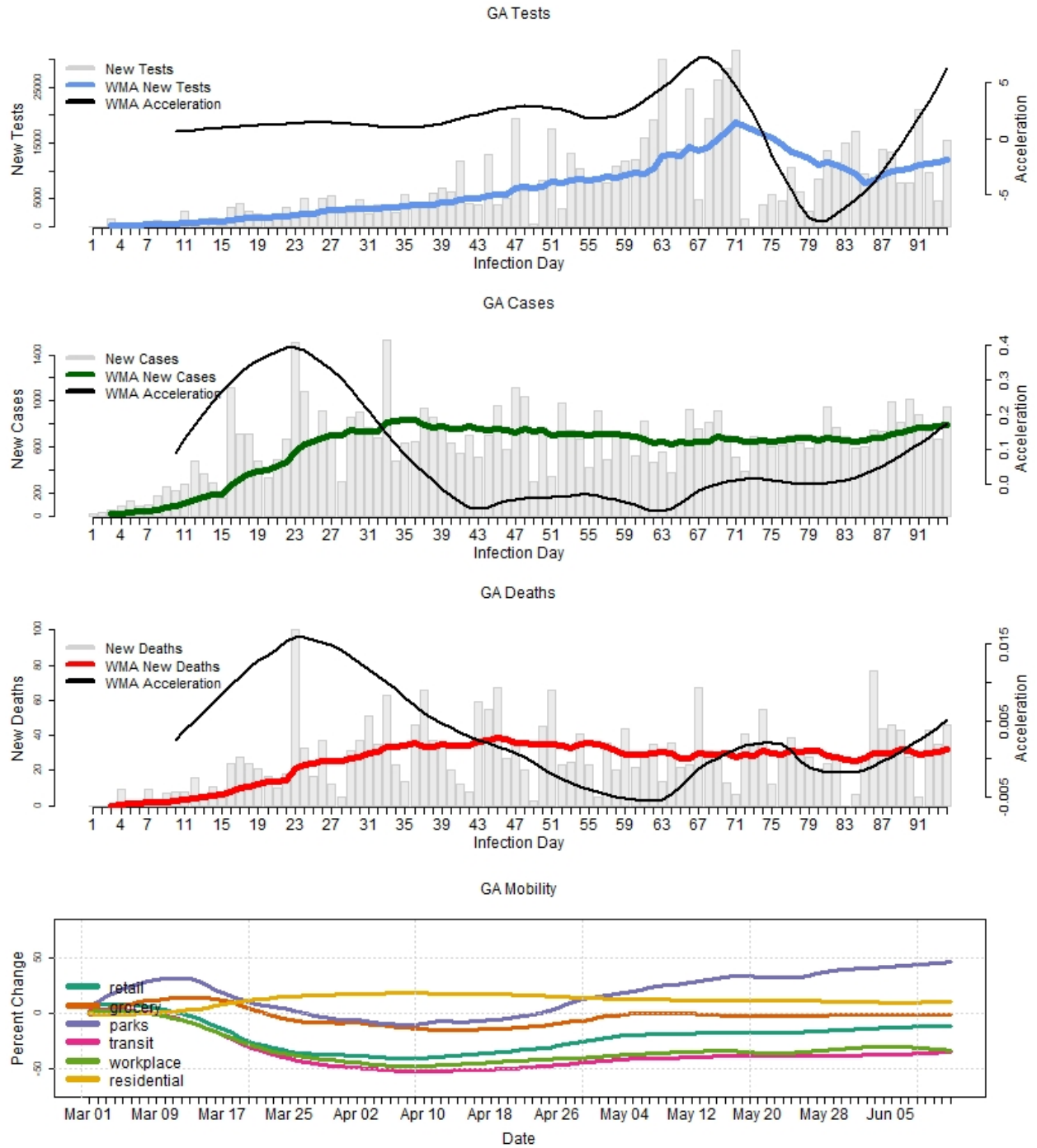
FL



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
FL	1485759	82719	3110	5.6	3.8	2610	25

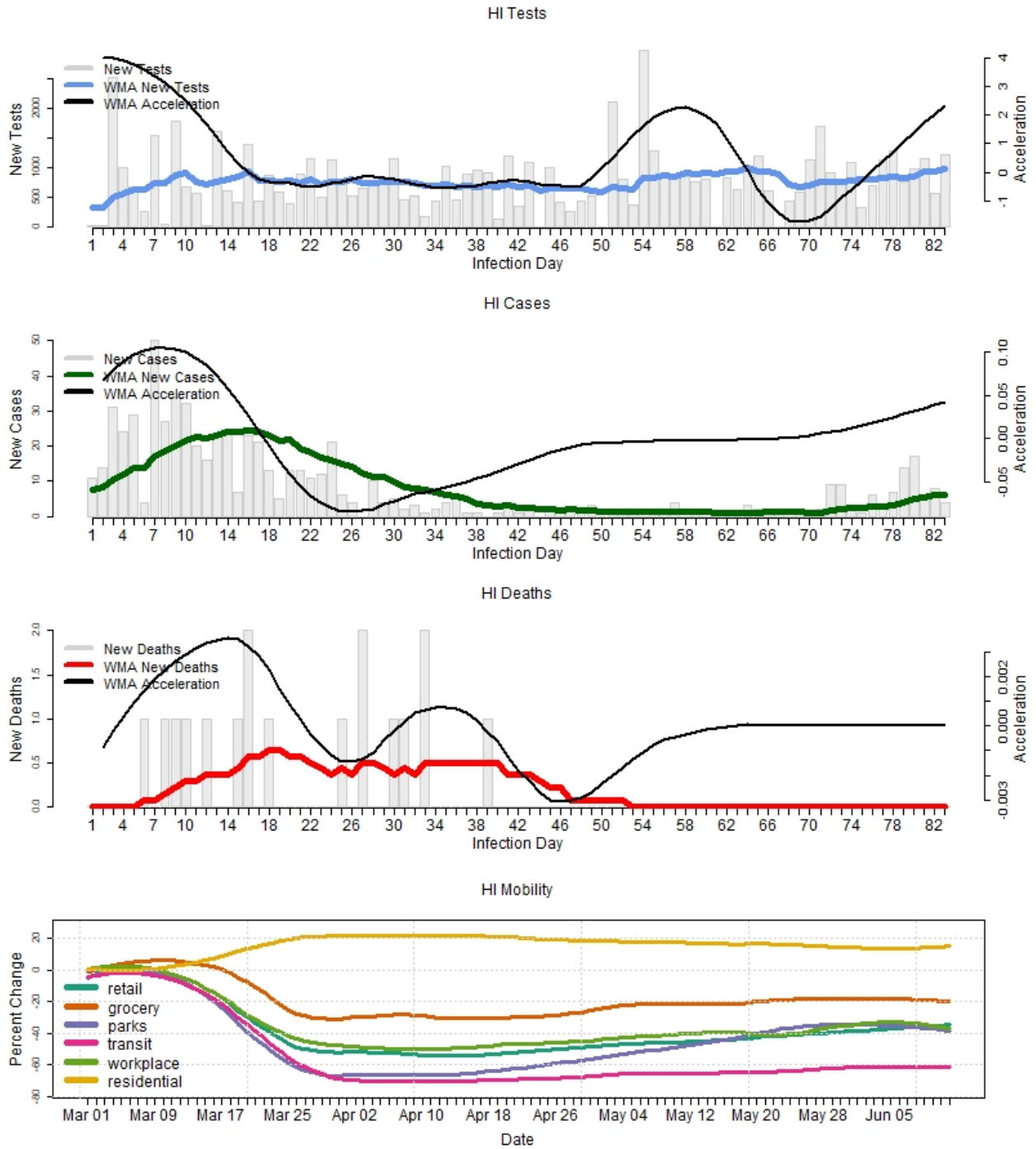
GA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
GA	650467	60030	2575	9.2	4.3	952	46

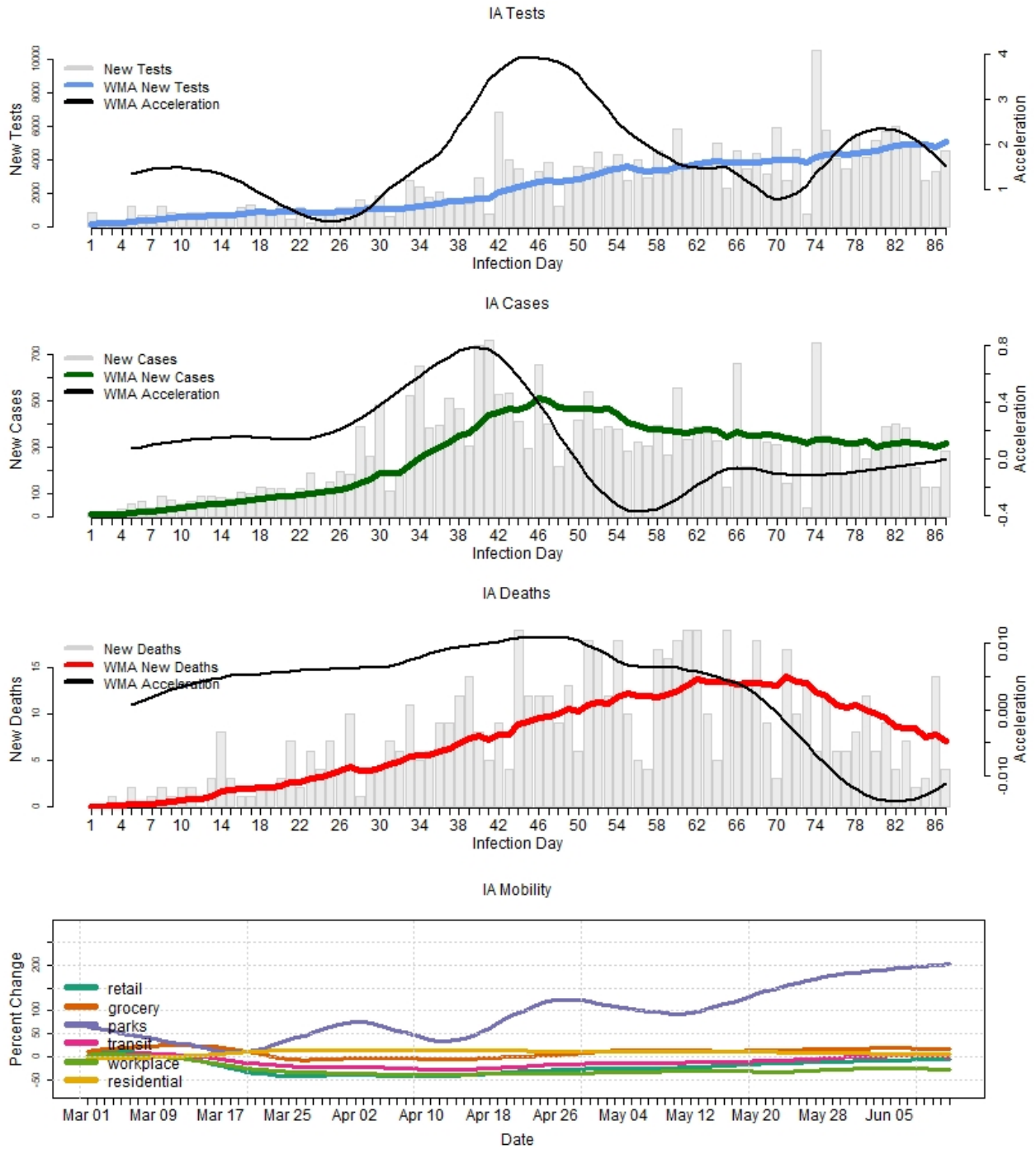
HI



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
HI	63243	740	17	1.2	2.3	4	0

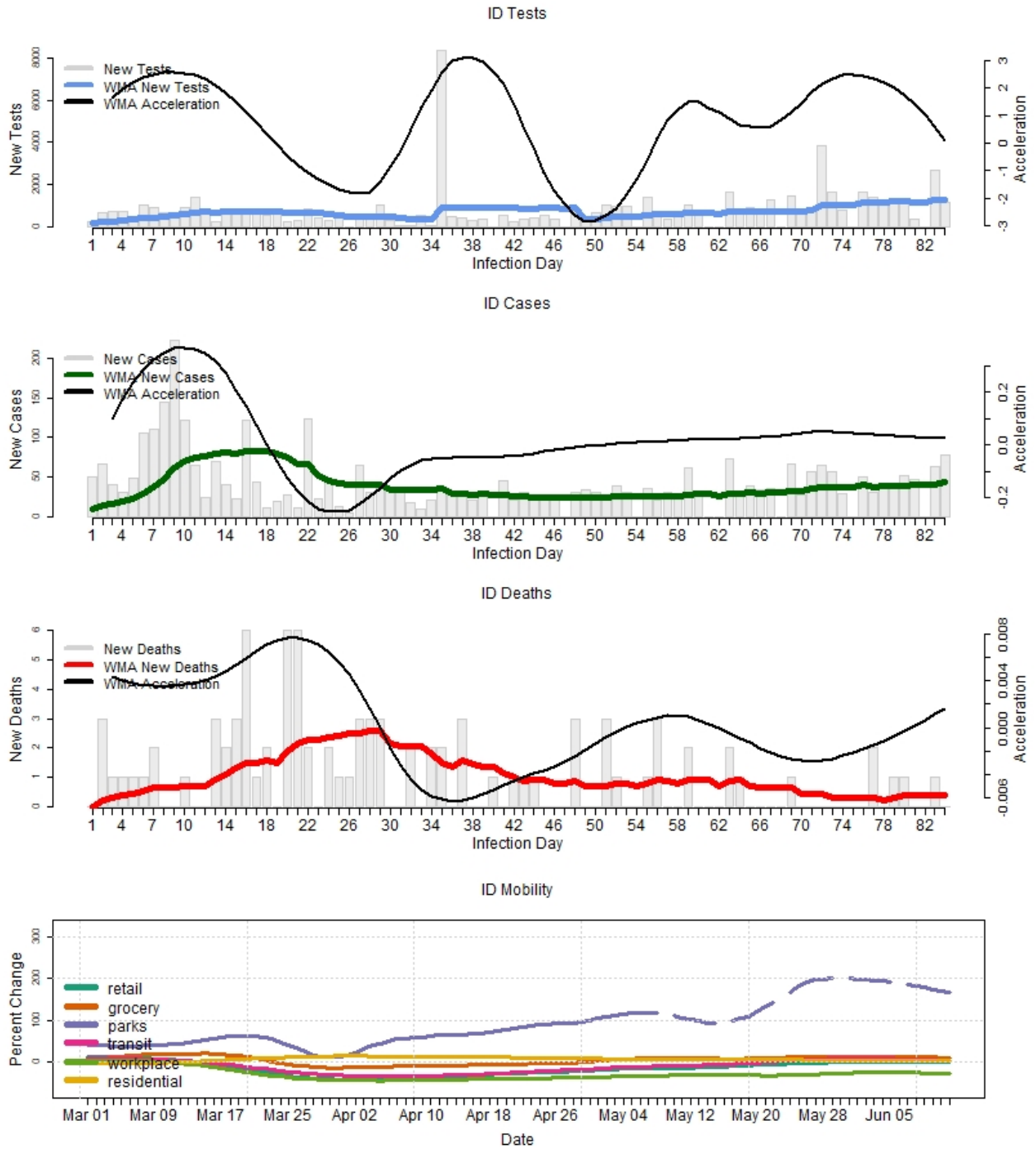
IA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
IA	235131	24461	673	10.4	2.8	282	4

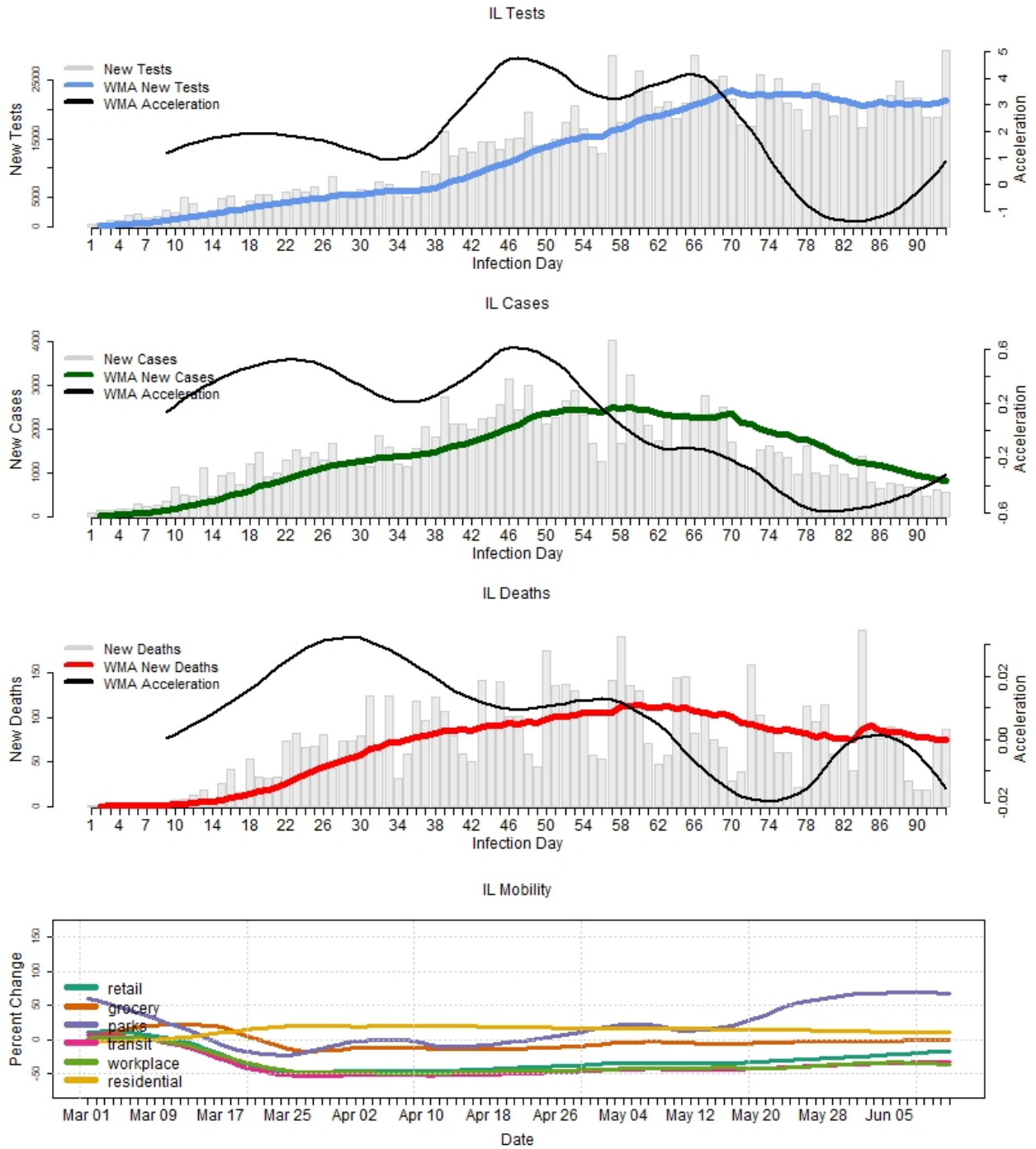
ID



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
ID	66784	3540	88	5.3	2.5	78	0

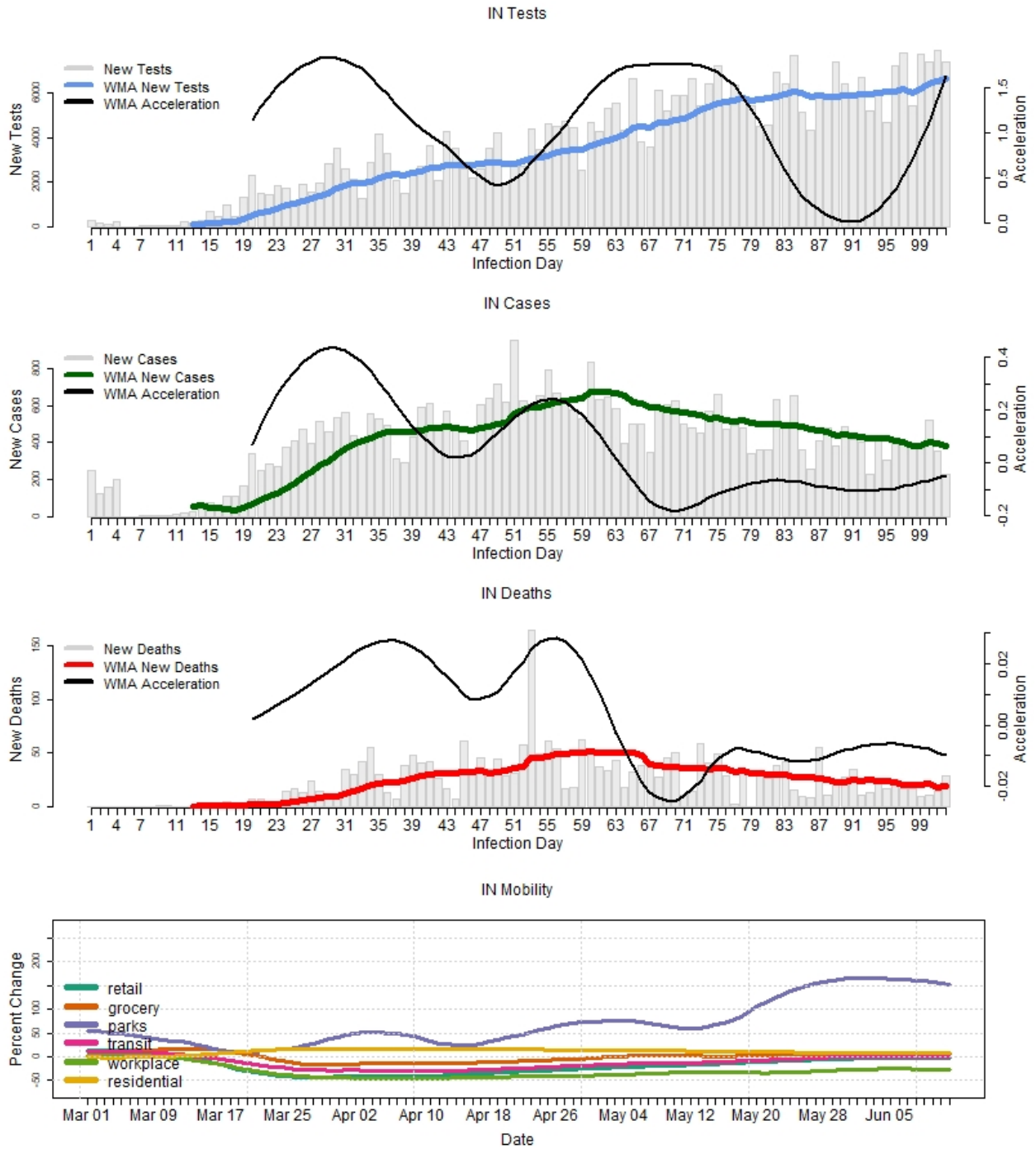
II



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
IL	1259189	135046	6666	10.7	4.9	546	87

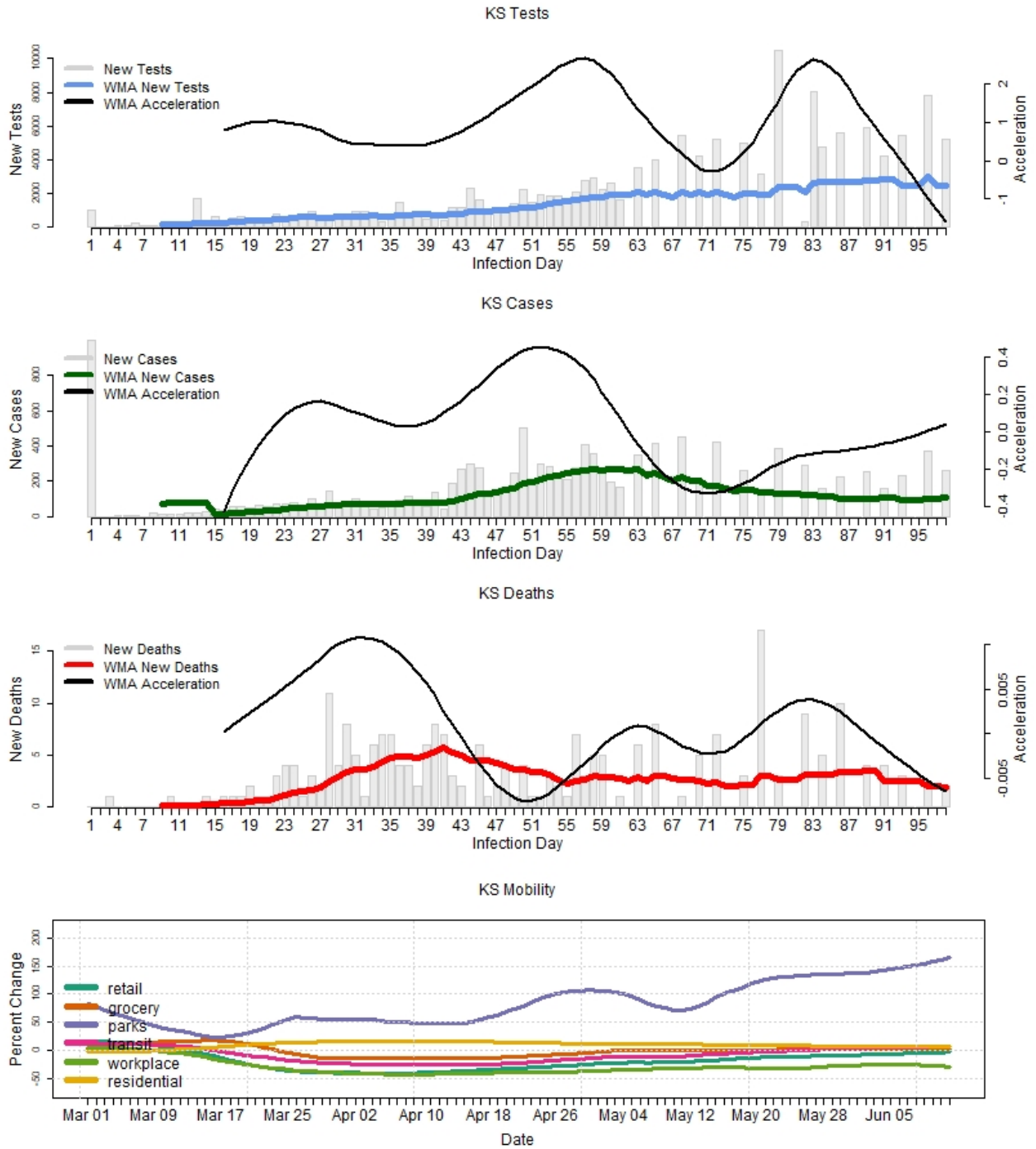
IN



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
IN	371182	41013	2475	11	6	227	28

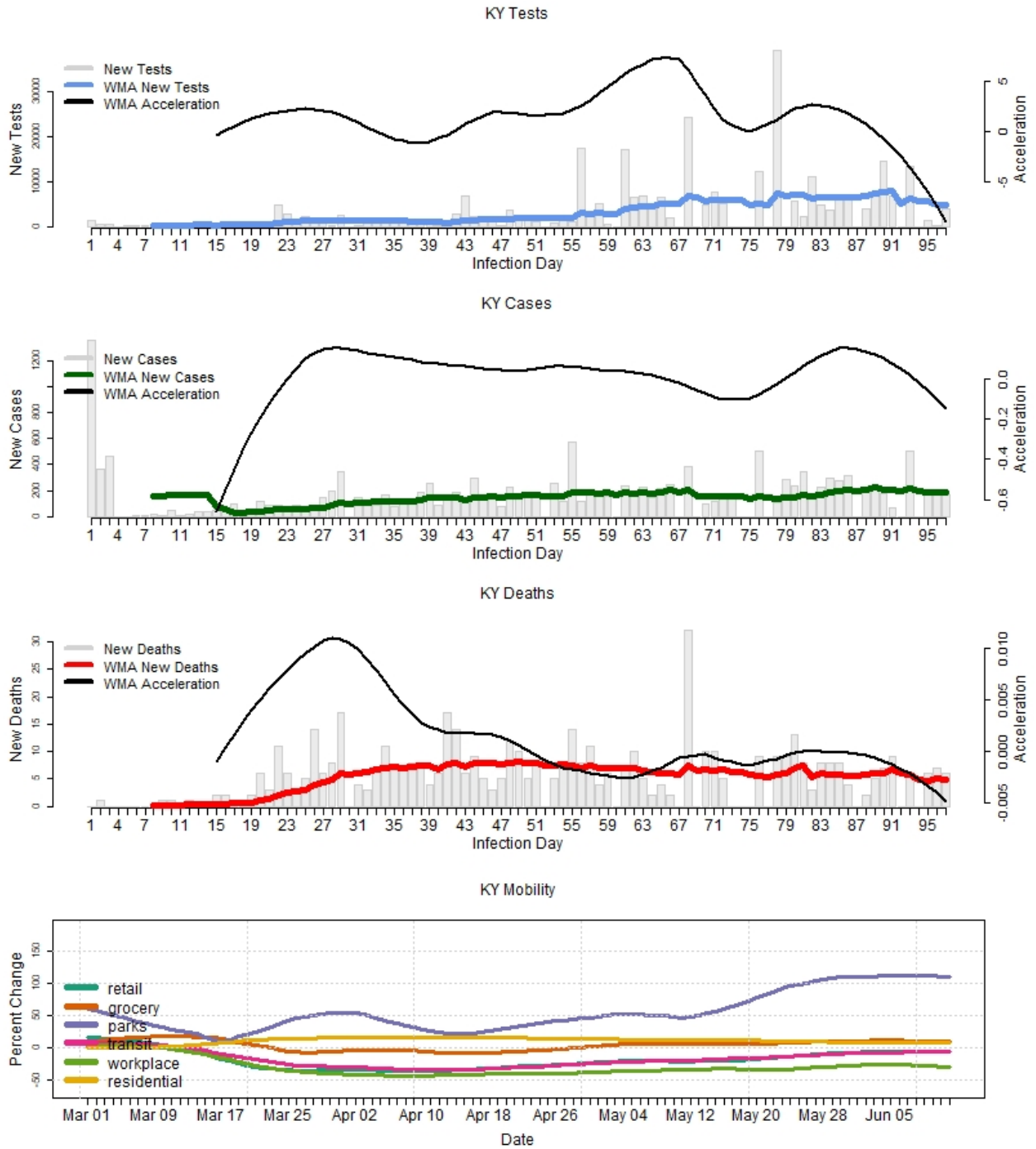
KS



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
KS	142124	11681	247	8.2	2.1	262	2

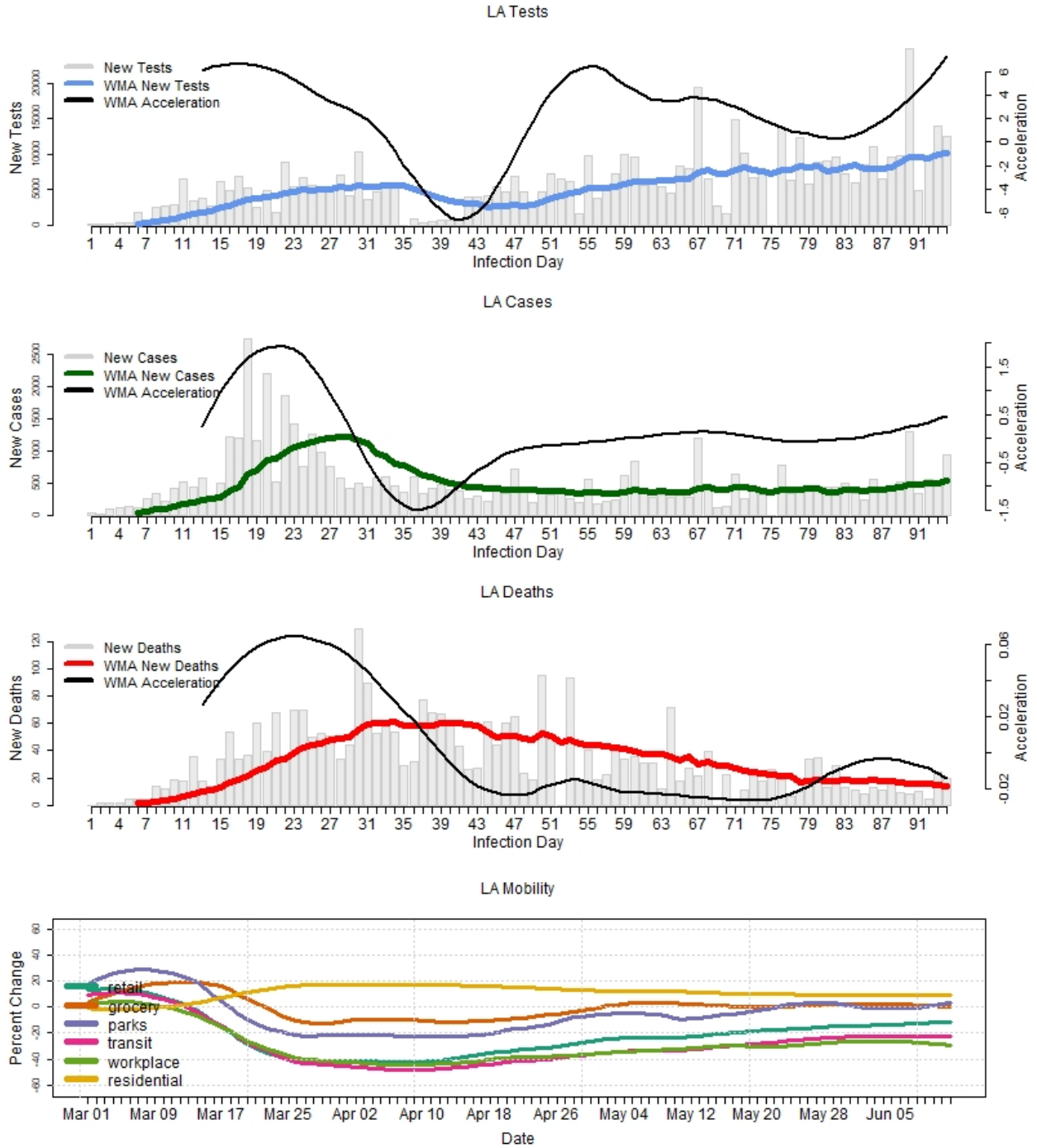
KY



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
KY	299869	12995	518	4.3	4	166	6

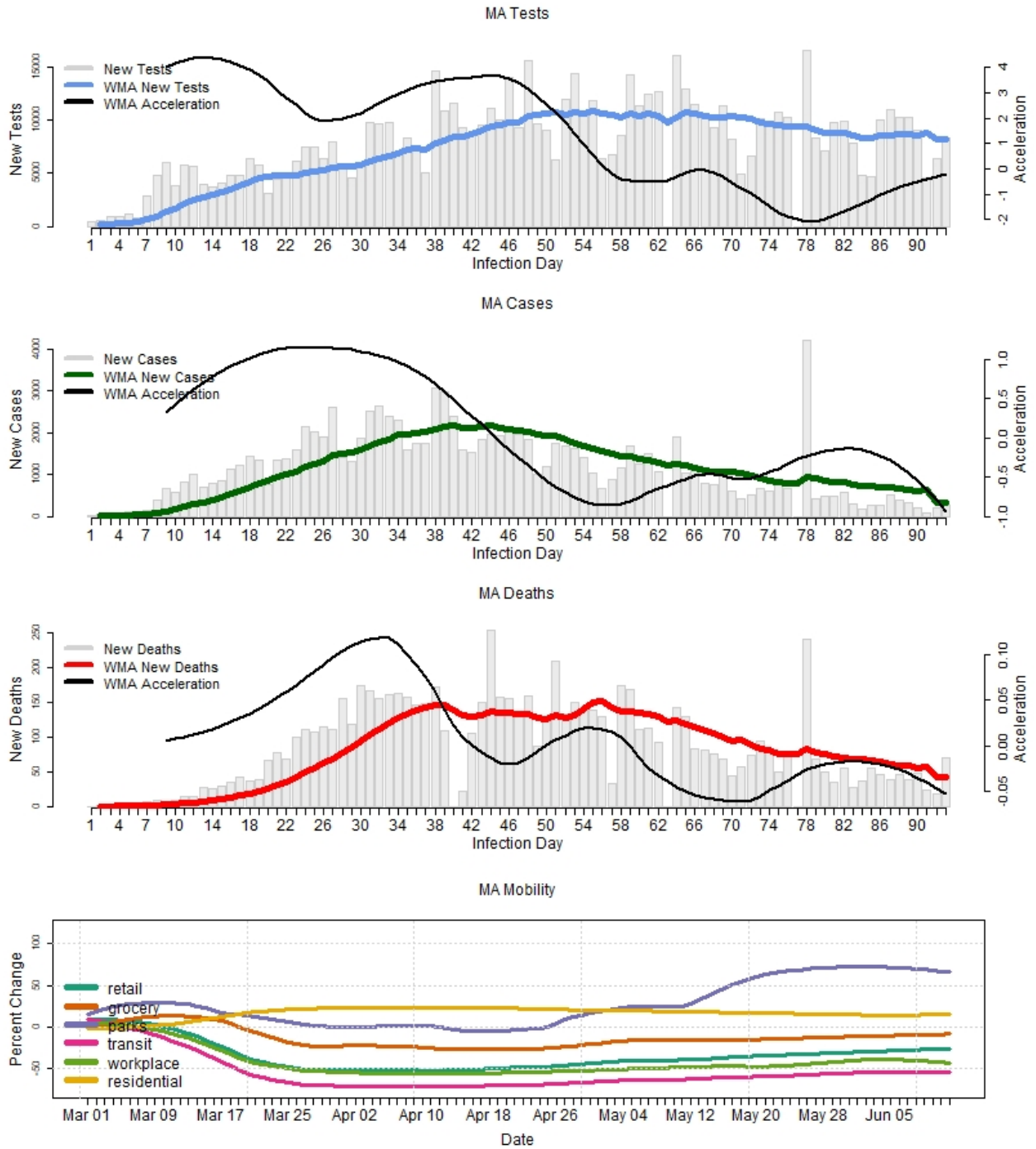
LA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
LA	545221	48634	3062	8.9	6.3	928	20

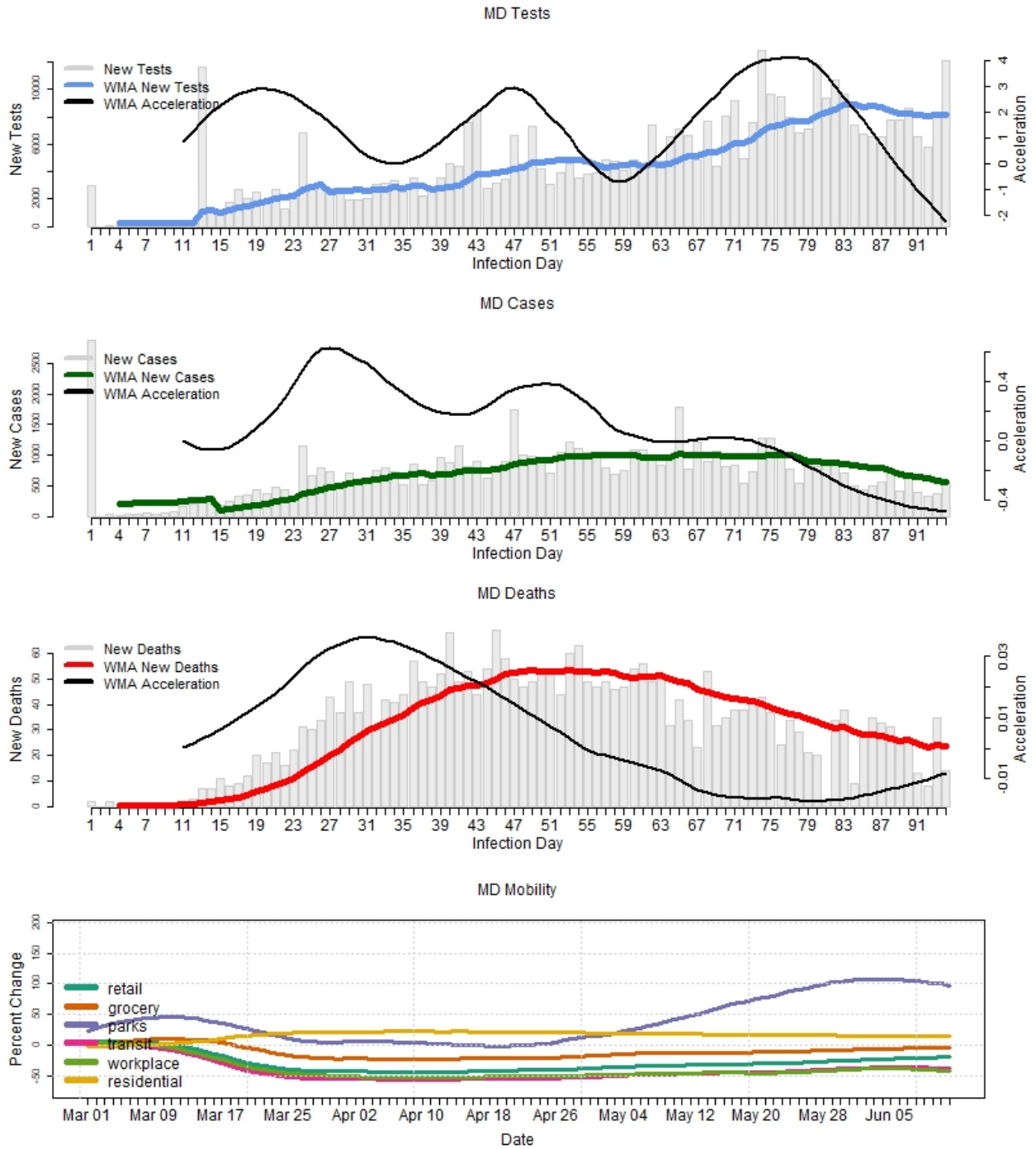
MA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MA	732046	106151	7734	14.5	7.3	266	69

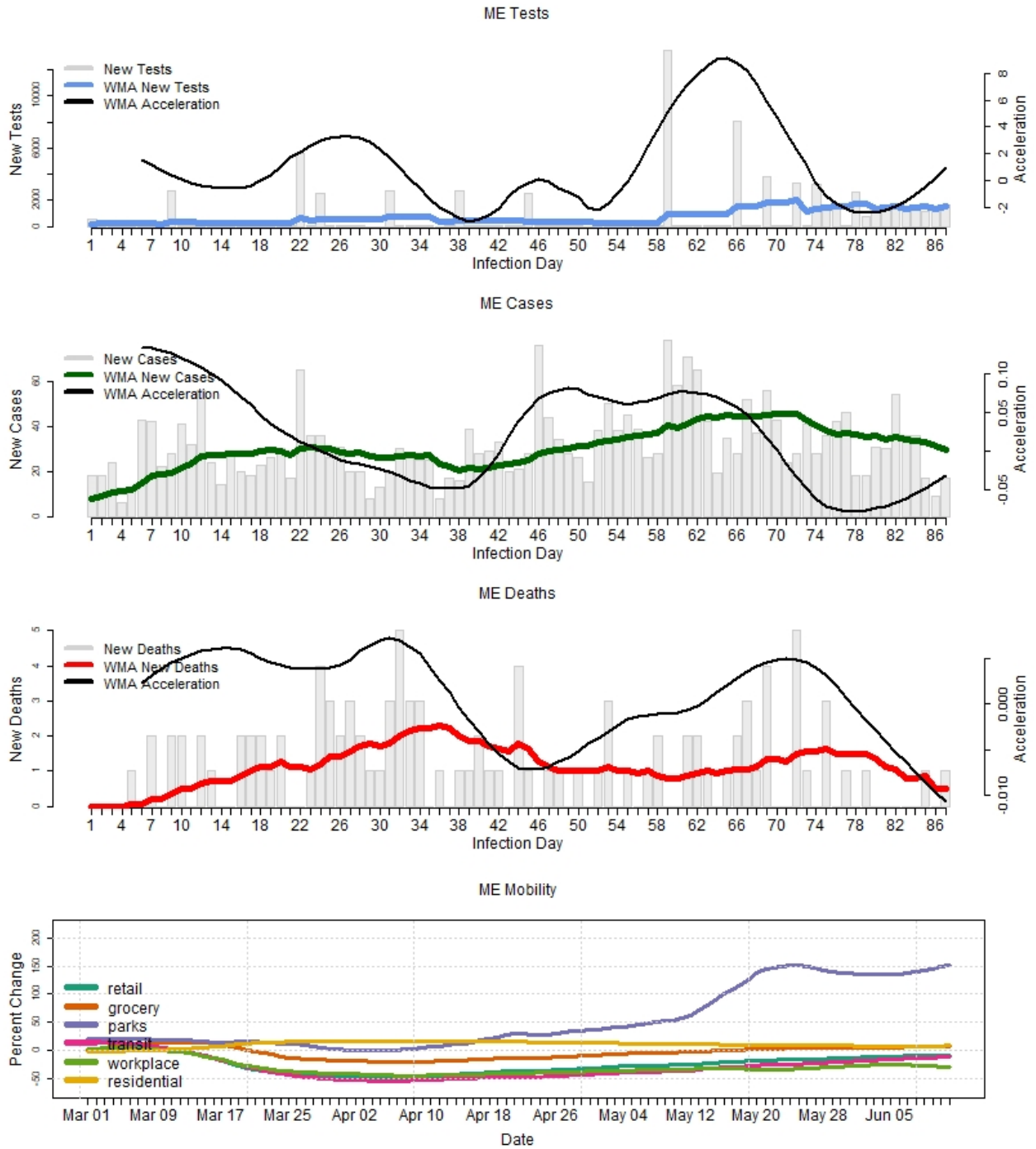
MD



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MD	441343	62969	2996	14.3	4.8	560	14

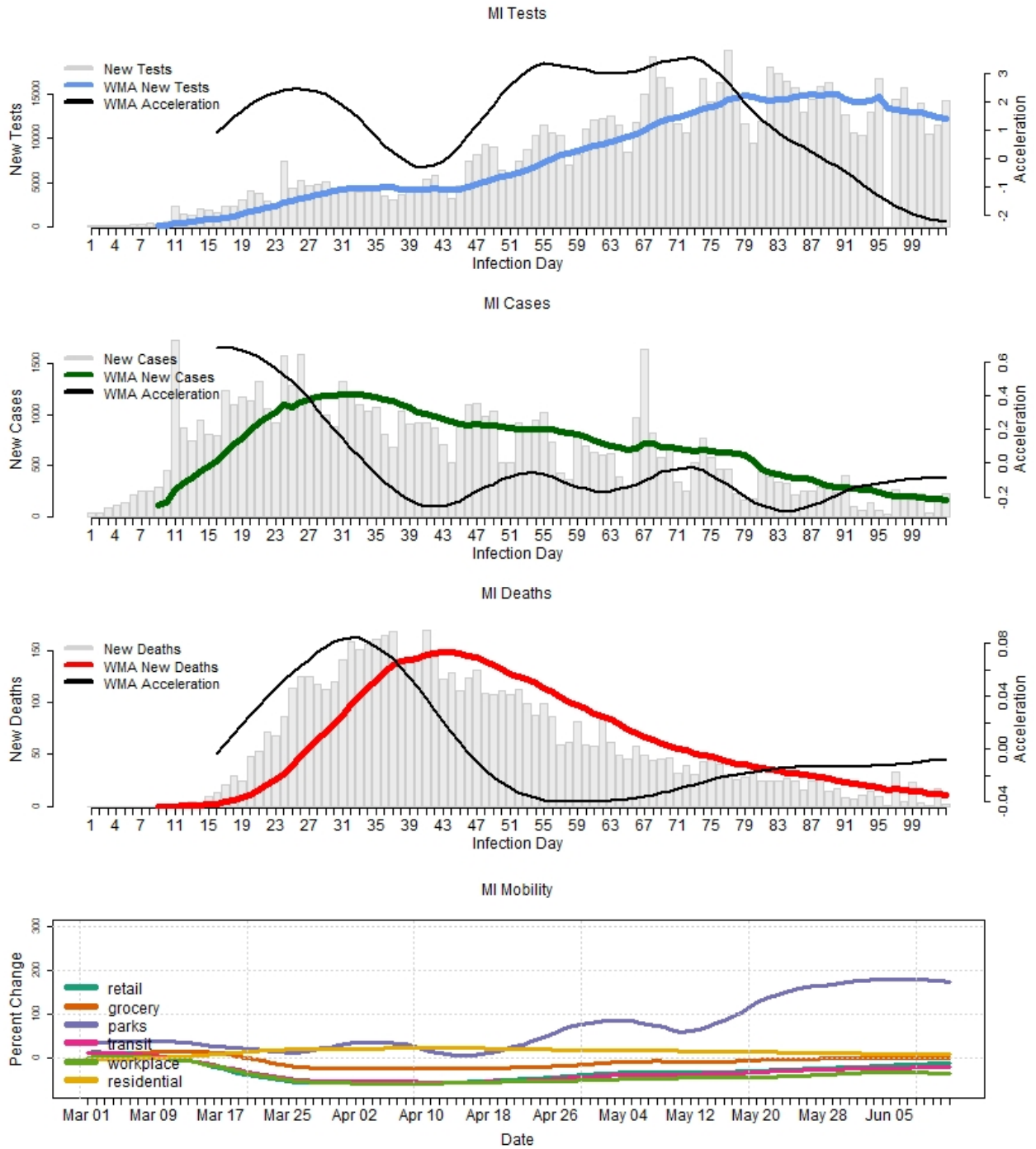
ME



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
ME	74018	2836	102	3.8	3.6	17	1

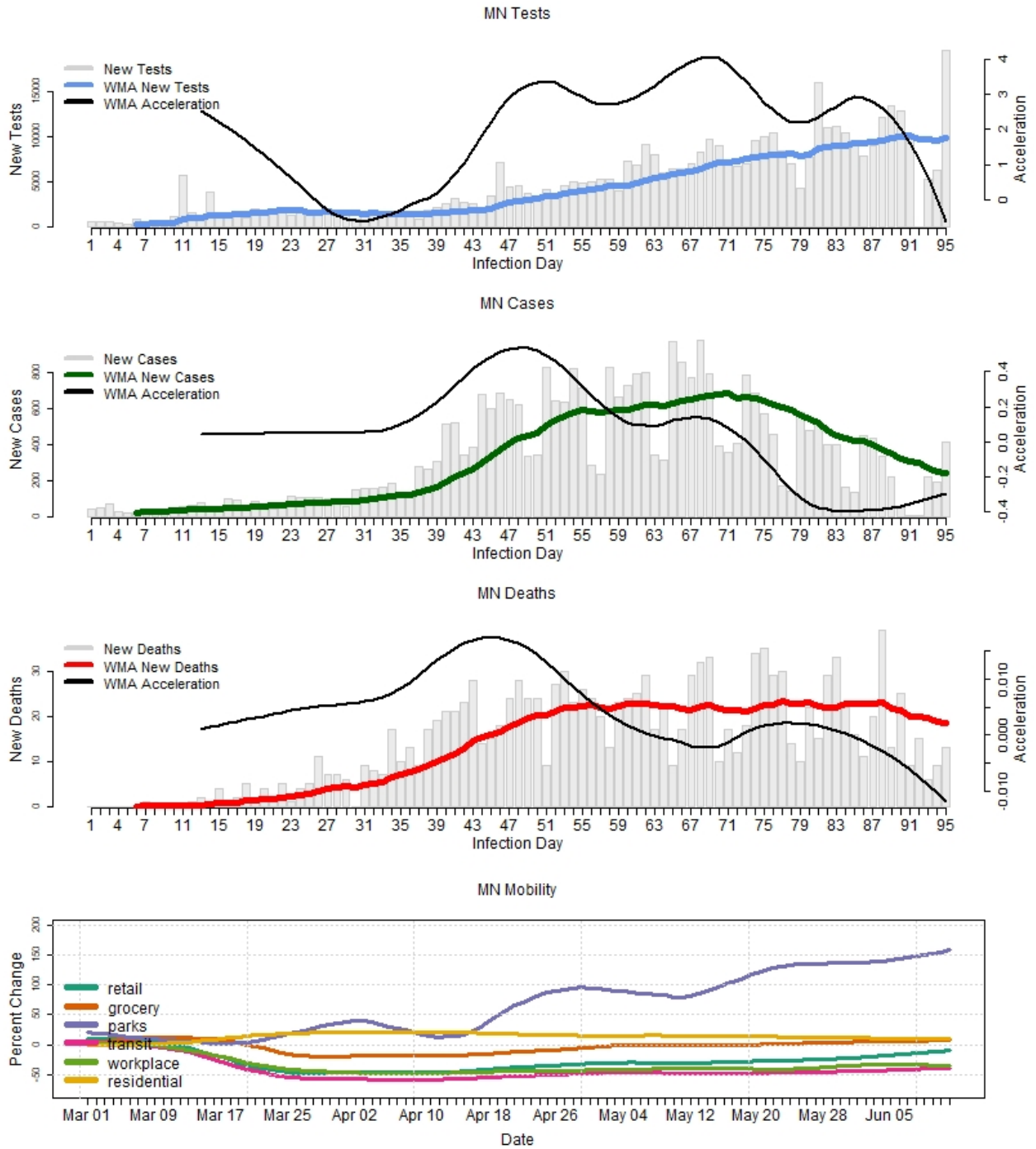
MI



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MI	849885	66497	6036	7.8	9.1	228	2

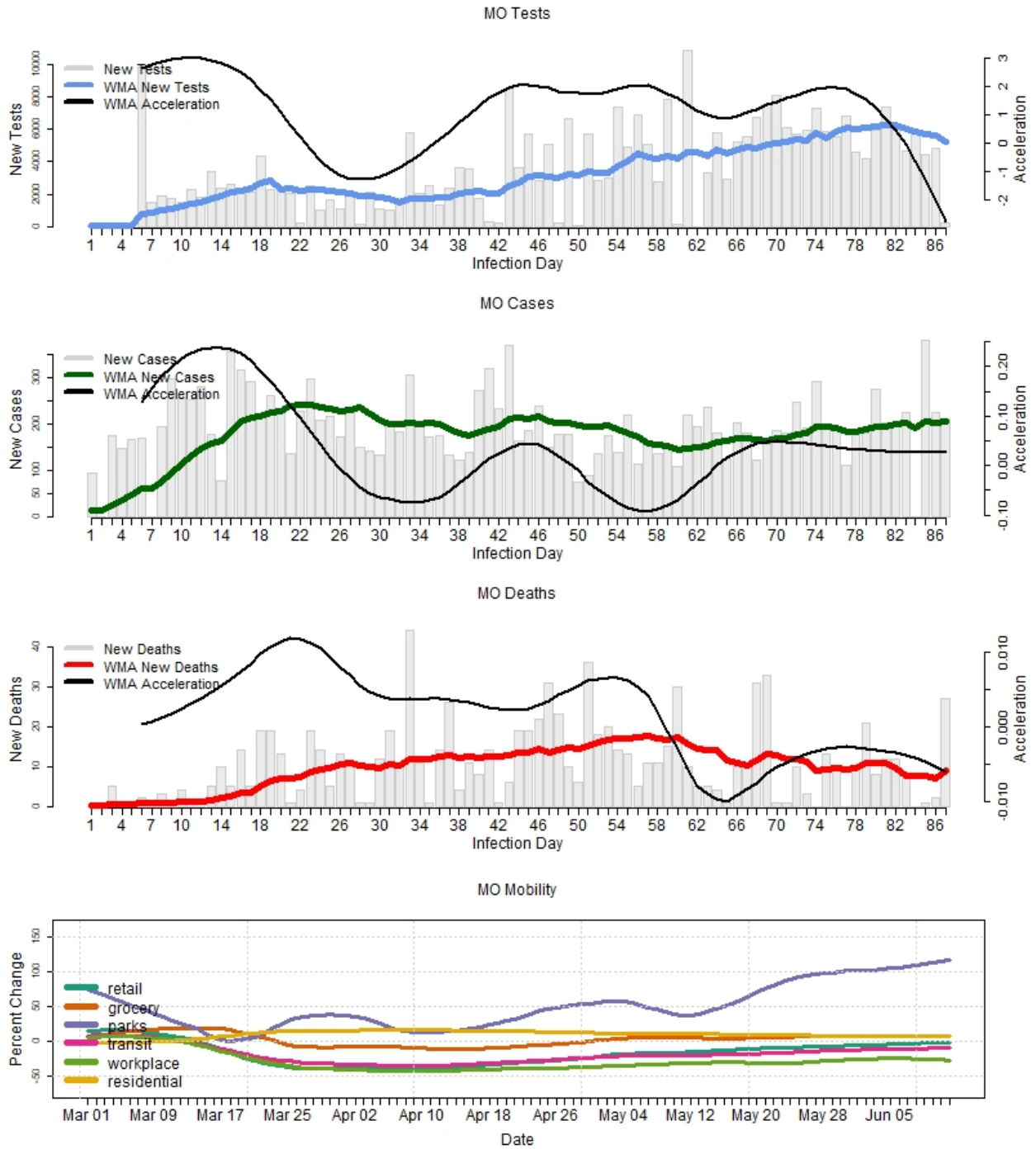
MN



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MN	448587	31296	1357	7	4.3	414	13

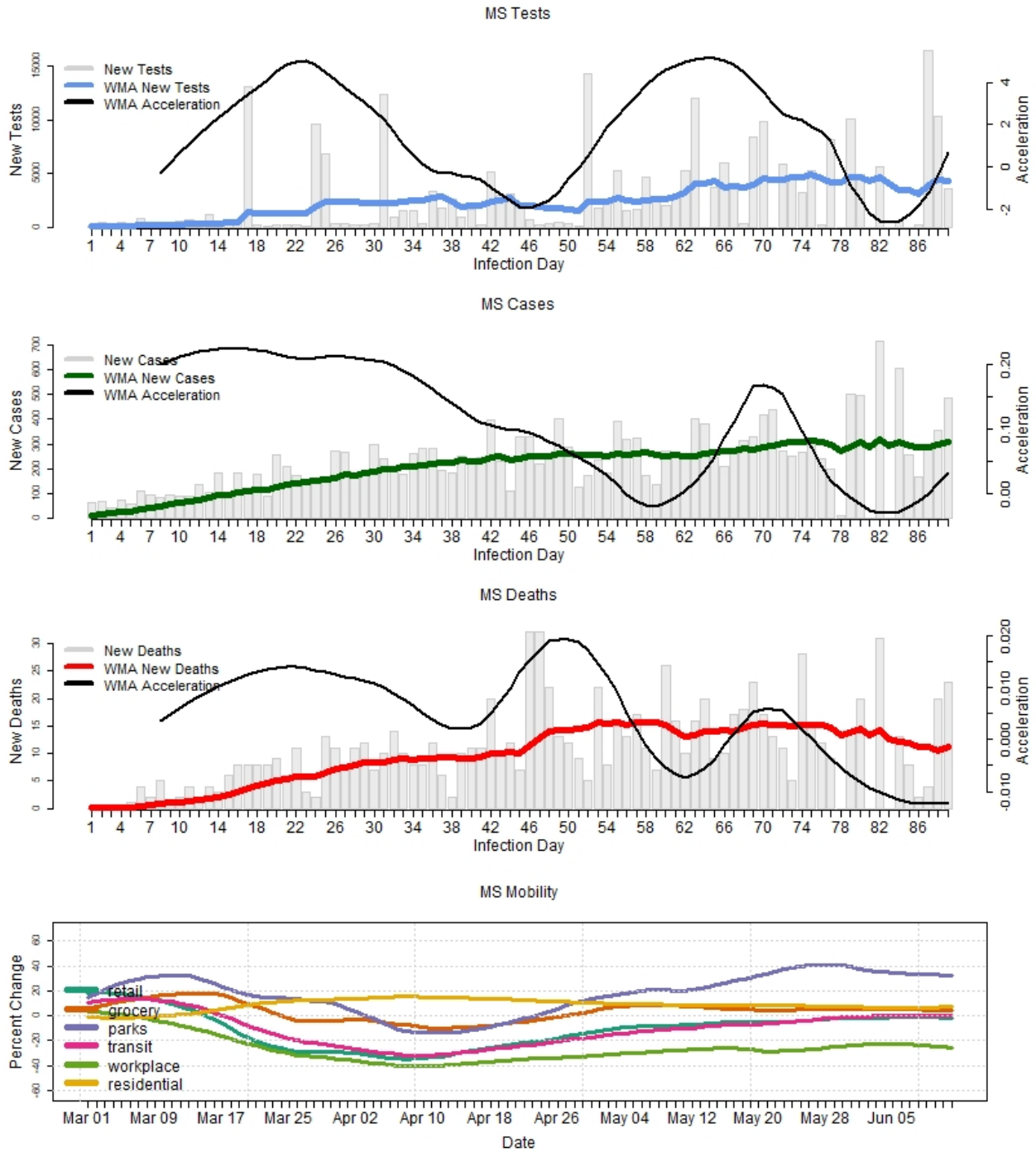
MO



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MO	285002	16625	909	5.8	5.5	211	27

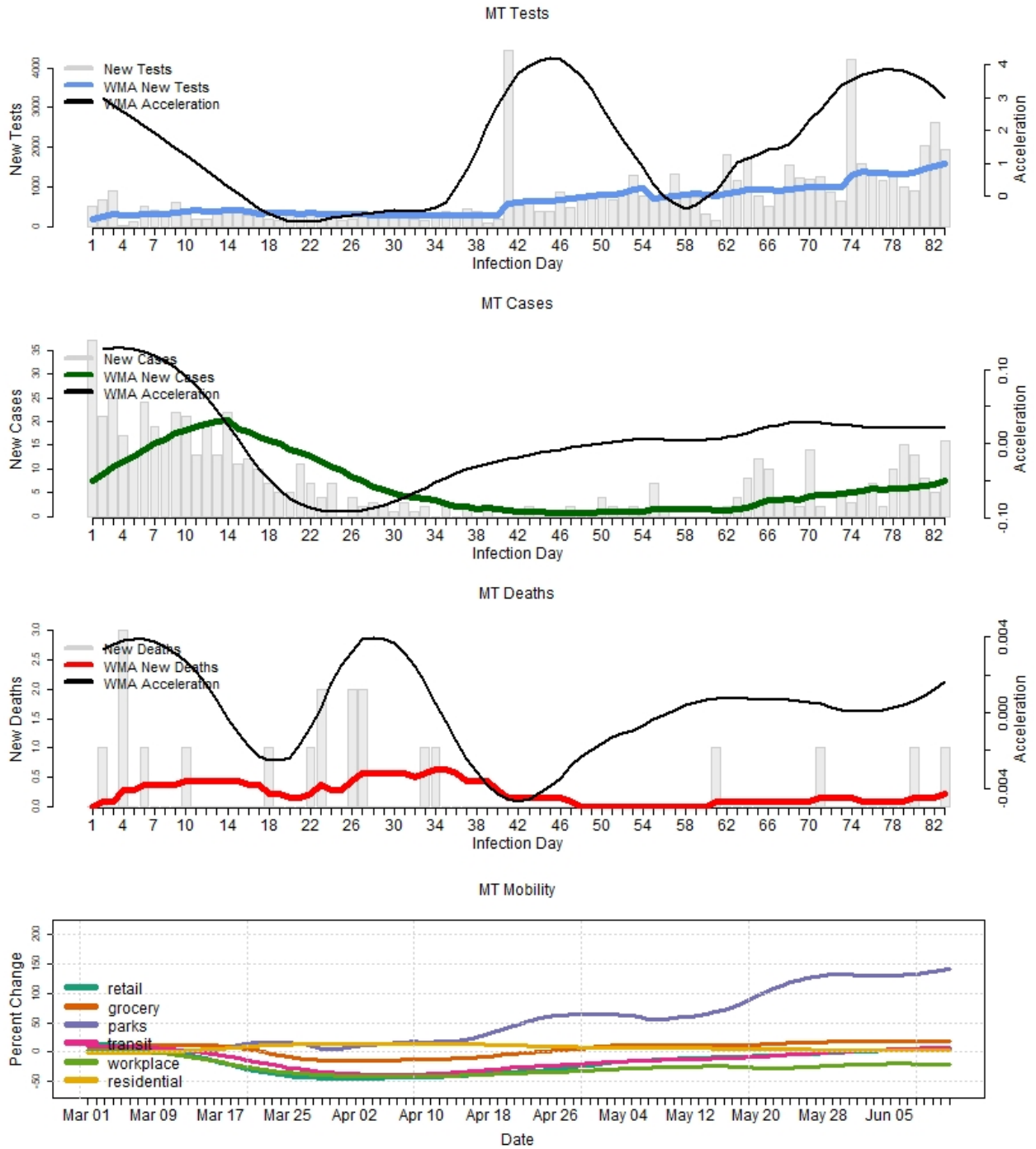
MS



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MS	244389	20641	938	8.4	4.5	489	23

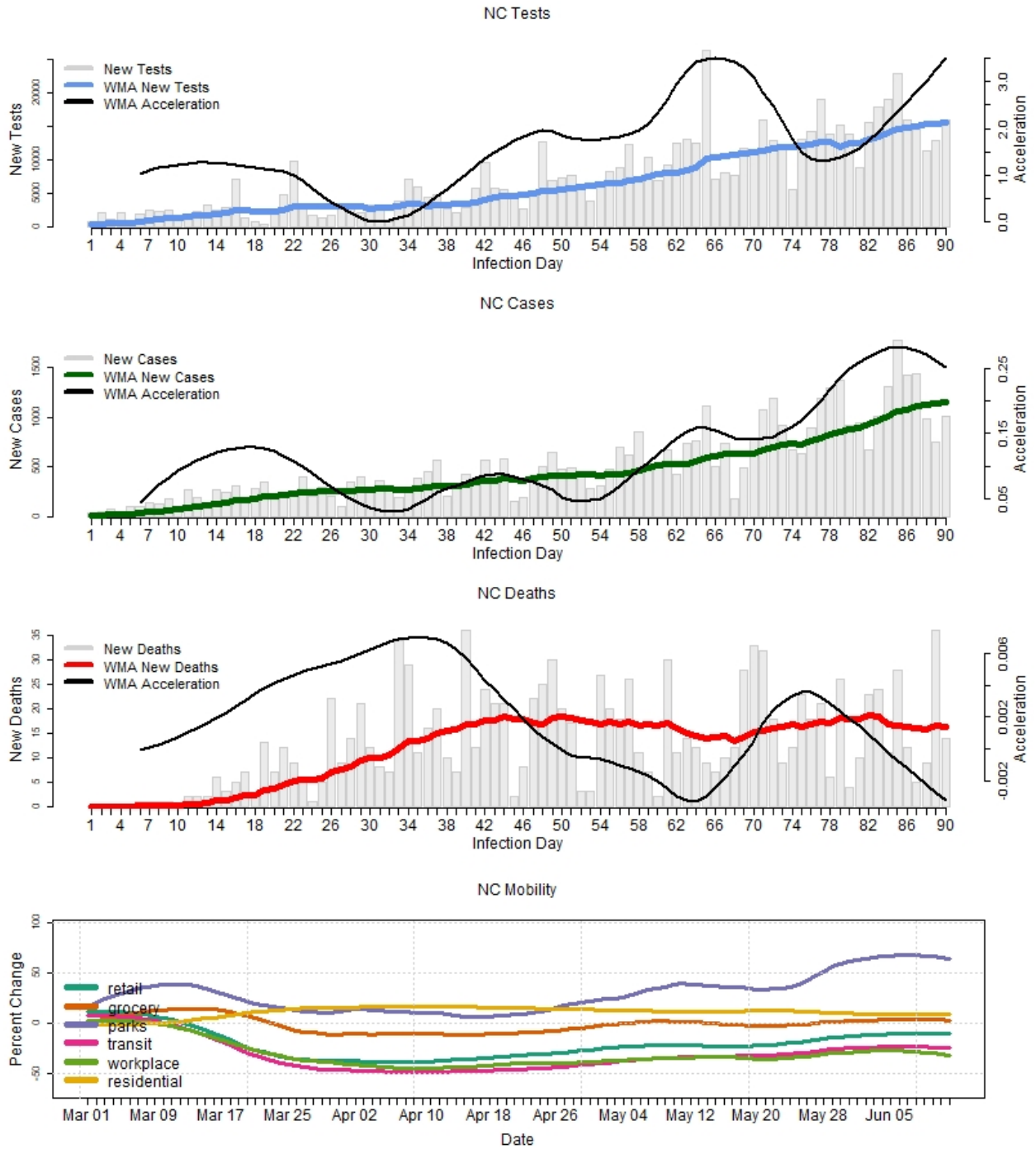
MT



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
MT	65515	630	20	1	3.2	16	1

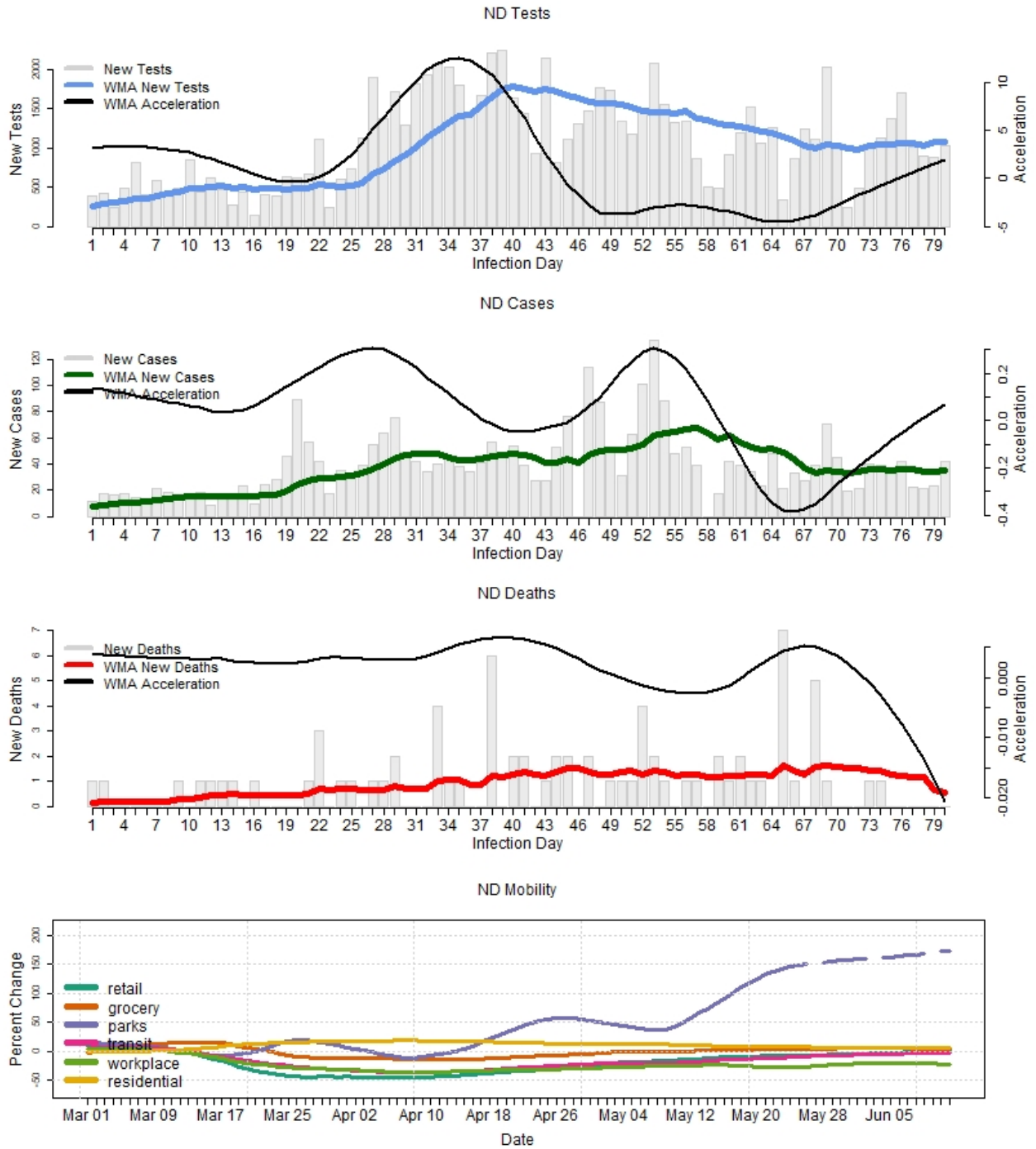
NC



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NC	667422	46855	1168	7	2.5	1002	14

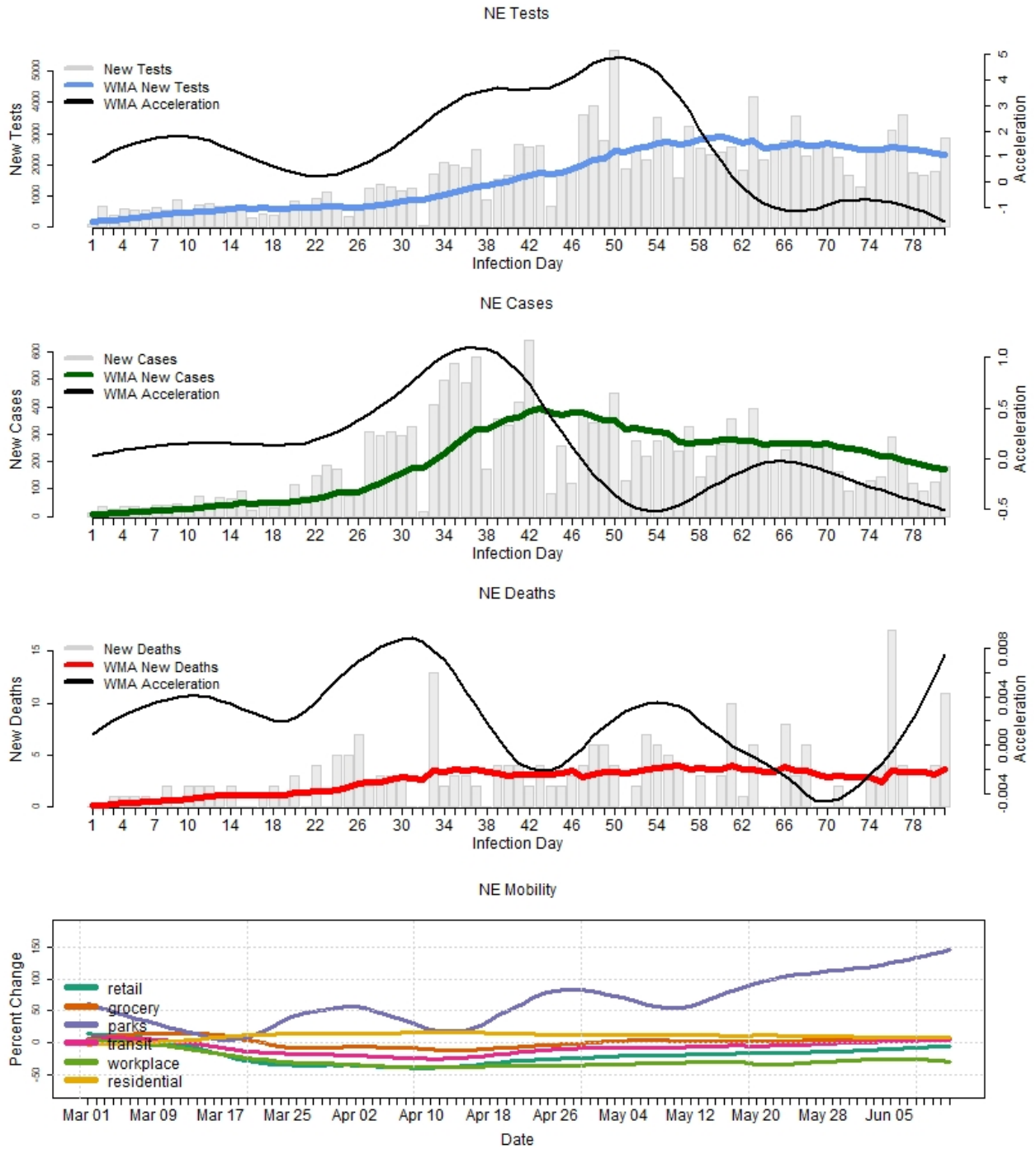
ND



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
ND	89674	3166	77	3.5	2.4	42	0

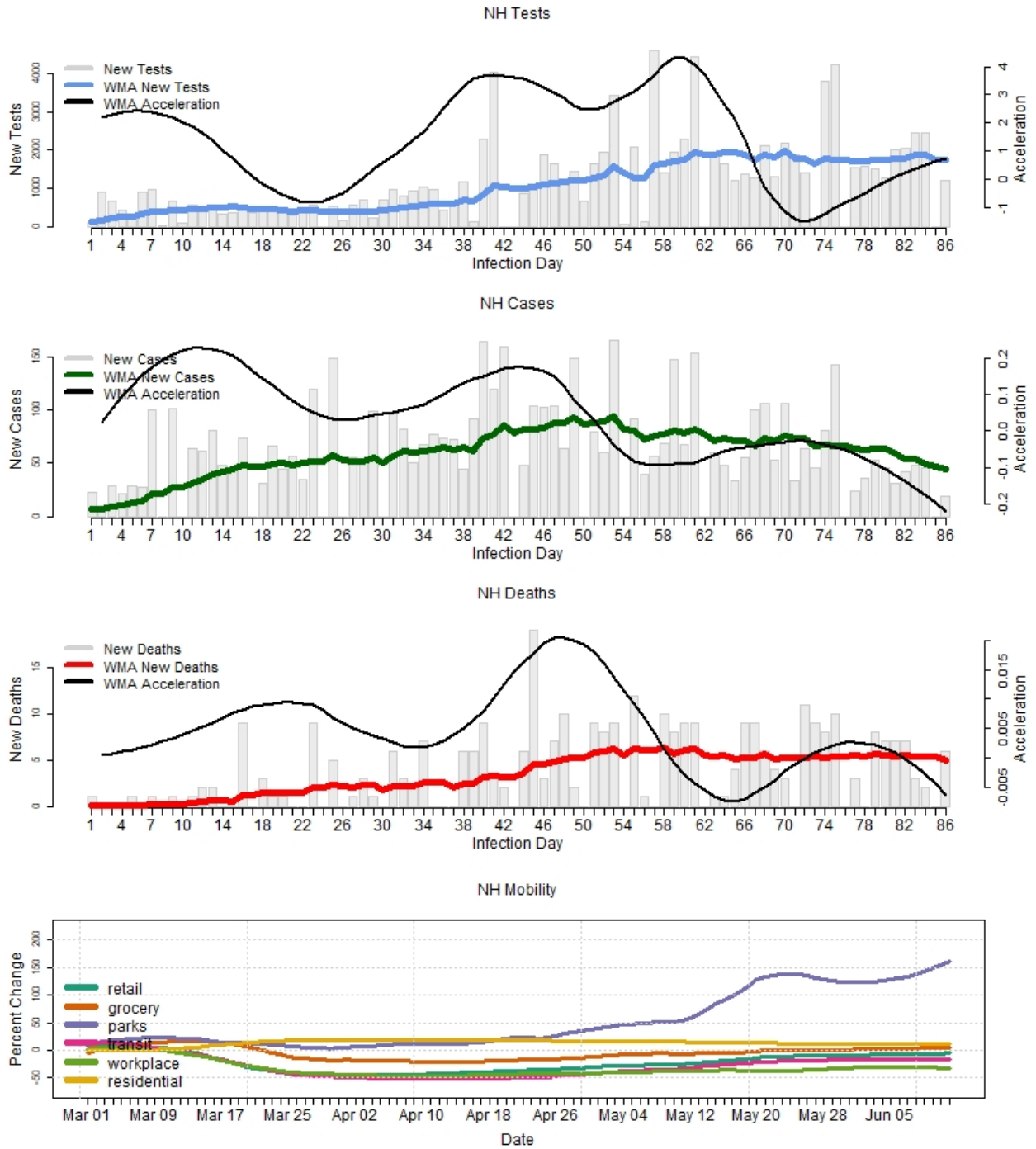
NE



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NE	142387	17031	231	12	1.4	180	11

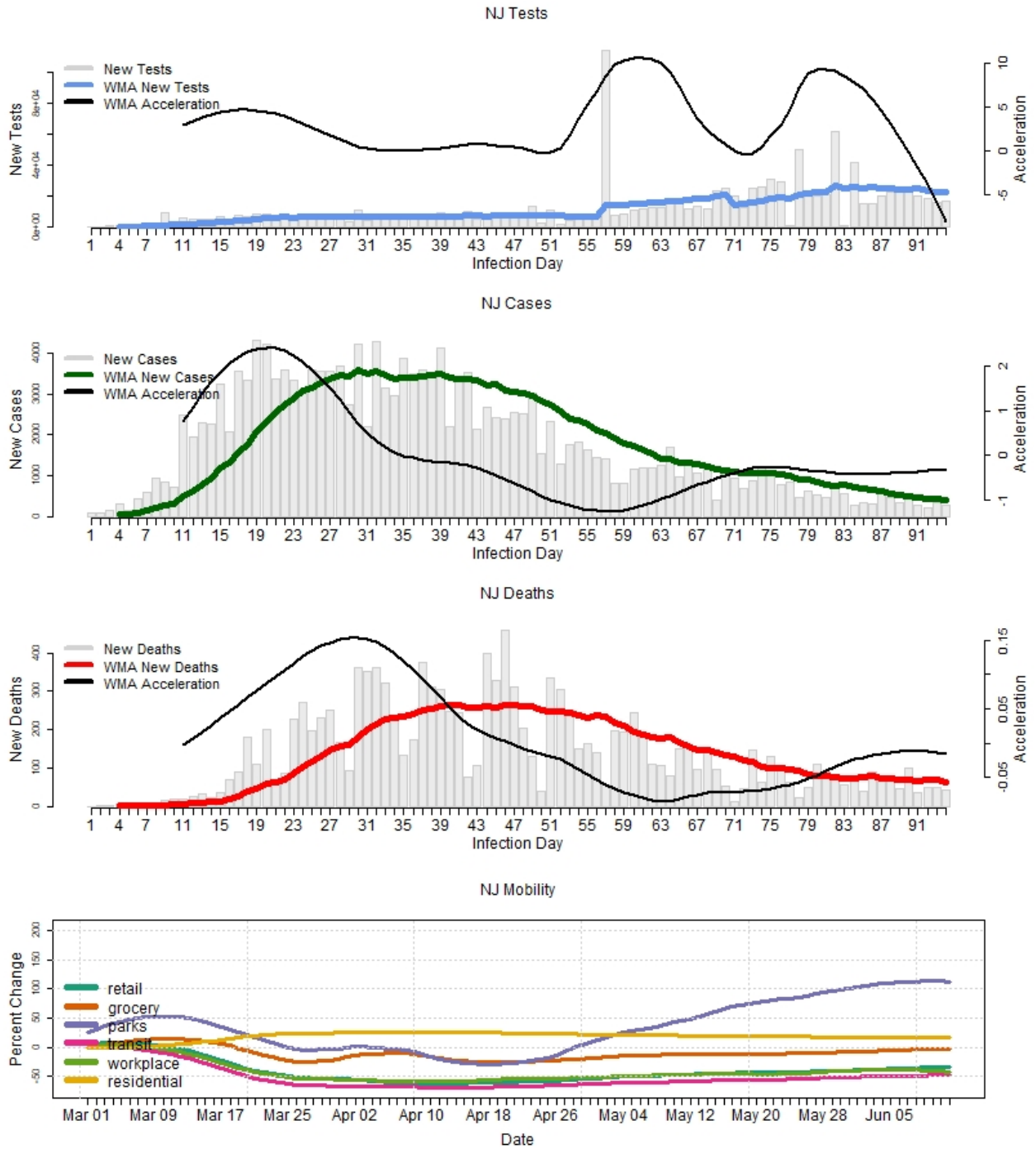
NH



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NH	100086	5364	326	5.4	6.1	19	6

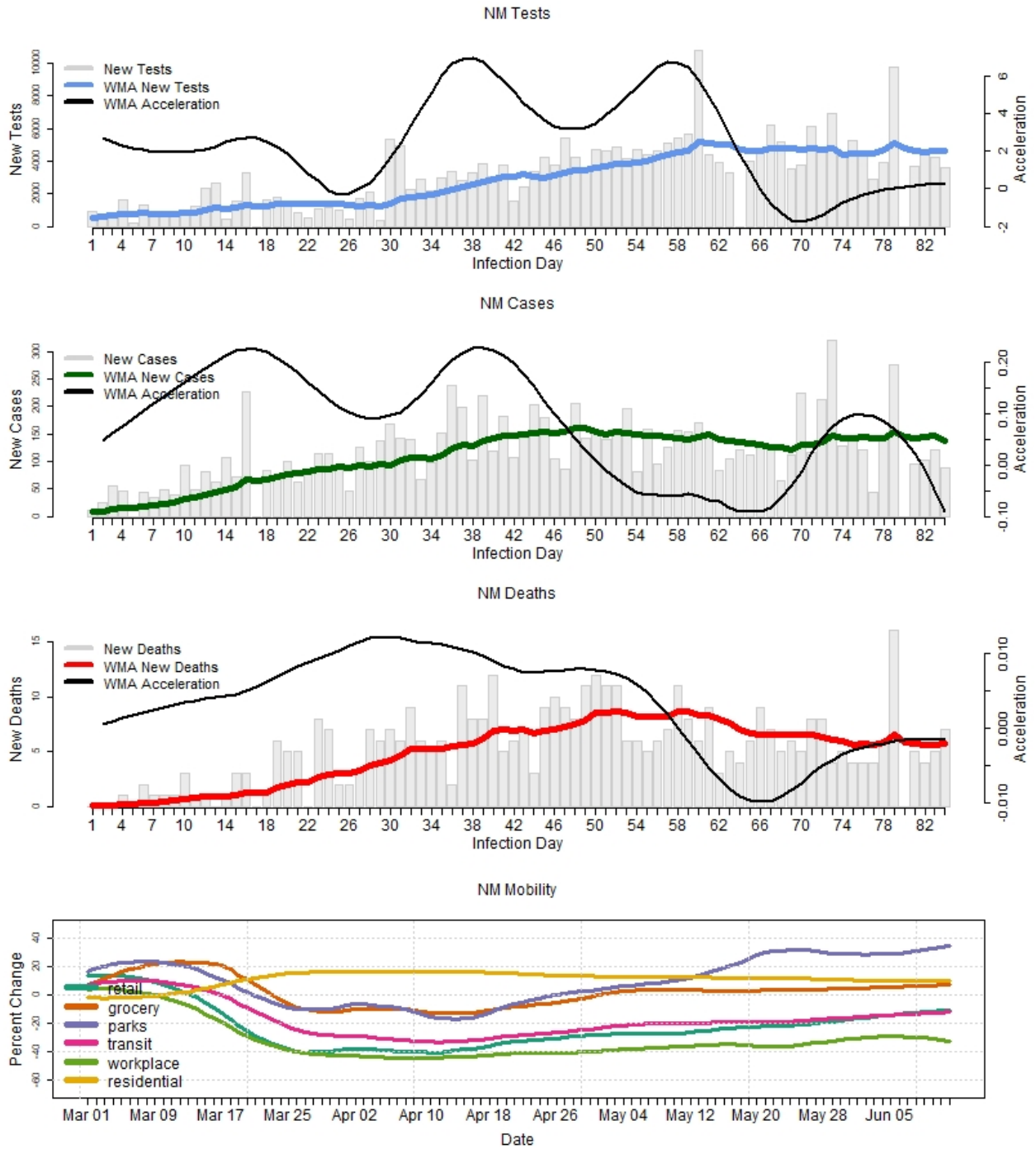
NJ



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NJ	1147841	167703	12769	14.6	7.6	277	42

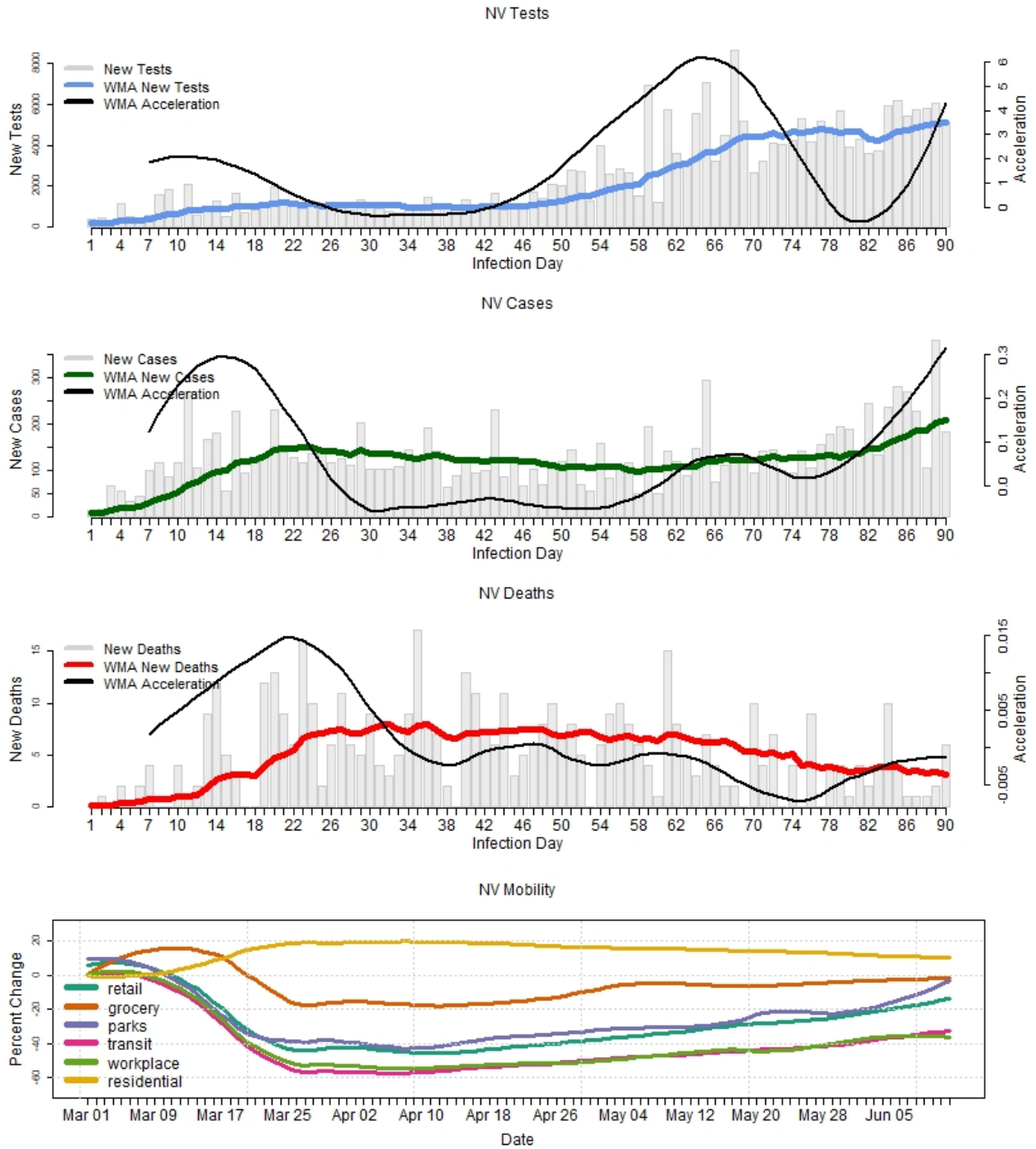
NM



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NM	271553	9933	447	3.7	4.5	88	7

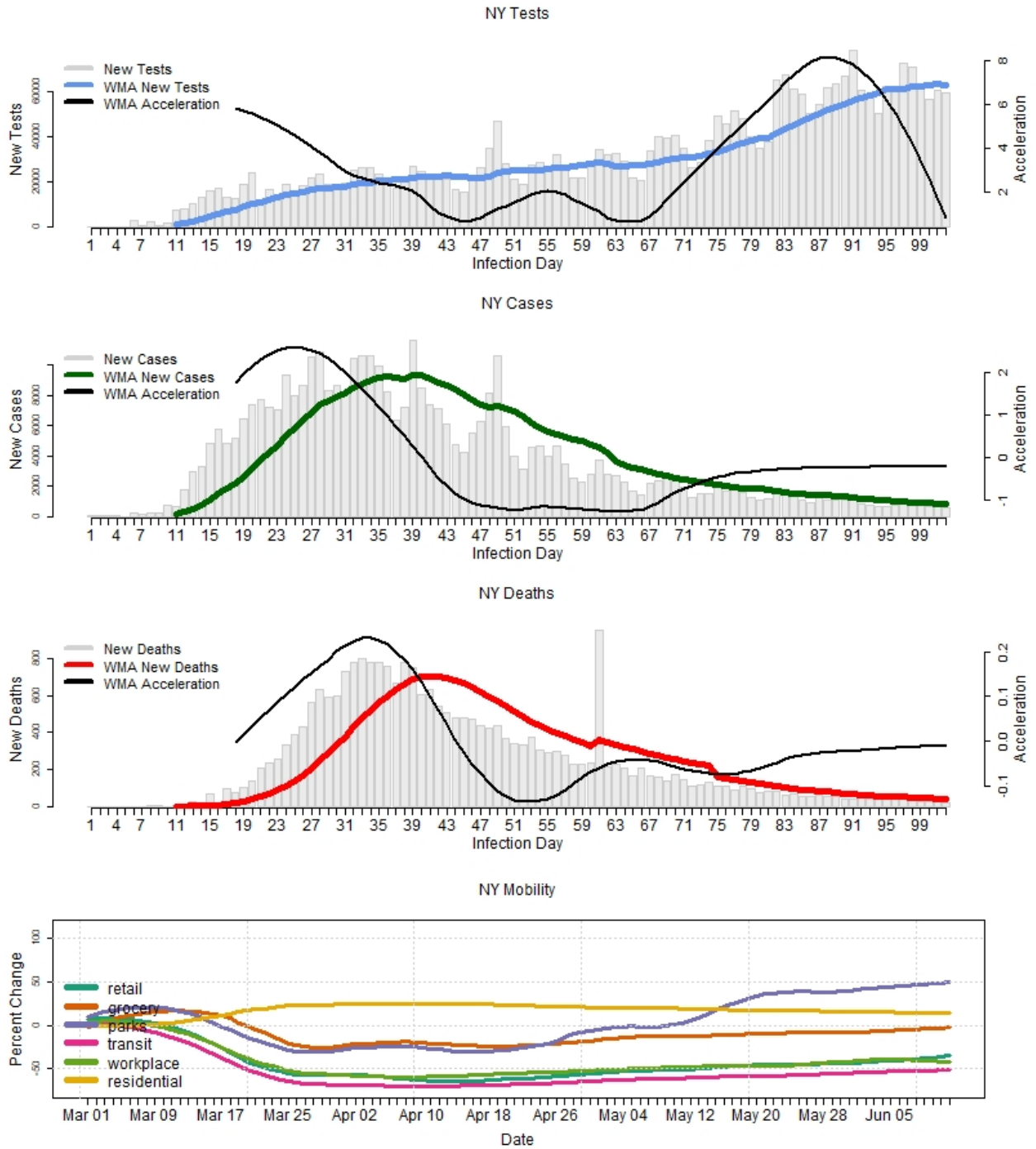
NV



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NV	227610	11842	473	5.2	4	184	6

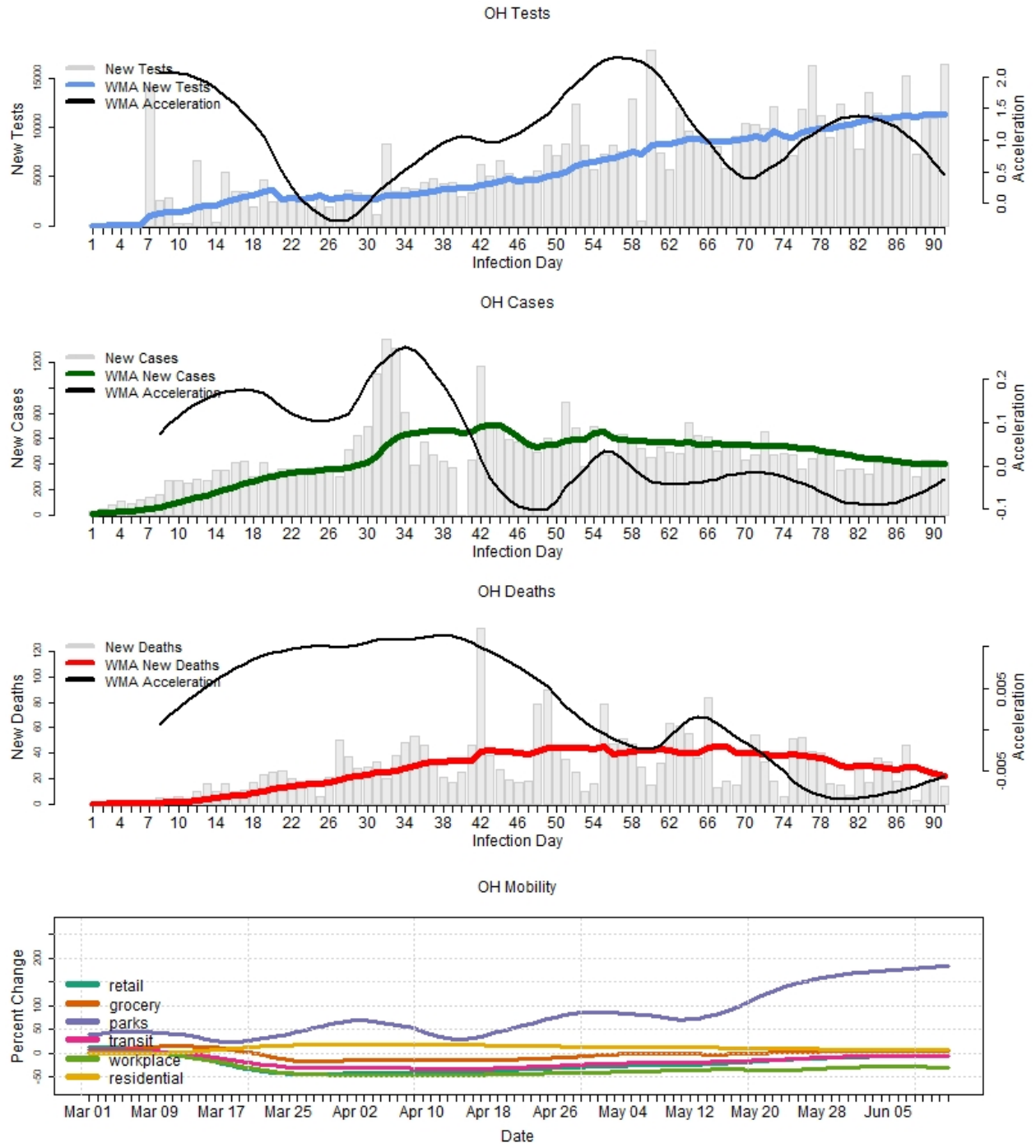
NY



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
NY	3111119	385142	24629	12.4	6.4	567	21

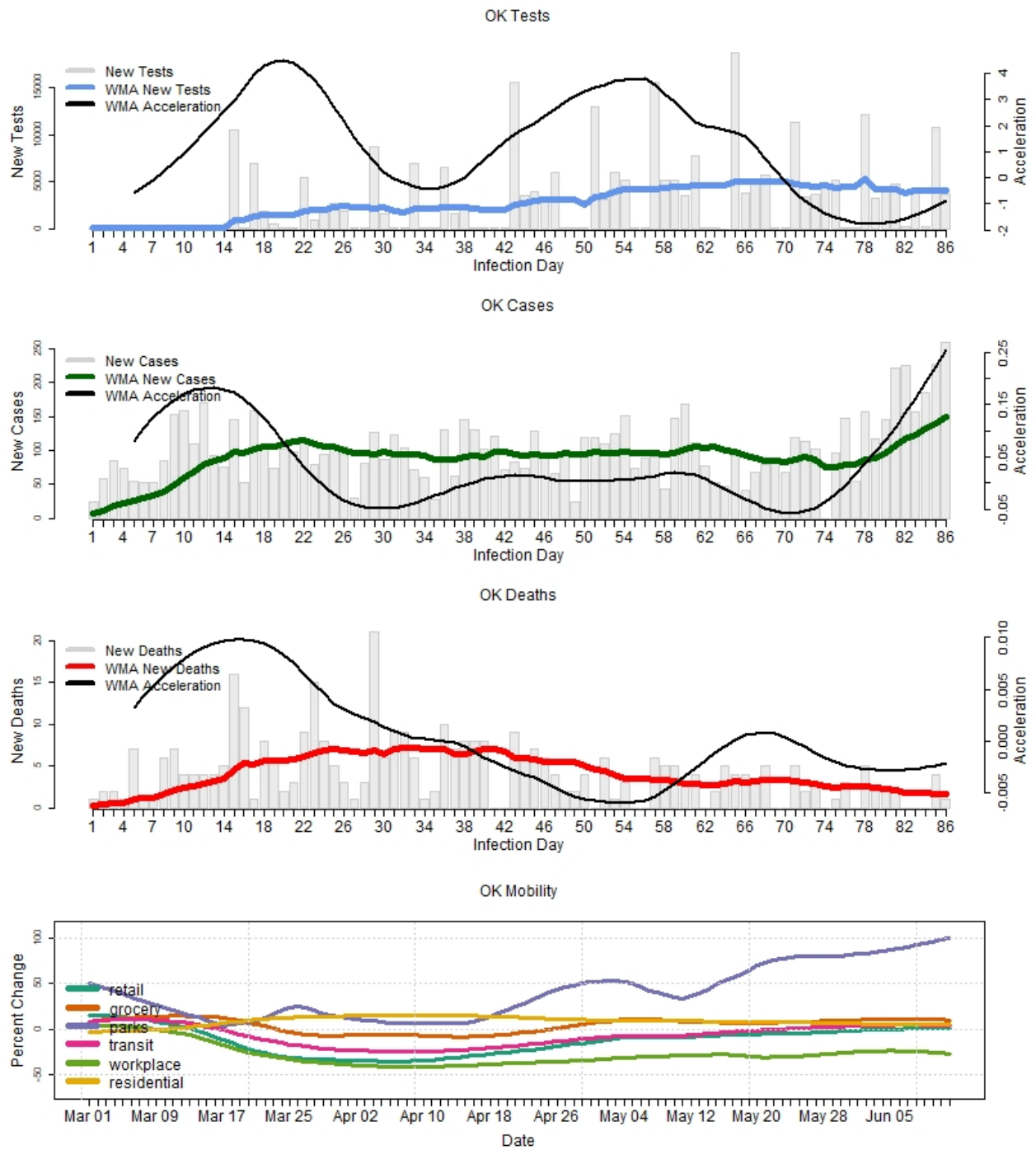
OH



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
OH	584563	42422	2611	7.3	6.2	412	14

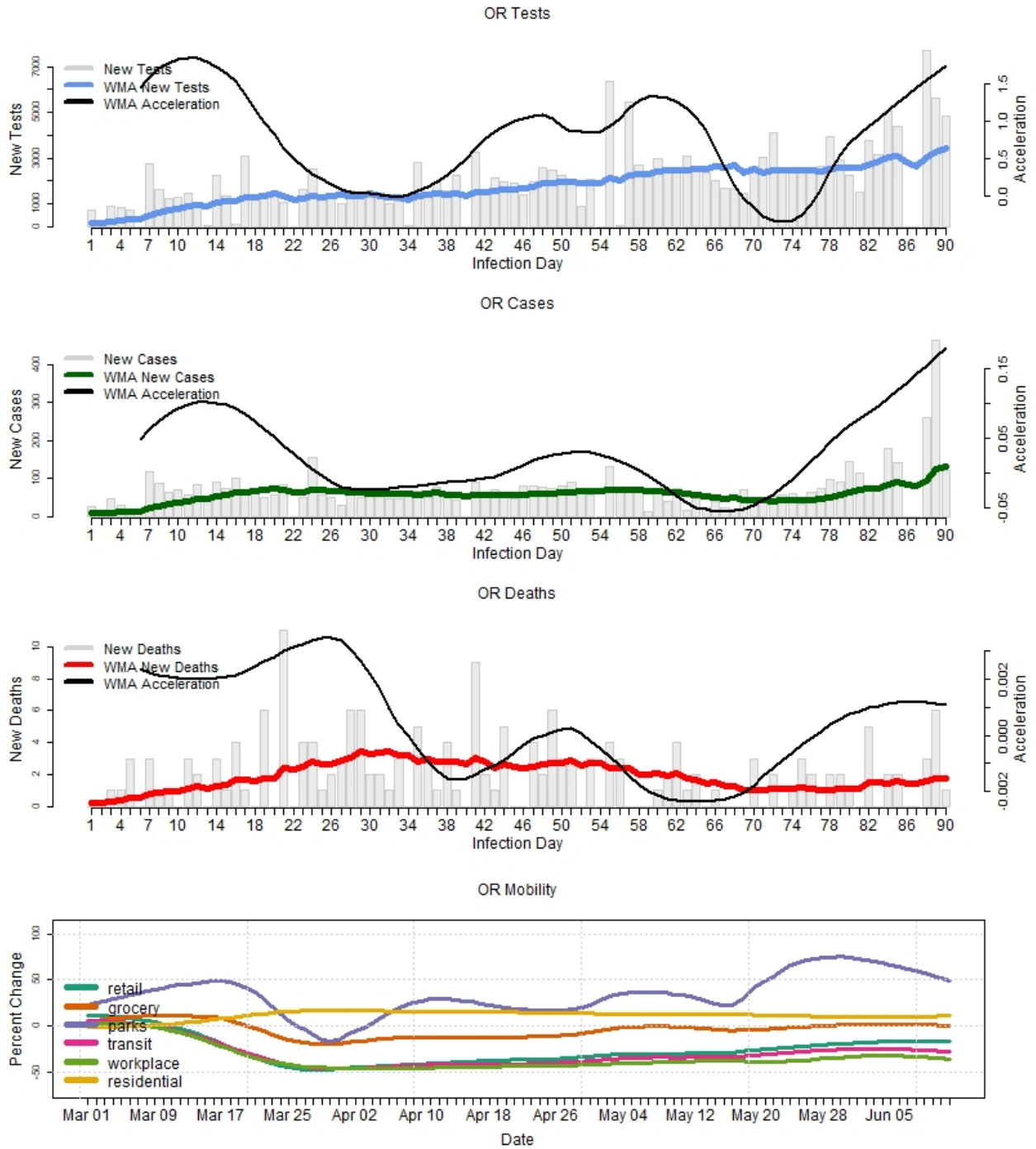
OK



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
OK	265432	8904	364	3.4	4.1	259	1

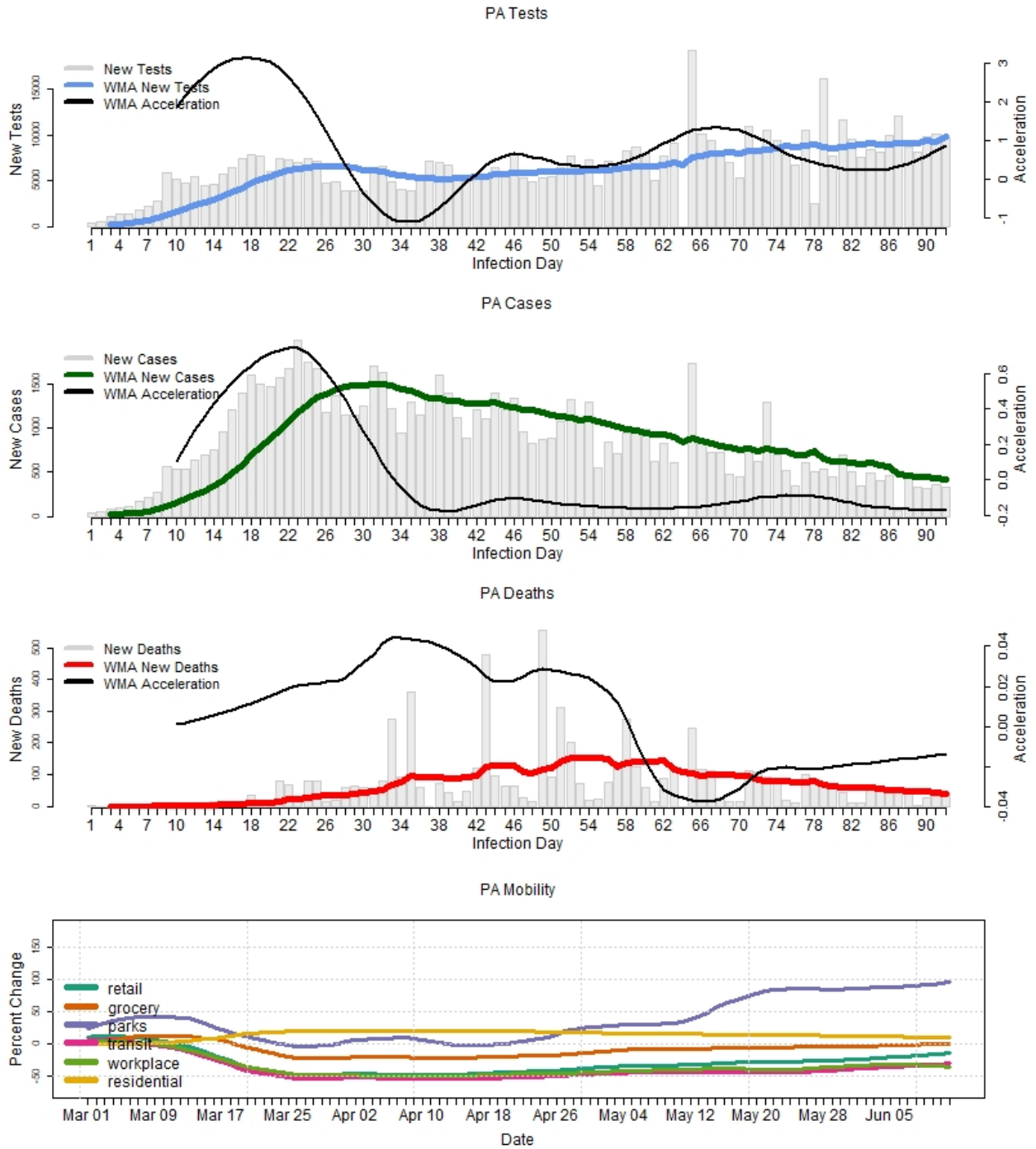
OR



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
OR	184350	6218	183	3.4	2.9	120	1

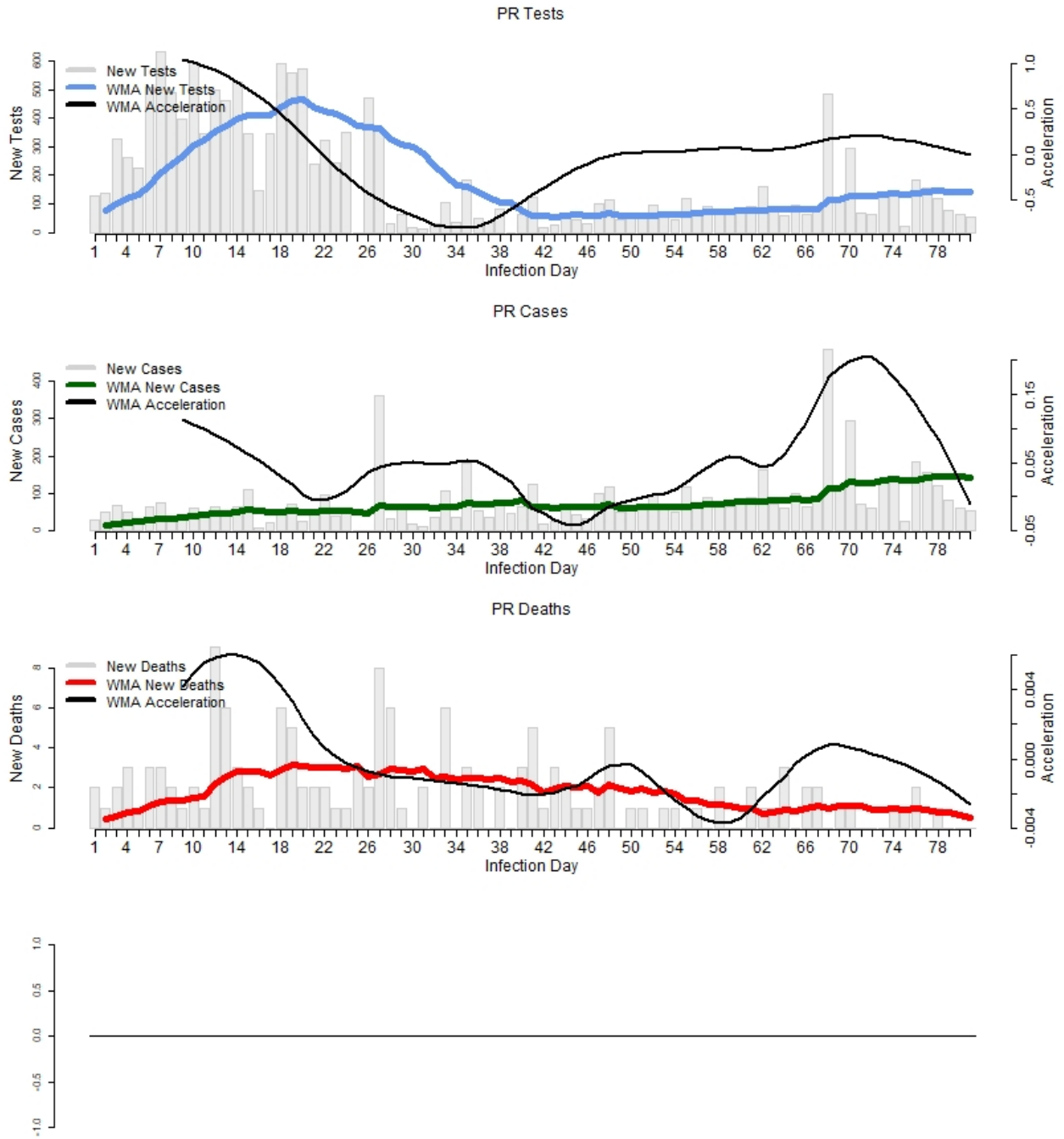
PA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
PA	612831	79818	6319	13	7.9	335	43

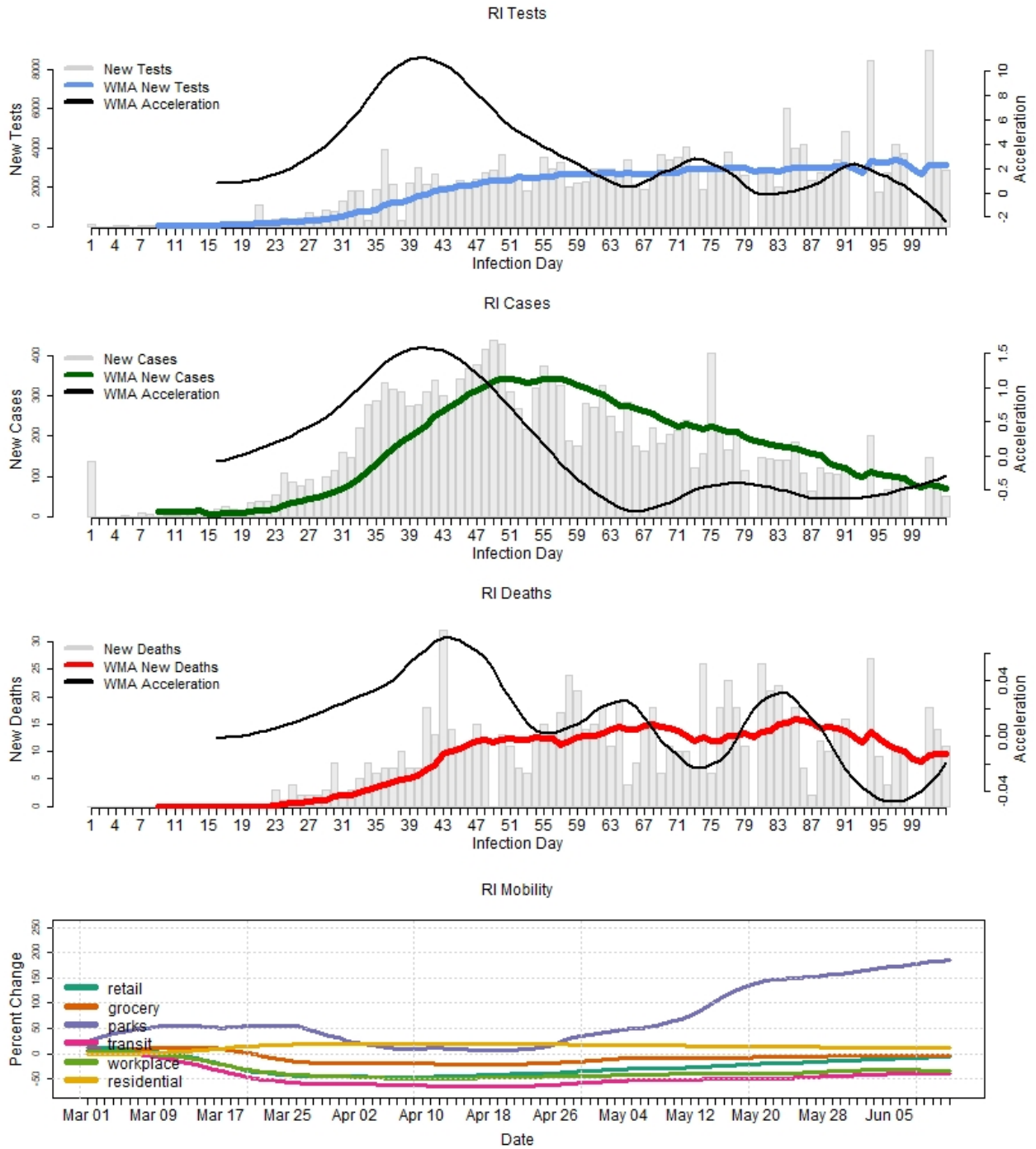
PR



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
PR	6003	6003	147	100	2.4	52	0

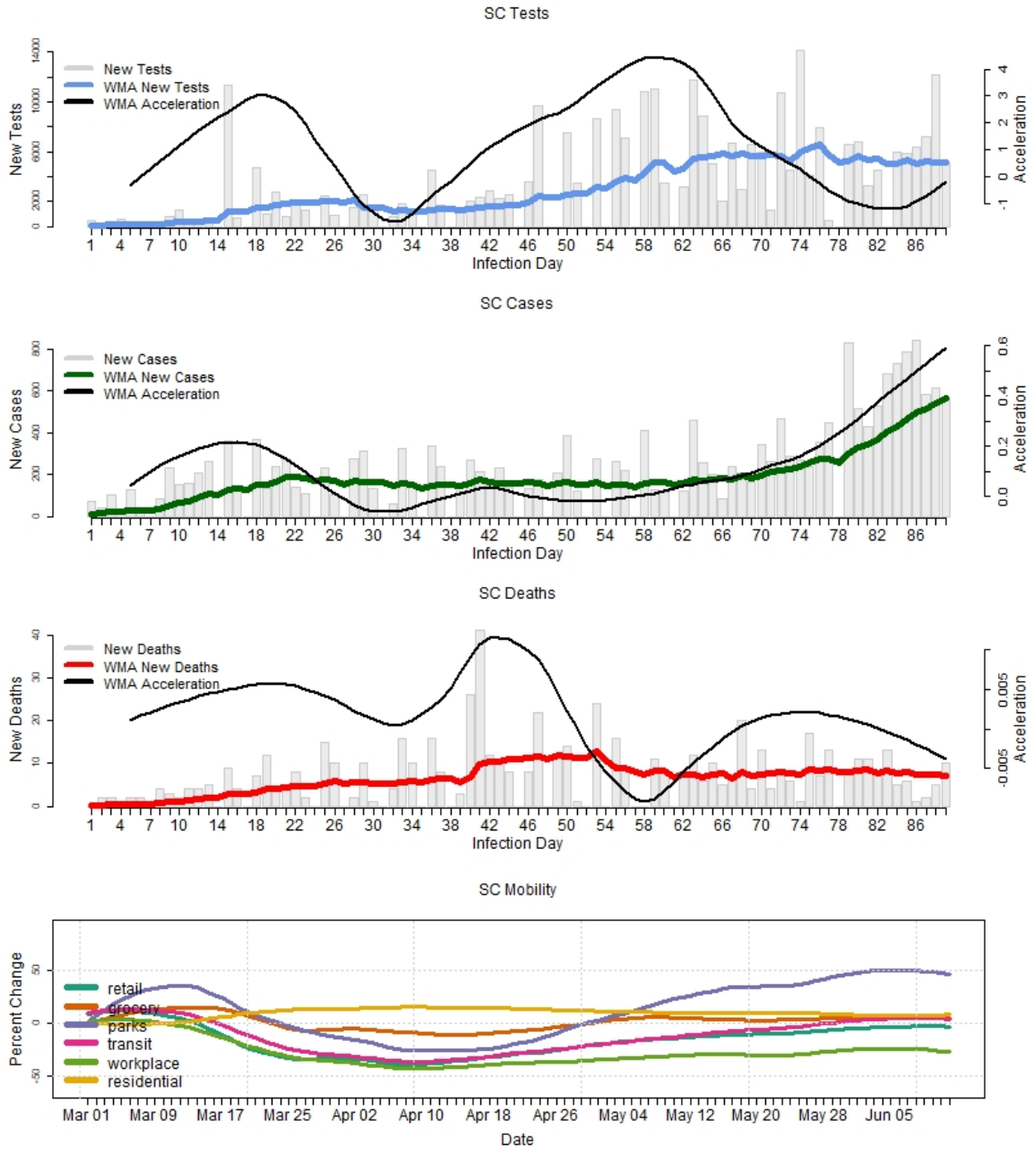
RI



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
RI	206470	16213	876	7.9	5.4	49	11

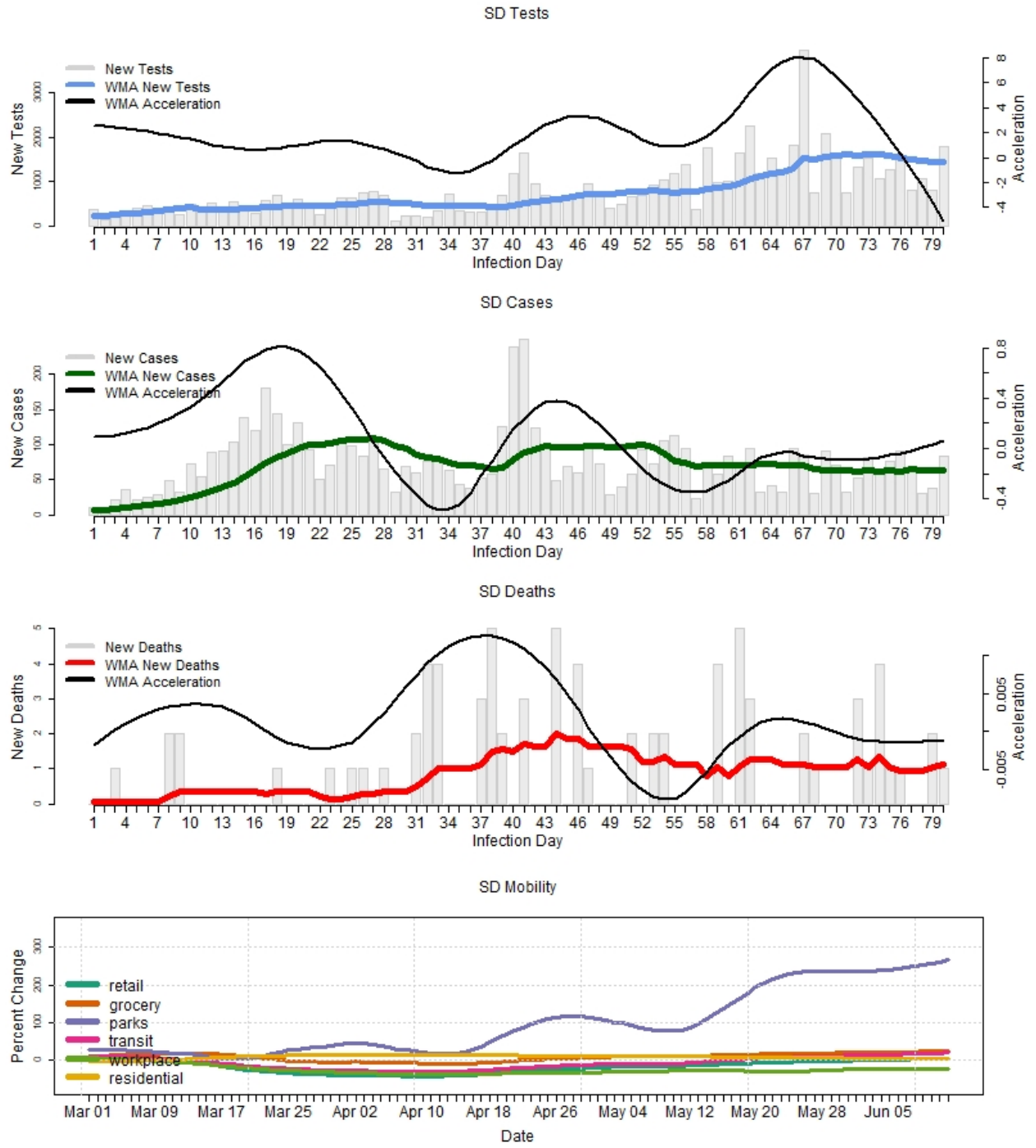
SC



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
SC	272754	20556	617	7.5	3	566	10

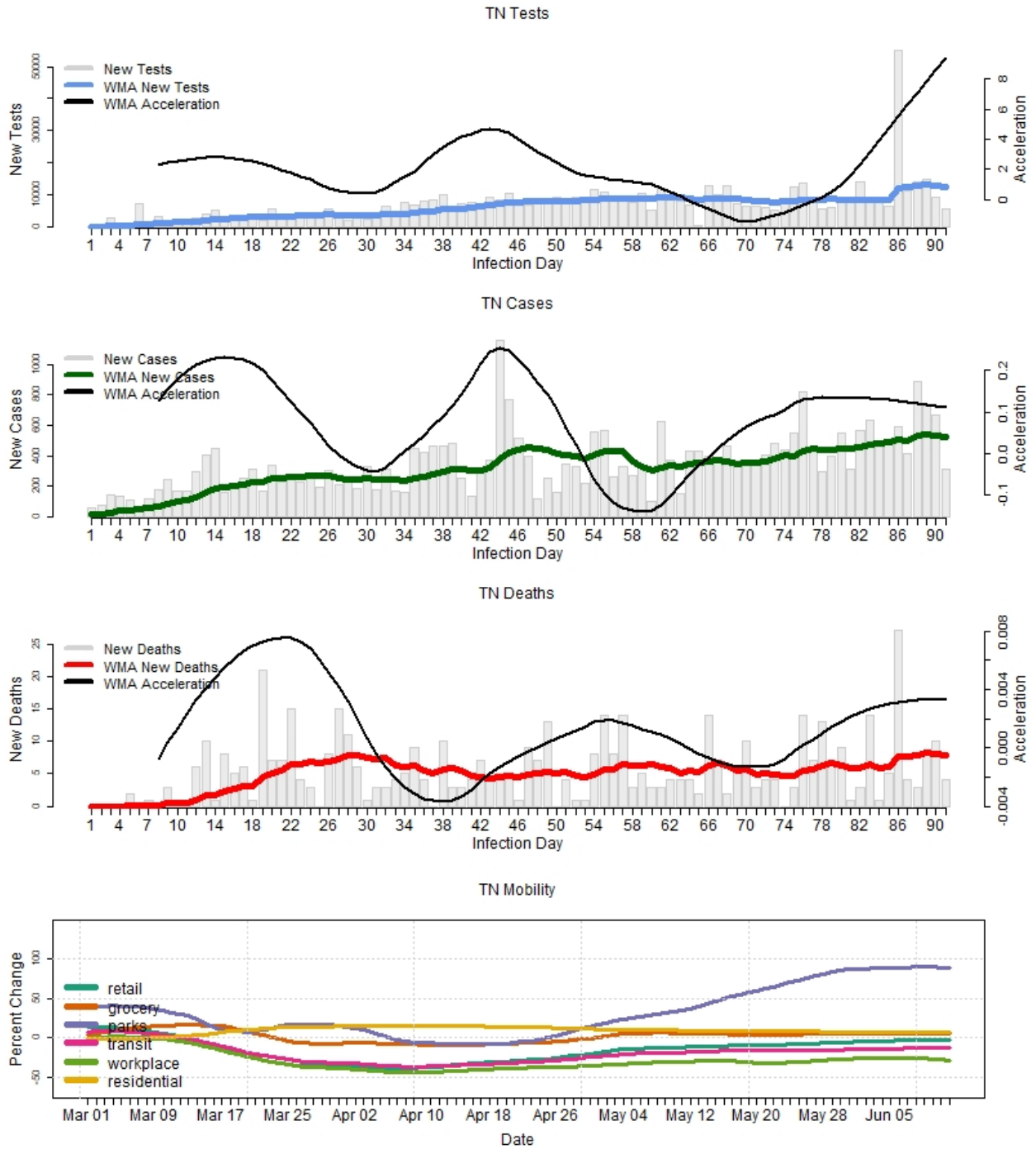
SD



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
SD	68988	6050	78	8.8	1.3	84	1

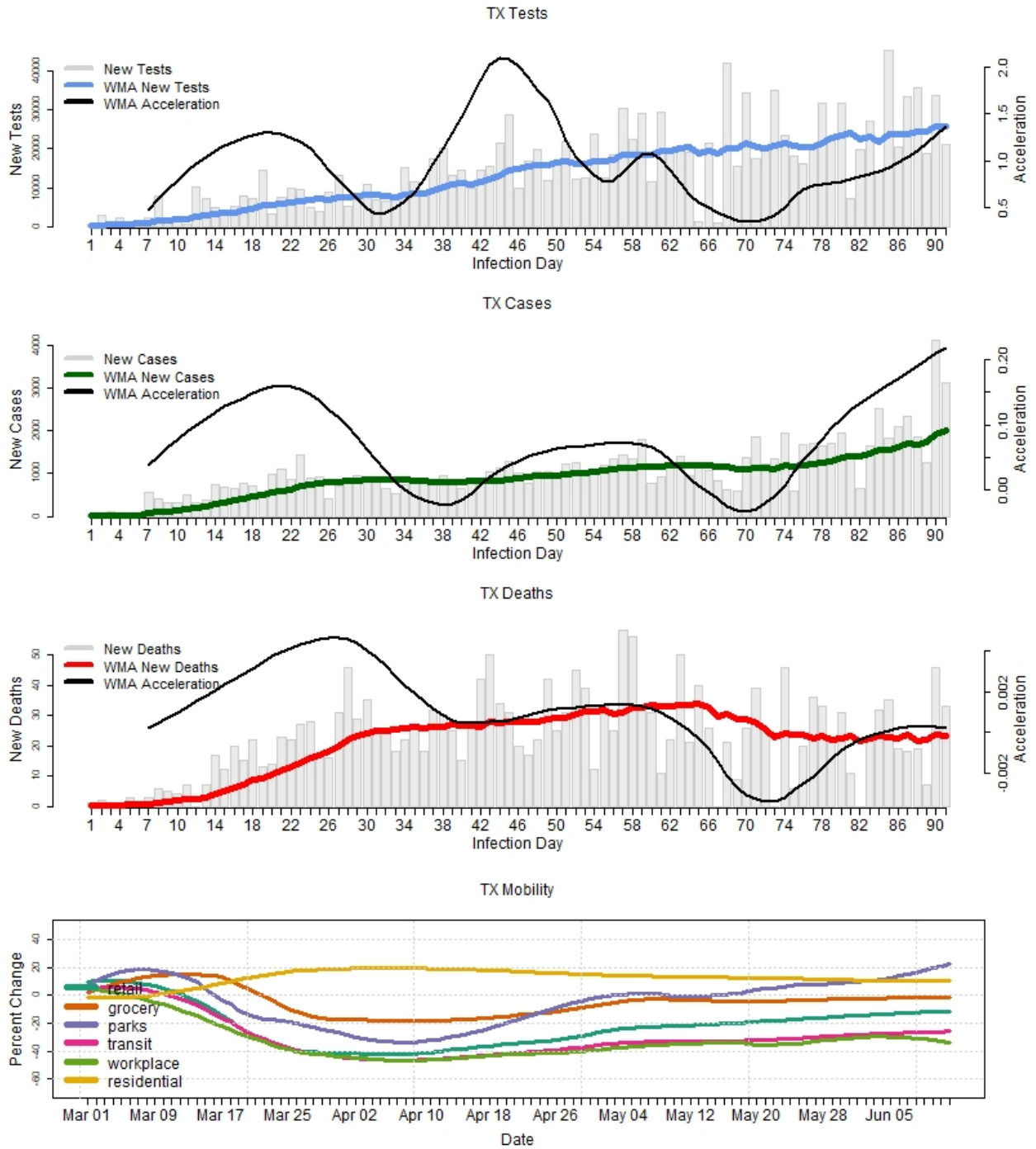
TN



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
TN	644573	32143	497	5	1.5	313	4

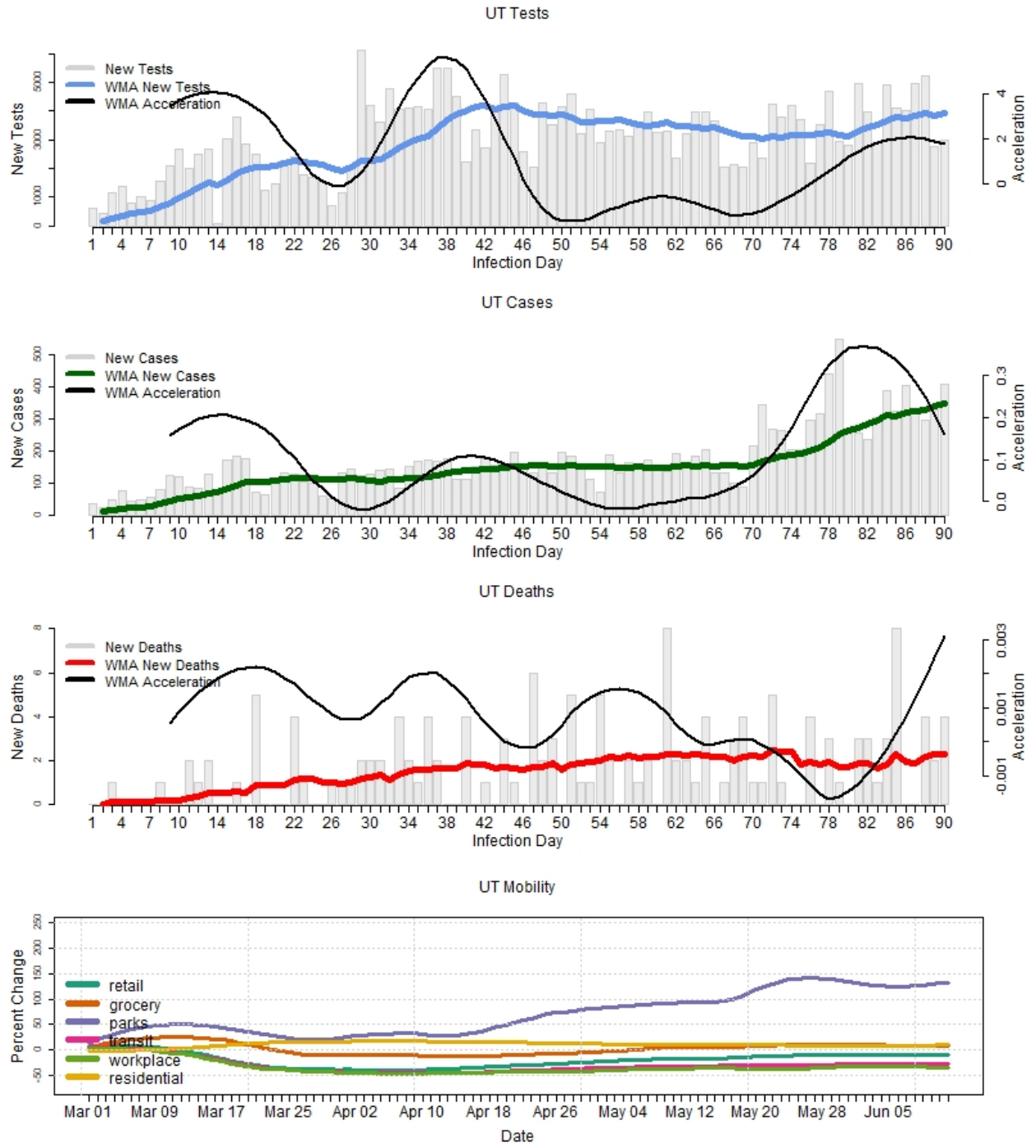
TX



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
TX	1369638	96335	2062	7	2.1	3129	33

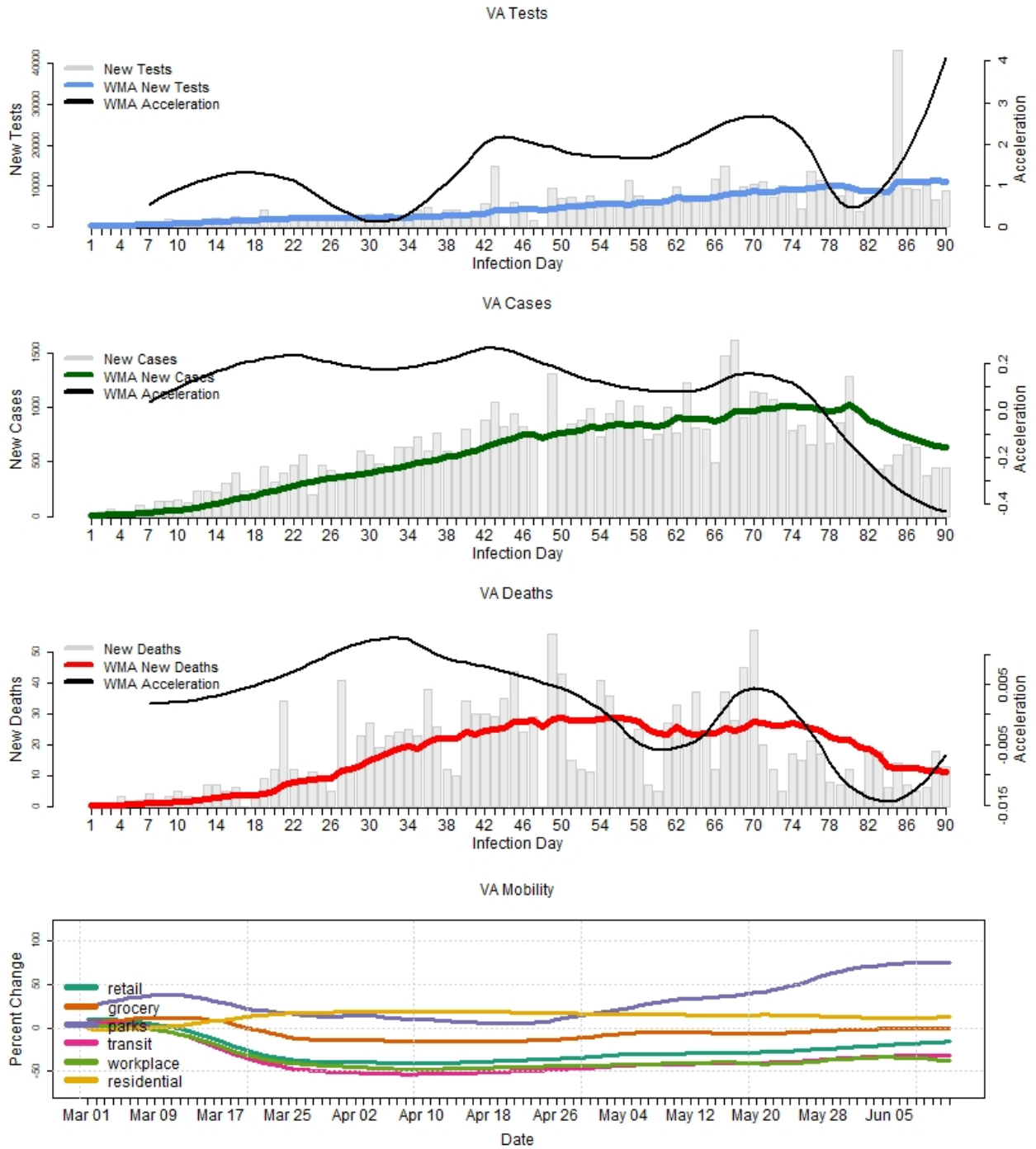
UT



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
UT	278692	15344	149	5.5	1	407	4

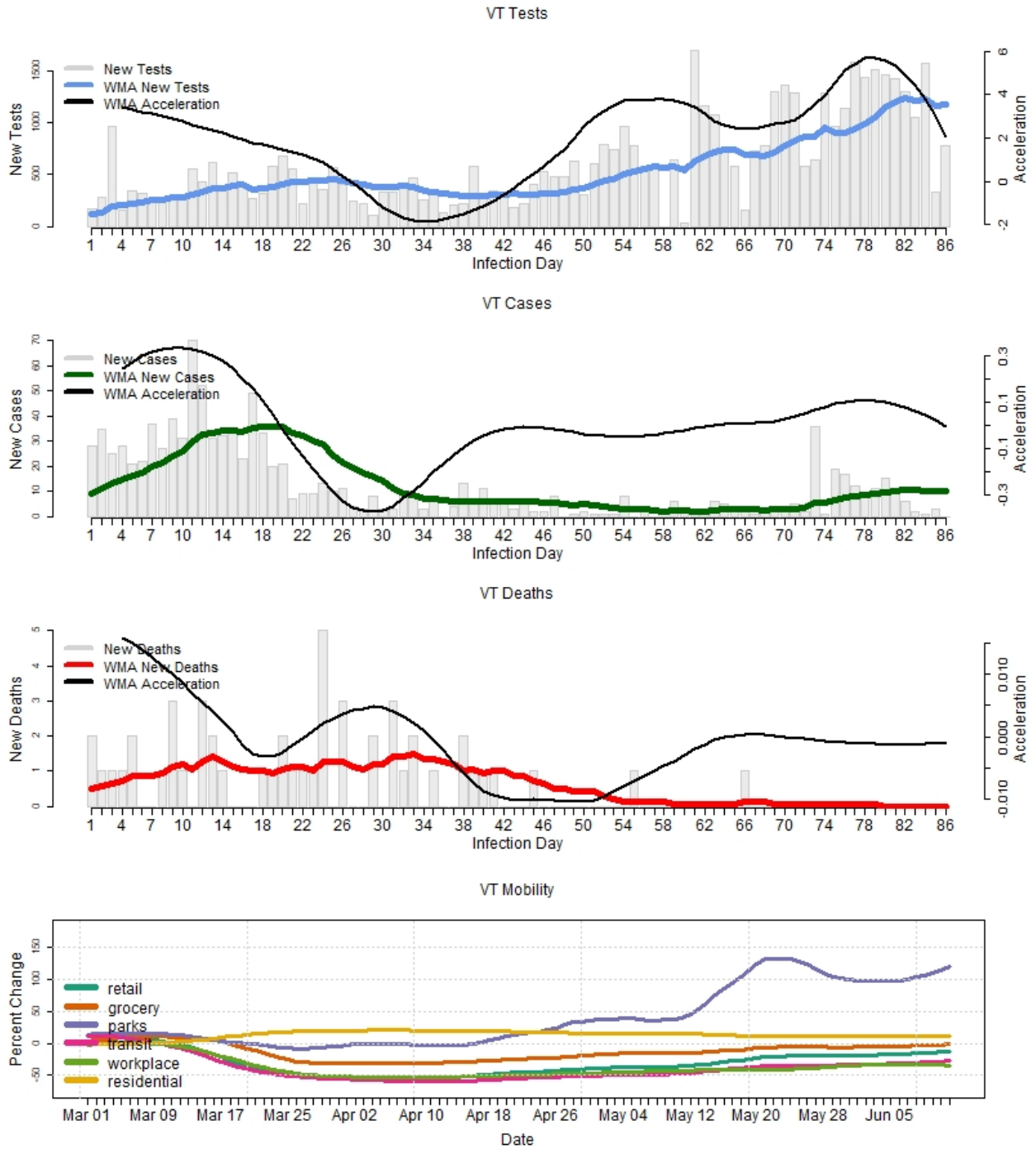
VA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
VA	494341	55775	1583	11.3	2.8	444	13

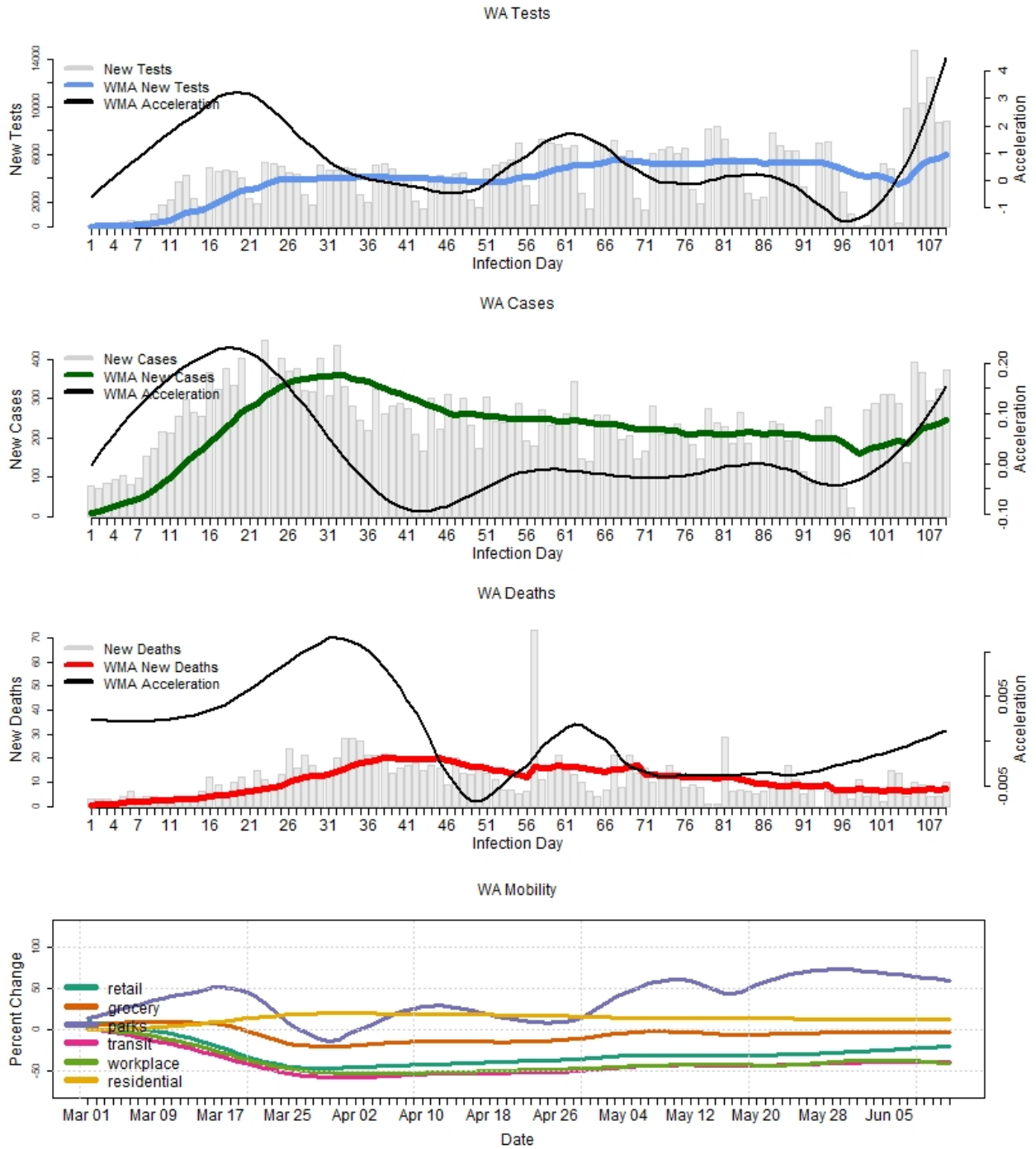
VT



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
VT	53663	1130	55	2.1	4.9	0	0

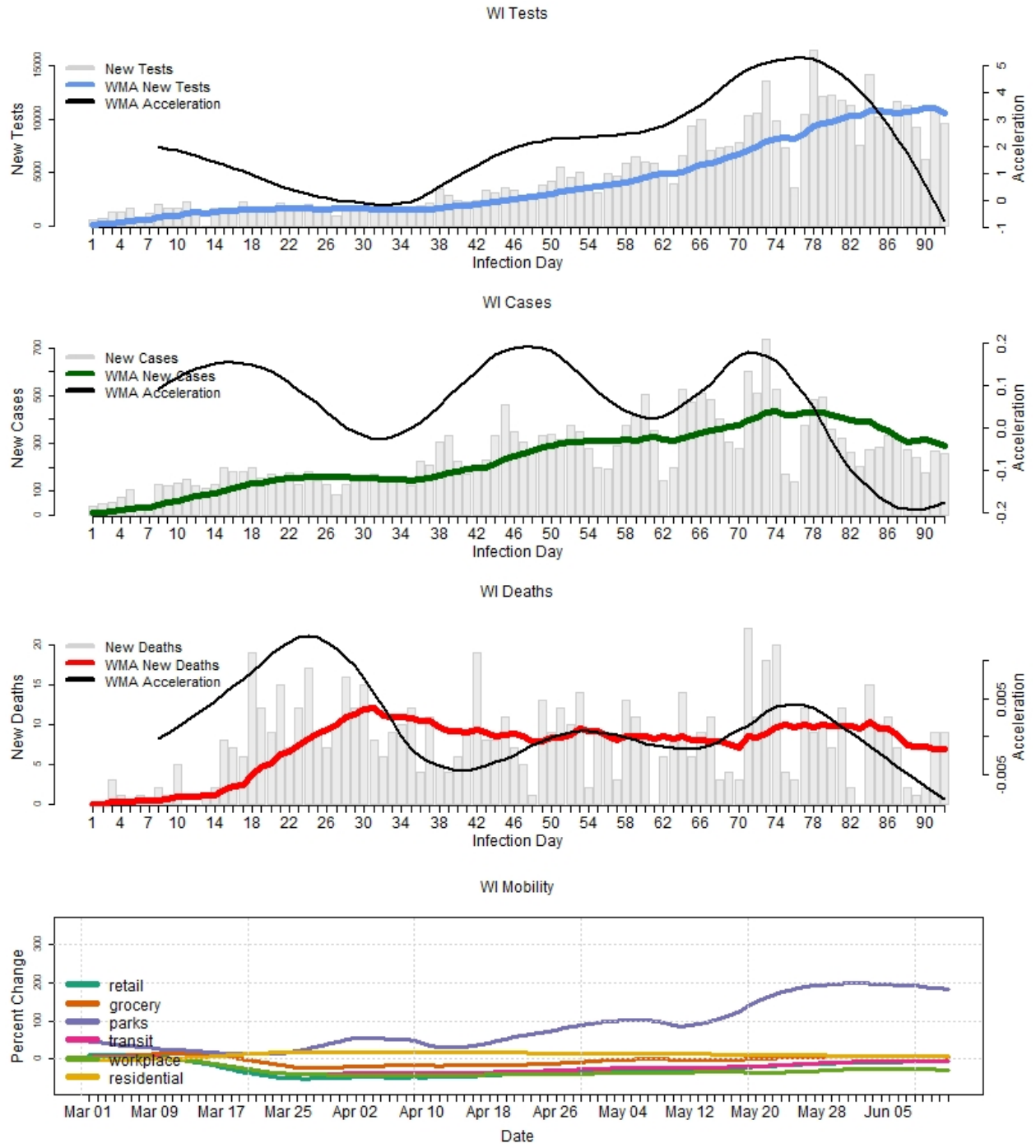
WA



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
WA	480026	26531	1231	5.5	4.6	373	10

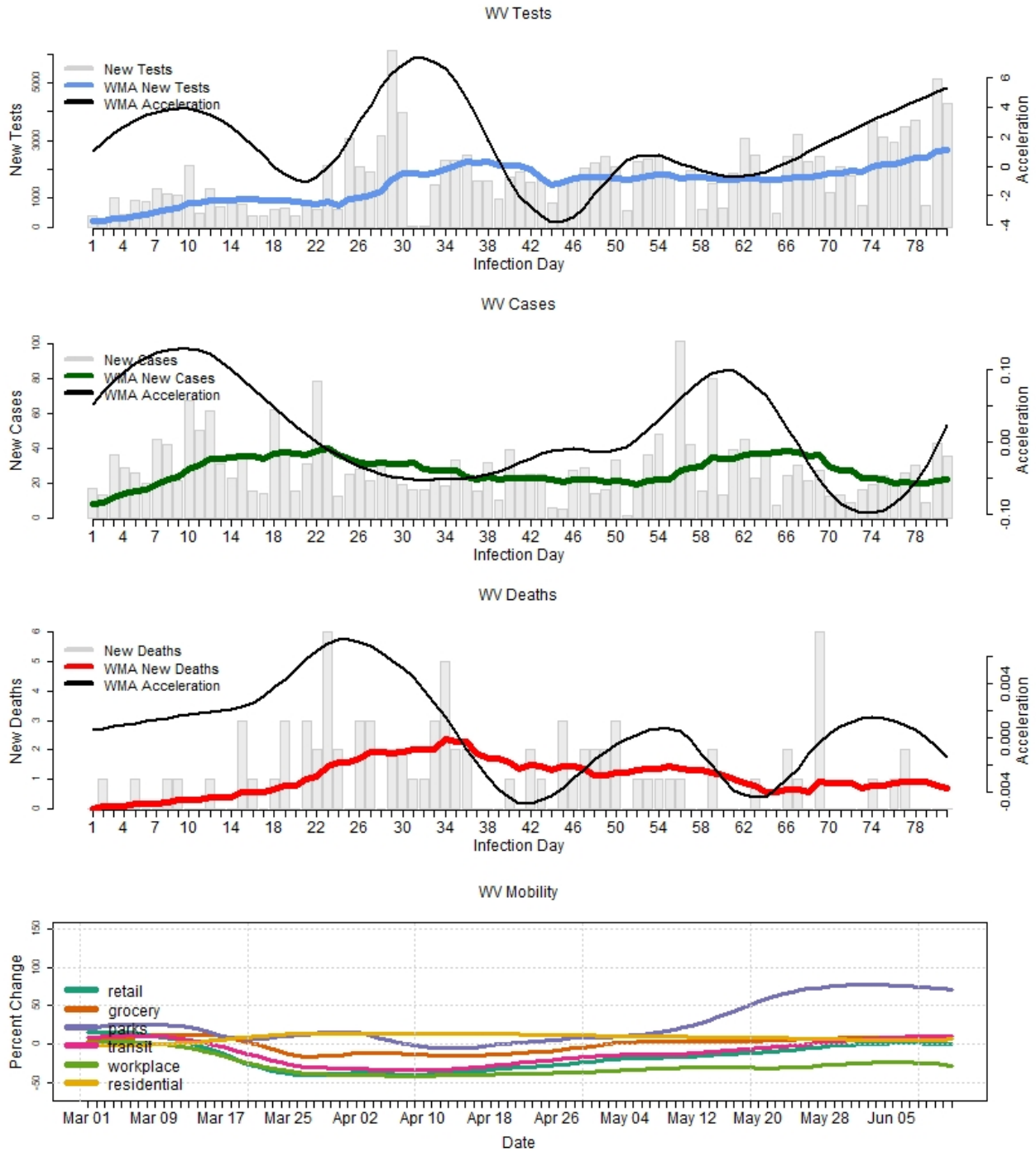
WI



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
WI	447190	23454	712	5.2	3	256	9

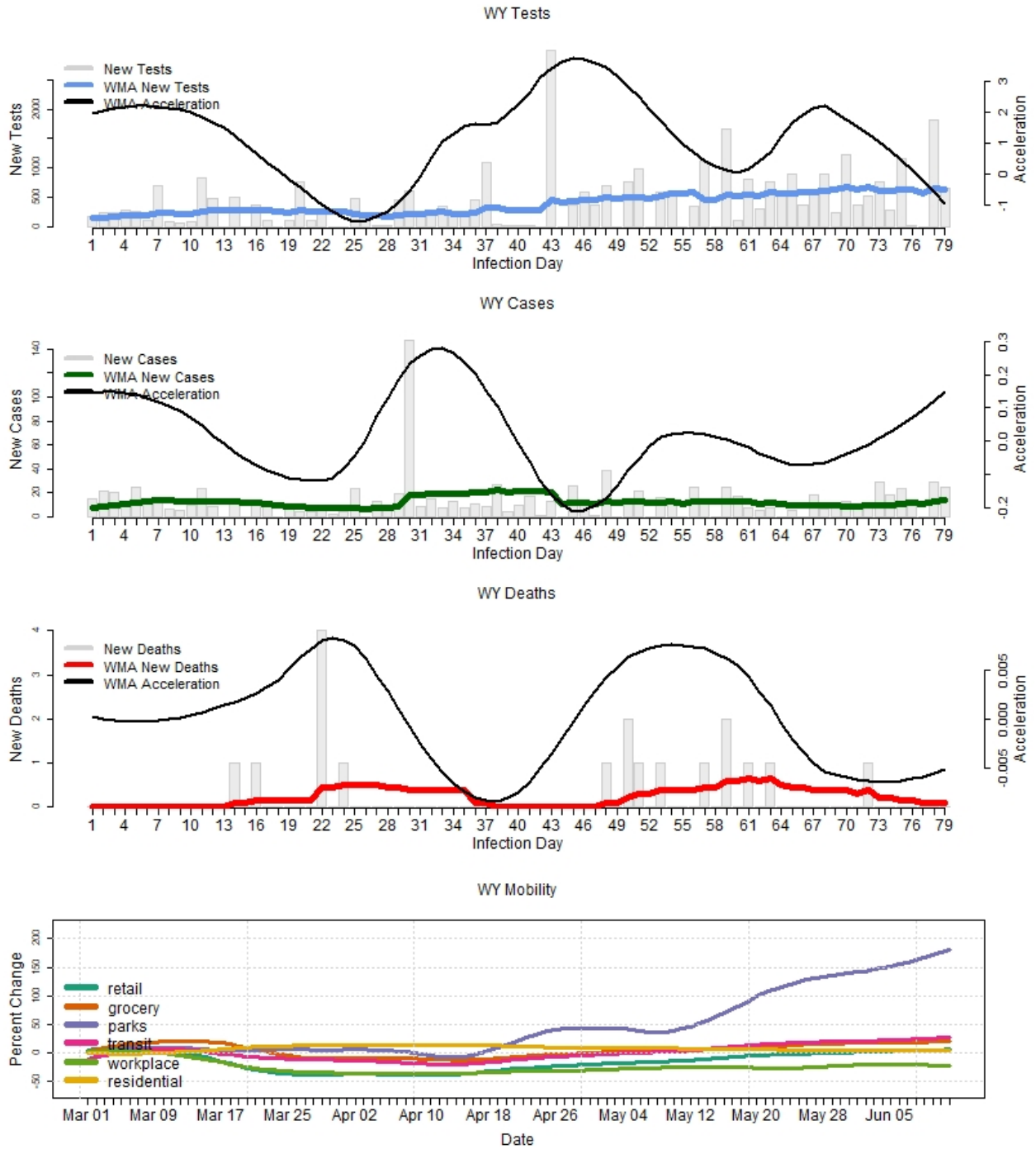
WV



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
WV	141370	2376	88	1.7	3.7	35	0

WY



Metrics as of 2020-06-18

State	Tests	Positive	Deaths	Pos Rate (%)	Death Rate (%)	New Cases	New Deaths
WY	35069	1114	18	3.2	1.6	25	0