



COVID-19 Mitigations in the U.S.

March 16 - 31, 2021





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This report provides highlights of a weekly survey of practices regarding the mitigation of the spread of COVID-19 in the U.S. during the second half of March 2021 along with comparisons to prior half-month time periods. The survey asks about the degree to which the respondents perceive that people in their community are following 21 common mitigation practices. The responses are separated by state and compared to state level statistics regarding the level of COVID-19 infections from the Johns Hopkins COVID database for the same time period.

Executive Summary

For the second consecutive half month an increase was observed in community mitigation compliance across the country. In the second half of March average compliance was 64.2% compared to 63.2% in the first half of the month, according to observations from 1064 individuals from all 50 states and the District of Columbia. At the same time, new COVID-19 infections increased slightly with 1.0 million new cases for late March compared to 0.8 million in the first half of the month. The average infection level for the half month was down very slightly from the first half of the month, at 242 per 100,000 vs. 271 per 100,000.

Additional findings from the second half of March:

- ❖ Compliance fell slightly for the top five mitigation practices. Only one of the mitigations have compliance over 75%.
- ❖ Mask Wearing showed an increase in compliance at 74% compared to 71% for the first half of the month.
- ❖ Of the thirty-one states where we have significant data from this week, the worst three (Nebraska, Georgia and Oklahoma) had average compliance in the low-50's among them.
- ❖ Four states among the thirty-one had average mitigation compliance over 70% - Alaska, Illinois, Massachusetts and Oregon. Texas continued its downward trend following the elimination of statewide restrictions.

The full set of mitigations surveyed are included in the appendix to this report.

It is now estimated that immunities from vaccination total 24% of the population, while immunities from people who have been infected and recovered are 9%, with the vaccinated group growing much faster than the recovered/immune group. But there seems to be a race between the vaccine impact, new strains of COVID and reduced compliance to determine the near-term course of the pandemic.

Mitigation Practices - National

Average percentage compliance with 21 COVID-19 mitigation strategies that are surveyed was 64.2% in the last half of March, up from 63.2% in the second half of February. For the half-month, only one of the twenty-one mitigations practices had average compliance above 75%, two had average compliance below 50% and eighteen had average compliance between 50% and 75%.

Nationally the weighted average of compliance with these mitigations has stayed in a very tight range a low of 62.3% in late November to a high of 64.2 for this period. When mitigations are broken out into practices within states and regions of states, there is a far greater variance in mitigations as respondents observe the results of individual states implementing changes in COVID mitigations and Individuals react to their personal perceptions of the level of COVID danger.

Survey Details

Collects information from volunteers on perceptions of community compliance with 21 COVID Mitigation strategies.

Participants answer between 0% and 100% that they see the strategy in use in their area.

Participants are asked to fill out survey every week.

CHANGING MITIGATIONS

Throughout the past eight weeks, the six mitigations that our observers say have the highest average compliance have remained the same (with “Quarantine people with positive tests” shifting in and out of the Top 5). Results from the last four periods are presented below:

Top Five Mitigations	Feb 1-14	Feb 15-28	Mar 1-15	Mar 16 - 31
Special protection in hospitals areas that treat COVID patients	85%	79%	79%	78%
Visitors to senior living facilities to be restricted	82%	75%	75%	71%
Wearing a Mask in Public	72%	72%	71%	70%
Hairdresser and barber to be open with restrictions	75%	71%	72%	74%
Restaurants to have reduced seating	75%	70%	73%	71%

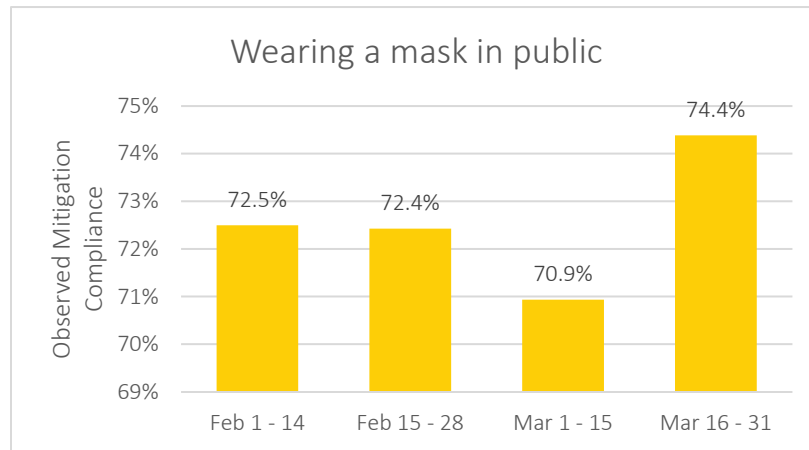
In the last half of March four of these five practices reported stable compliance, one “Visitors to Senior living facilities restricted”, reported a 4% decrease which is most likely a reasonable reaction to the highly effective vaccination program in those facilities. The top mitigants have had an average compliance of 73% for this period and the prior two periods.

Mitigation practices with the largest change are compared below.

Mitigations with Largest Change	Mar 1 - 15	Mar 16 - 31	Change
Violations of COVID restrictions result in fines or police enforcement	36%	43%	8%
Get antibody testing to detect prior infection	45%	49%	4%
Visitors to senior living facilities to be restricted	75%	71%	-4%
Local level of COVID infections	60%	64%	4%
Wearing a mask in public	71%	74%	3%

Several of these mitigations are among those found to have a positive correlation to infection level which we speculate means that they are imposed after a rise in infections. The decrease in restrictions at senior living facilities is the direct consequence of the success of the early efforts to bring vaccinations to those residents. These significant changes are the net effect of larger increases and decreases at the individual state level, which is discussed in the following section as Variability of Change in Mitigation Compliance by State.

Mask wearing has perhaps been the most controversial mitigation practice but the observations that we have collected tell that compliance with mask wearing protocols had risen to a new high level for all of 2021 to date.



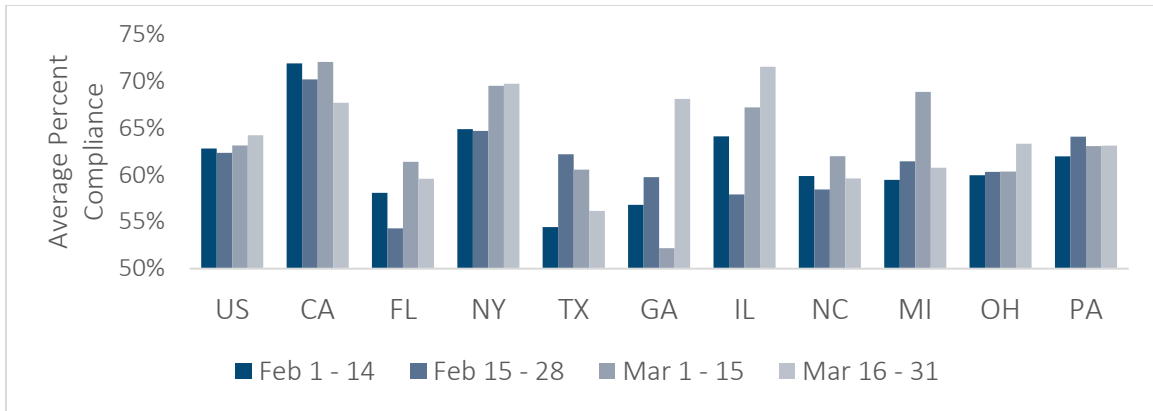
Mitigation Practices – State Level

Weighting Basis

Weighting is based on average compliance in states where COVID was under control during September.

For the second half of February, the survey had a credible number of responses from 31 states. The states from that group with the highest compliance were Alaska (73%), Illinois (72%), Massachusetts (71%) and Oregon (70%). The states with the lowest compliance were Nebraska (46%), Georgia (52%) and Oklahoma (57%).

Focusing in on the ten most populous states, (which are all among the 31 states with credible number of responses) there is quite a bit of variability of compliance over the past four months.



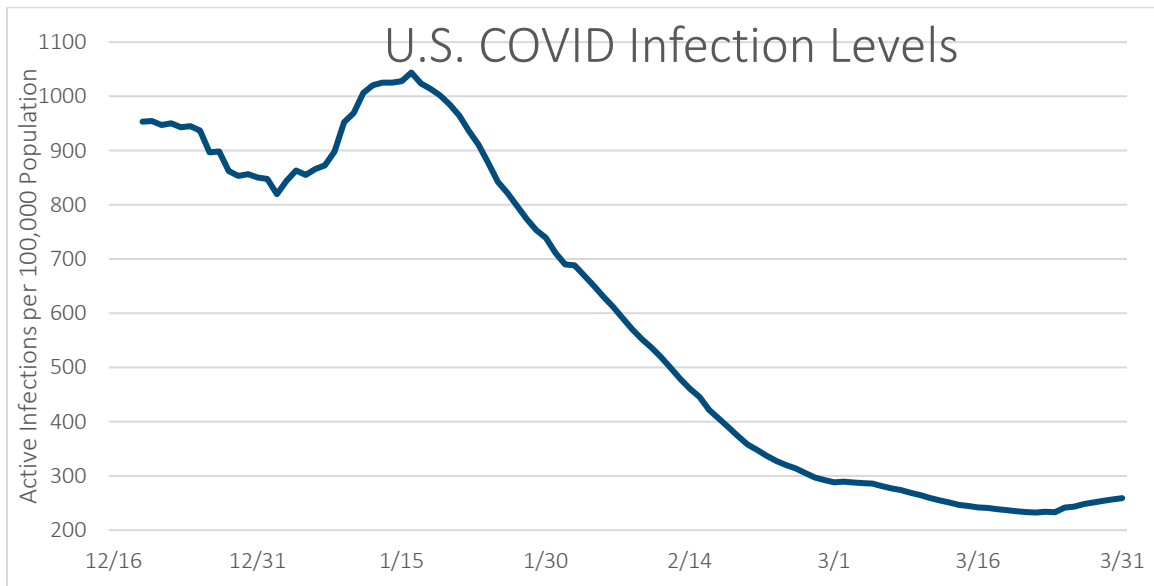
Three of the ten states showed increases in compliance, two states were flat and only five states declined. Georgia displays an unusually large jump in compliance off of a depressed compliance rate for last period. As can be seen with Michigan and Illinois, the unusual values are often followed by a return to prior trend. It remains to be seen whether the value from early March or late March is the deviation from trend.

Variability of Changes in Mitigation Compliance by State

Mitigations with Largest Change	Change In U.S. Average	Number of States with Increases	Number of States with Decreases	Largest Increase	Largest Decrease
Violations of COVID restrictions result in fines or police enforcement	8%	18	13	25%	-13%
Get antibody testing to detect prior infection	4%	18	13	39%	-19%
Visitors to senior living facilities to be restricted	-4%	6	25	17%	-36%
Local level of COVID infections known	4%	21	10	19%	-11%
Wearing a mask in public	3%	24	7	17%	-12%

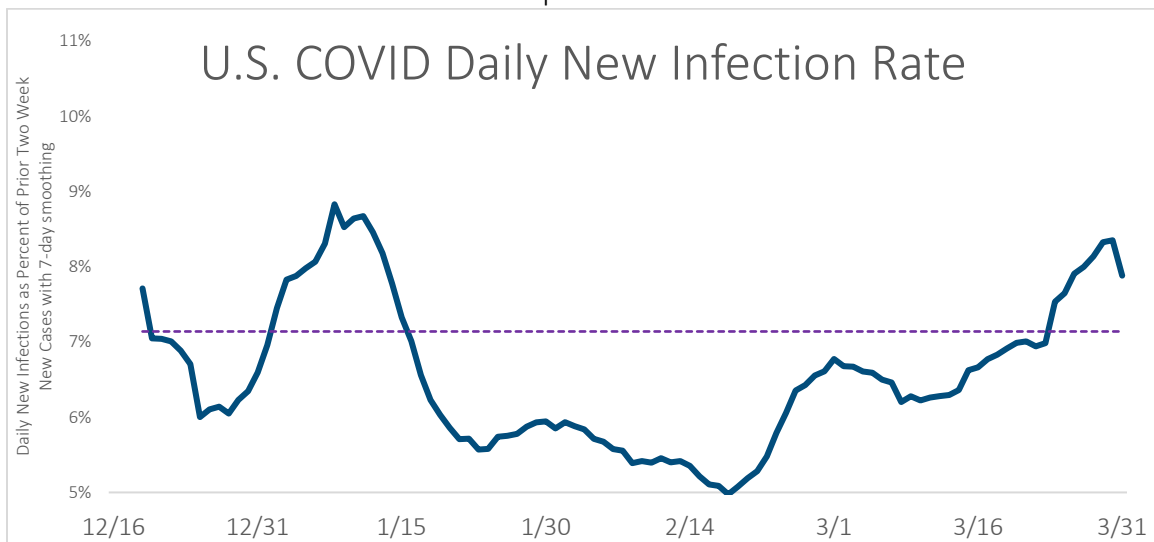
In general, this shows that changes in the national averages are driven by the balance of states that are either increasing or decreasing their compliance. This table reflects only the 31 states where we have credible observations. The national average includes the responses from the other 26 states which make up less than 10% of total observations.

COVID-19 Spread of Infections – National

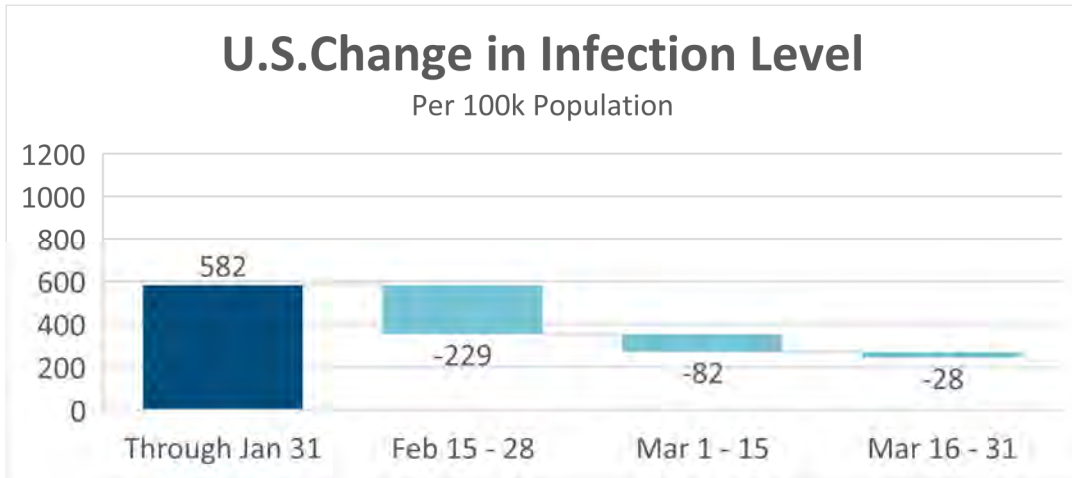


There were about 966,000 new cases of COVID-19 reported in the second half of March. This is up from 847,000 reported in the first half of March but still down substantially from the 2.6 million reported in the second half of January. The reported infection level is now fluctuating in the same range as experienced in the month of October. Vaccinations are having a favorable effect – but not as favorable as needed to further shrink the pandemic in the U.S.

Infection Level
is the number of active infections per 100,000 people.



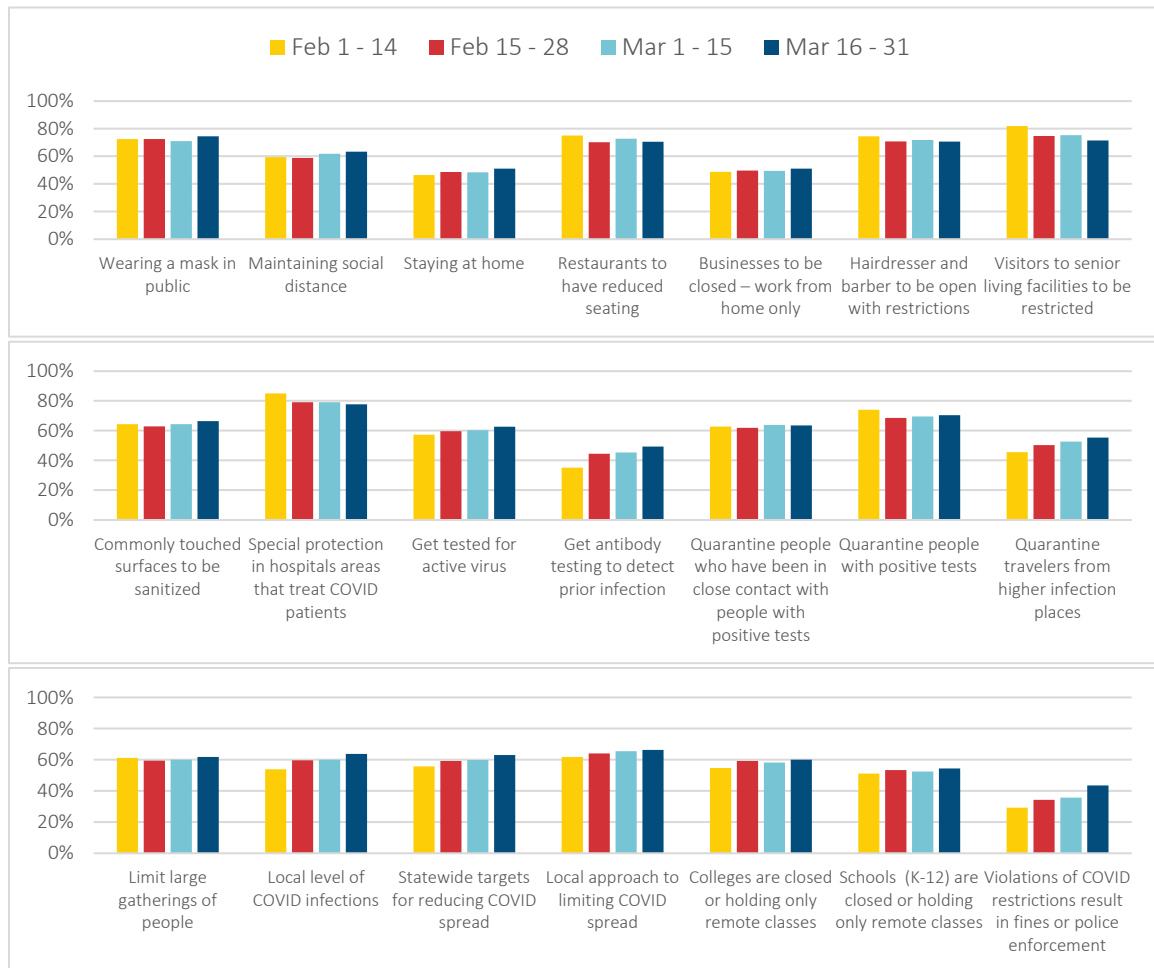
The rate of new infections had trended upwards since mid-February. In this period, that rate crossed the No Growth level of 7.14% and ended the month around 8%. An 8% NIR will result in slow but steady daily growth in the number of new infections. The New Infection rate is being pulled upwards by the new, more infectious strains of COVID, downwards by the vaccinations and downwards by the average increasing mitigation compliance noted above.



The plot above clearly shows the monthly decreases in Infection Level getting smaller each month with a near zero change in the most recent period.

Mitigations Levels over Time

The following charts provide a perspective on the relative compliance levels of all 21 mitigations with each other as well as the trends over the past two months.



Impact of Immunities

The vaccination programs are moving forward very rapidly. An estimate of the potential impact of immunity gained from vaccinations and from recoveries from COVID infections shows that at this time, the impact of immunities on the spread of COVID has reached a significant level.

	3/15/21	3/31/21	Increase
Reported Recovered Immune	28.0 M	28.7 M	+0.7 M
Vaccinated Immune	55.2 M	77.0 M	+21.8 M
Total Immune	83.2 M	105.7 M	+22.5 M
Pct of Population	25.5%	32.4%	+6.9%
Est. Impact on NIR	-2.1%	-3.8%	-1.7%

While the national average total percent immune is shown above to be 32.4%, at the state level, immune percentage ranges from a high of 43% in Michigan to a low of 27% in Oregon. These differences are primarily driven by the different levels of recovered immune people in the states with a smaller range of vaccinated immune.

These calculations are estimates based upon average reported efficacy of the vaccines and an assumption that people with immunity would face an average level of exposure to COVID infection. In addition, no adjustments were made to these figures to reflect the exact timing of the onset of immunity from vaccinations which varies by type of vaccine or the fact that some recovered immune people are getting vaccinated.

In addition, these calculations are based upon Reported Infections. Because COVID infections result in a very wide range of individual responses from largely symptom free to severe respiratory distress leading to hospitalization and death, there are thought to be many cases that go unreported. The CDC conducted a study of the seroprevalence of COVID antibodies in blood drawn for a variety of medical tests. Results from that study, updated in late January show that unreported infections may be as high as 120% of the reported infections. If that were true, the estimated Total Immune level could be as high as 38% of the U.S. population.

Acknowledgments

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Note on Mitigation Compliance Observations

The COVID mitigation information is collected via Pollfish and SurveyMonkey surveys. In those survey, observers are asked to say what they are seeing in their community regarding the percentage compliance with 21 specific mitigation activities. The observers are volunteers who were either recruited personally by the project team or who responded to a variety of solicitations for observers via Twitter, Facebook, LinkedIn, Pollfish and SurveyMonkey. This data is subject to self-selection and other biases. No adjustments have been made to the data that we have collected in order to respond to possible biases. Observations are aggregated and the average of multiple views are treated as true information about the mitigation activity in a state. The variance of the responses in a state has been examined and targets are set for a higher number of responses in states where there is a higher variance of responses.

Appendix List of Mitigations under Study

- Wearing a mask in public
- Maintaining social distance
- Staying at home
- Restaurants to have reduced seating
- Businesses to be closed – work from home only
- Hairdresser and barber to be open with restrictions
- Visitors to senior living facilities to be restricted
- Commonly touched surfaces to be sanitized
- Special protection in hospitals areas that treat COVID patients
- Get tested for active virus
- Get antibody testing to detect prior infection
- Quarantine people who have been in close contact with people with positive tests
- Quarantine people with positive tests
- Quarantine travelers from higher infection places
- Limit large gatherings of people
- Local level of COVID infections
- Statewide targets for reducing COVID spread
- Local approach to limiting COVID spread
- Colleges are closed or holding only remote classes
- Schools (K-12) are closed or holding only remote classes
- Violations of COVID restrictions result in fines or police enforcement

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