**Analyzing Traffic Speeding Behavior during Covid-19 in Maine**

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**Abstract**

Despite fewer vehicles on roads, during the Covid-19 stay-at-home order, the severity of crashes increased in Maine and other states in United states. The severity of crashes has a direct relationship with operational speed. It is hypothesized that reduction of traffic volume and other factors (such as enforcement) resulted in increased operational speed in Maine and consequently more severe crashes. We used 5 minutes traffic volume and speed data collected at 10 continues count stations to model traffic speeding during and after the Covid-19 stay-at home order. The percentage of vehicles driving 10, 15, 20, and 25 mph above speed limit was used as a response variable. Various variables such as traffic volume, time of the day, time of the week, month of the year, and speed limit were used as control variables in the model to properly analyze the impact of the stay-at-home order. We found that the odds of speeding greater than 15 mph of speed limit increased by 34% during stay-at-home order. In addition, even after 1 year from stay-at-home order, the odds of speeding greater than 15 mph, is still 27% higher than before Covid-19 pandemic (or stay at home order, to be exact). These results show that there are other factors (other than traffic volume) such as enforcement that impacted the traffic speeding during the Covid-19 pandemic.

