On the Road Again: Initial Impact of Covid-19 on Motor Vehicle Fatalities in Maryland

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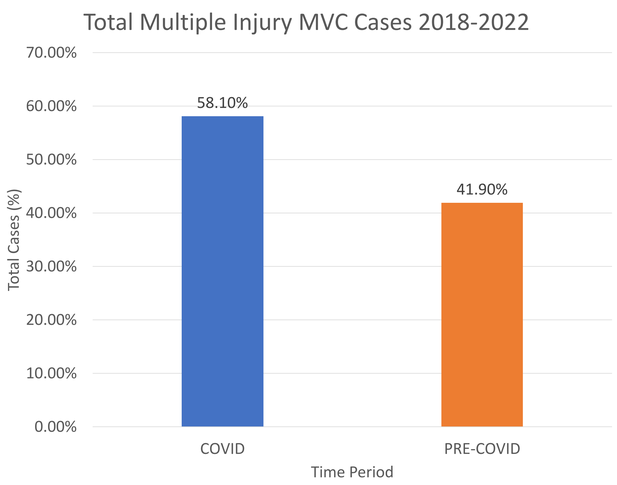
Introduction

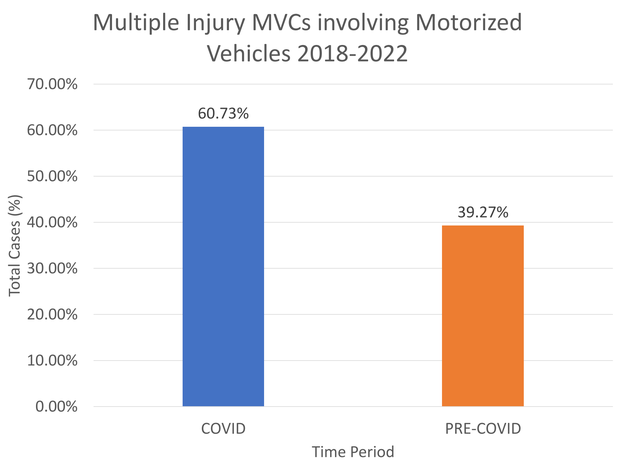
Accidental deaths have consistently been the fifth leading cause of death among Marylanders since 2014, according to the CDC.[1] Over the years, the accidental deaths per year have continued to increase while the age-adjusted rates have remained relatively consistent. The goal of this review was to analyze the trends in motor vehicle collision (MVC) fatalities in Maryland—a state-wide medical examiner system—corresponding to from January 2018 to December 31, 2022.

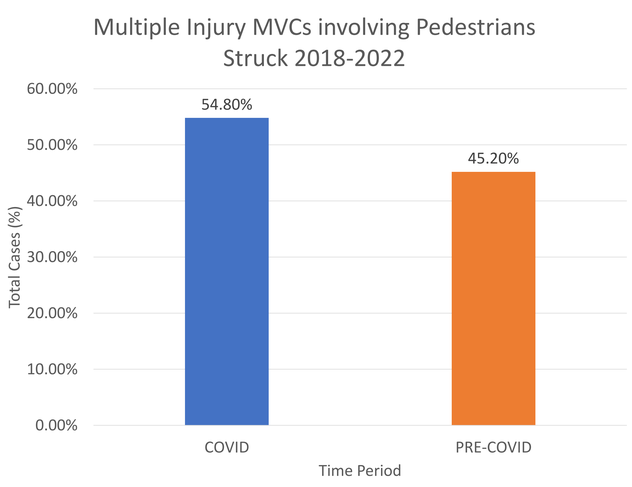
Method

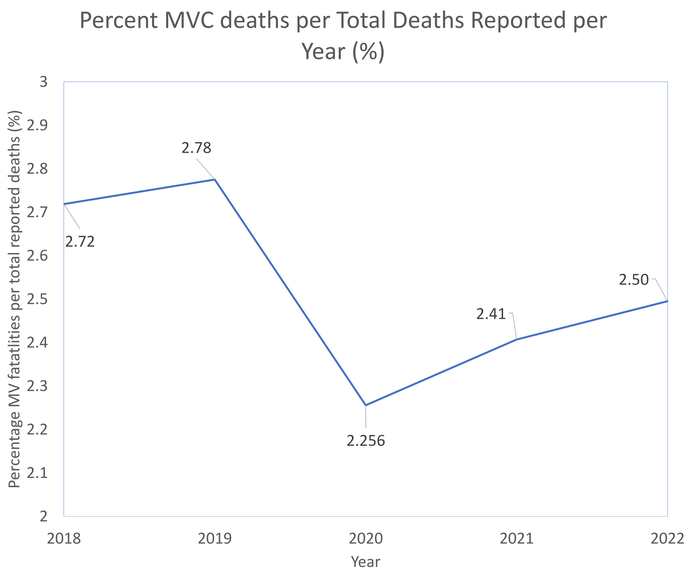
Data associated with accidental deaths including “injury” or “injuries” listed as the cause of death (selecting for MVCs) from the designated time period, was compiled from the Office of the Chief Medical Examiner’s (OCME) autopsy database and imported into Microsoft Excel for statistical review. Cases involving pedestrians/cyclists and other motorized vehicles were considered separate categories. The time periods selected for were designated “pre-COVID” and “COVID”, with “COVID” beginning March 5, 2020.[2]

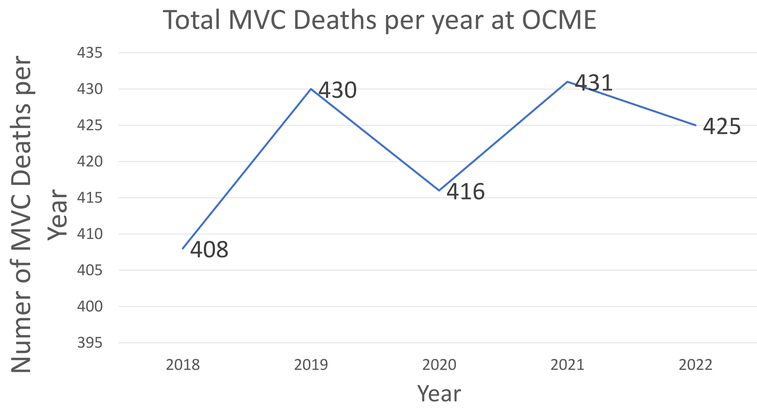
Results











Discussion

- 2513 cases were designated accidental deaths related to MVCs from 2018 – 2022.
- Death in 2098 of the cases was attributed to “multiple injuries” related to MVCs.
- Death in 12 cases was attributed to a single injury related to MVCs.
- Total MVC deaths during “COVID” exceeded “pre-COVID” amounts for multiple injury cases (58.10% > 41.90%); single injury cases, the distribution was equivocal (50%).
- Deaths involving pedestrians during “COVID” exceeded “pre-COVID” amounts (54.80% > 45.20%).
- Deaths involving motorized vehicles during “COVID” exceeded “pre-COVID” amounts (60.73% > 39.27%).
- Average number of total MVC deaths per total deaths reported to OCME (422) and average rate of MCV deaths per total deaths reported to OCME per year (2.53%).
- The year with the lowest average rate of MVC deaths per total deaths reported to OCME was 2020 (2.25%, $p < 0.05$).

Conclusions

- The findings demonstrate a significant decline in the rate of MVC fatalities for 2020 following the arrival of COVID-19 to Maryland (2.23%).
- Increase in number of MVCs over “COVID” period compared to “pre-COVID” years with steadily increasing rate of MVC fatalities accounting for total reported deaths to the OCME.
- Total number of MVC fatalities in 2021 and 2022, following the decline in 2020, exceeded the OCME average.
- Proposed reasoning for these trends include increased speeding, impaired driving, and the impact of telework on workers.
- Monitoring these trends into the “post-COVID” future will be beneficial for public health transportation safety.

References

1. https://www.cdc.gov/nchs/pressroom/sosmap/accident_mortality/accident.htm
2. https://www.fredericknewspost.com/news/continuing_coverage/coronavirus/a-timeline-of-the-covid-19-cases-in-maryland/article_4b37ff99-5375-55b3-9864-acda52bfe5b1.html