



TRAFFIC SAFETY MONITOR

Texas Traffic Safety Monitor: Public Opinion Survey Results

**Texas A&M Transportation Institute
Center for Transportation Safety**

Project Technical Report



**Center for
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<p>6. Supplementary Notes This project was funded by the Texas A&M Transportation Institute Center for Transportation Safety.</p>	
<p>7. Abstract The Traffic Safety Monitor is a project created for the purpose of conducting brief surveys within a relatively quick timeframe on subjects of high visibility or emerging topics as they arise in Texas. The surveys are conducted to monitor opinions, self-reported behaviors, attitudes, and knowledge for a convenient sample of the Texas population. Four diverse topics surveyed in 2020 addressed traffic safety and the pandemic, seat belt use compared with attitudes toward face mask use, vehicular heat stroke awareness, and texting while driving. A unique minimum sample of 400 respondents was surveyed on each topic. Descriptive analysis was used to show results for each questionnaire item and cross-tabulations revealed relationships among variables. Several key findings from the surveys indicate that respondents were not fully aware of heat stroke facts and messages; that enforcement of stay-at-home requirements early in the pandemic were met with approval; reasons for seat belt use and face mask use could be similar but acceptance is not equivalent; and the texting while driving ban in Texas has not significantly affected behavior since its enactment.</p>	
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BACKGROUND

RESEARCH PURPOSE STATEMENT

Four surveys conducted for the Traffic Safety Monitor provide timely information to serve as a snapshot indication of views and behaviors of Texans on various traffic safety-related topics.

THE PROBLEM

There are various reasons to conduct public opinion surveys on traffic safety issues. In-depth studies of factors that influence behavior are very useful, but are often focused on single issues in great detail and can be expensive. Such surveys also can be limited in ability to assess emergent problems quickly, or make initial inquiries with limited resources.

By definition, the surveys conducted for this year's Traffic Safety Monitor are a starting point. The four surveys each address a different problem and have a different research question. The survey topics were selected to 1) measure reactions to an unprecedented event impacting traffic patterns in the case of the pandemic survey; 2) measure opinions related to a cultural phenomenon with a traffic safety inference in the case of the survey on seat belts versus face masks; 3) measure awareness and opinions of a specific preventable traffic safety problem in the case of the vehicular heatstroke survey; and 4) examine changes over time in response to legislative action in the case of the texting and driving survey. In each case, little information on public sentiment was currently available. The surveys were conducted to answer questions on each topic that could inform current thinking or facilitate more in-depth study.

RESEARCH QUESTIONS

The first survey of 2020 was conducted during the early period of the COVID-19 pandemic, April 16–May 23. Soon after the Governor of Texas declared a stay-at-home advisory for the state, dramatic shifts in traffic volumes, patterns and crashes were observed. Anecdotal evidence and news reports suggested that roads were either safer due to far less risk exposure or more dangerous due to excessively risky behavior of drivers on less congested higher speed roadways. The survey addressed several questions focusing on traffic safety and the COVID-19 pandemic. One was how the public perceived and responded to observable changes in traffic conditions. Another was how Texans view traffic safety relative to other safety and health concerns in the wake of a deadly pandemic. A third objective was to measure self-reported behavior, looking at differences before and during the pandemic.

A second survey was conducted during the heat of Texas summer, July 23–August 4. Texas leads the nation in the cumulative number of vehicular heatstroke deaths due to unattended children in vehicles, as indicated in Figure 1. The research question ultimately is can more be done to prevent them. This survey examined what Texans know and think about child vehicular heatstroke (hot car) deaths.

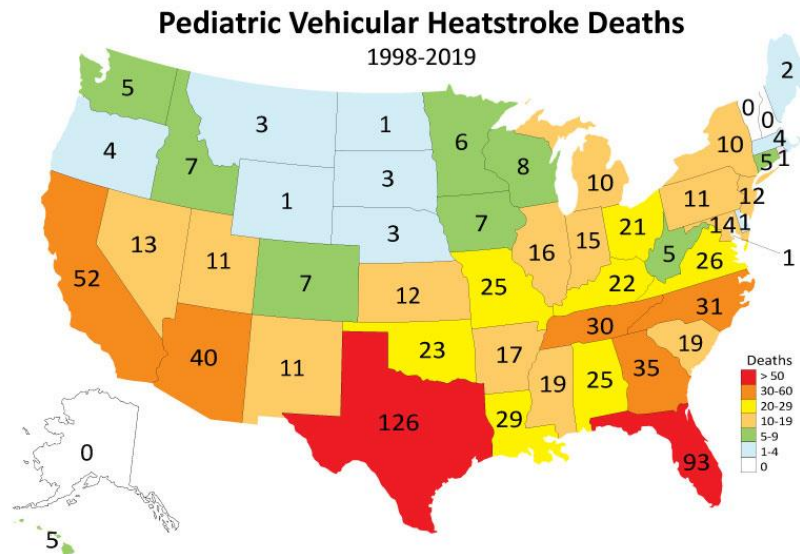


Figure 1. Cumulative Vehicular Heatstroke Child Deaths by State.

Source: <https://www.noheatstroke.org/state.htm>, accessed 11/10/2020

By early summer of 2020 the message of mask effectiveness in reducing the risk of spreading COVID-19 was widely promoted by public health officials and scientists throughout the U.S. and the world. Yet, particularly in the U.S., mask wearing soon became a controversial issue, first centering on questions of effectiveness, then moving to assertions of individual rights and resistance to government over-reach. These are familiar arguments to policy-makers, and specifically to those involved in the field of traffic safety. The parallel between seat belt mandates and mask-wearing became a part of the national dialog when state and local leaders began exercising their authority to mandate masks. Questions underlying this survey are about the relationship between belief systems and self-protective measures. Is there a connection between levels of conscientiousness in matters of traffic safety and public health? How influential are legal and punitive consequences and attitudes toward them? What demographic factors are associated with each and how might they differ? Finally, how consistent are beliefs across the two issues and could this inform efforts on public persuasion for either or both issues or similar issues?

The fourth survey was conducted in late August as a measure of change related to texting and driving. This survey was a replicate of a 2018 survey in which the research questions was to examine the awareness, opinion, and behavioral response to the statewide ban on texting and driving which went into effect in September 2017. The 2020 follow-up survey question was the degree of change from the 2018 measures.

Results for each survey are presented sequentially in the next section as they were conducted. The four are basically unrelated and conclusions are not intended to draw relationships between them.

RESULTS

Traffic Safety During a Pandemic

In general, a majority of Texans believed that driving conditions were safer in April during the shelter-in-place condition than before the pandemic, although a healthy percentage believed them to be about the same. The question was asked and answered as shown:

Are driving conditions more or less safe compared to a year ago?

- 58.0% - more safe
- 9.6% - less safe
- 29.1% - about the same

As driving conditions were perceived safer, the likelihood of getting a traffic ticket was viewed as less likely by 37 percent of the survey respondents. Enforcing traffic laws took on a little less priority relative to other policing activity during the pandemic. Texans believed the top three area for enforcement during this time should be social distancing measures (31%), essential travel enforcement (23%), and traffic laws (23%). While 77% of respondents said traffic safety laws were equally important during the pandemic, 12% said they were less important, and 9% said they were more important.

Significant correlating factors were age, education, and race.

- Younger respondents (less than 45 years old) were more likely to favor enforcement of social distancing over other police priorities.
- Respondents with higher education levels were more likely to favor attention to social distancing and essential travel enforcement over traffic law enforcement.
- Non-white respondents were far more likely to favor social distancing and essential travel enforcement and less likely to favor traffic law enforcement than White respondents.

Not only was driving considered safer during the pandemic, but also less stressful. Fifty-seven percent of Texas drivers surveyed said driving was more relaxing than the month before, while 31 percent said the stress was about the same.

The vast majority of people surveyed (90.6%) recognized they were under a shelter-in-place or stay-at-home order and their transportation use reflected it. All types of motorized travel were used less. Over 70 percent of those surveyed said they drove their personal vehicle or their work vehicle less often, and 72 percent said they were traveling by air less often. The only form of transportation respondents said had increased during the pandemic was walking for recreation, noted by 48 percent.

The survey included questions about changes in recent driving behavior. Approximately two-thirds said they were no more or less likely than before to speed or drive distracted. However, 15 percent said they were more likely to use a seat belt than before, and 46 percent said they were less likely to drive while intoxicated. Respondents (49%) were less likely to transport children during the pandemic, but more likely to use car seats when doing so (16%).

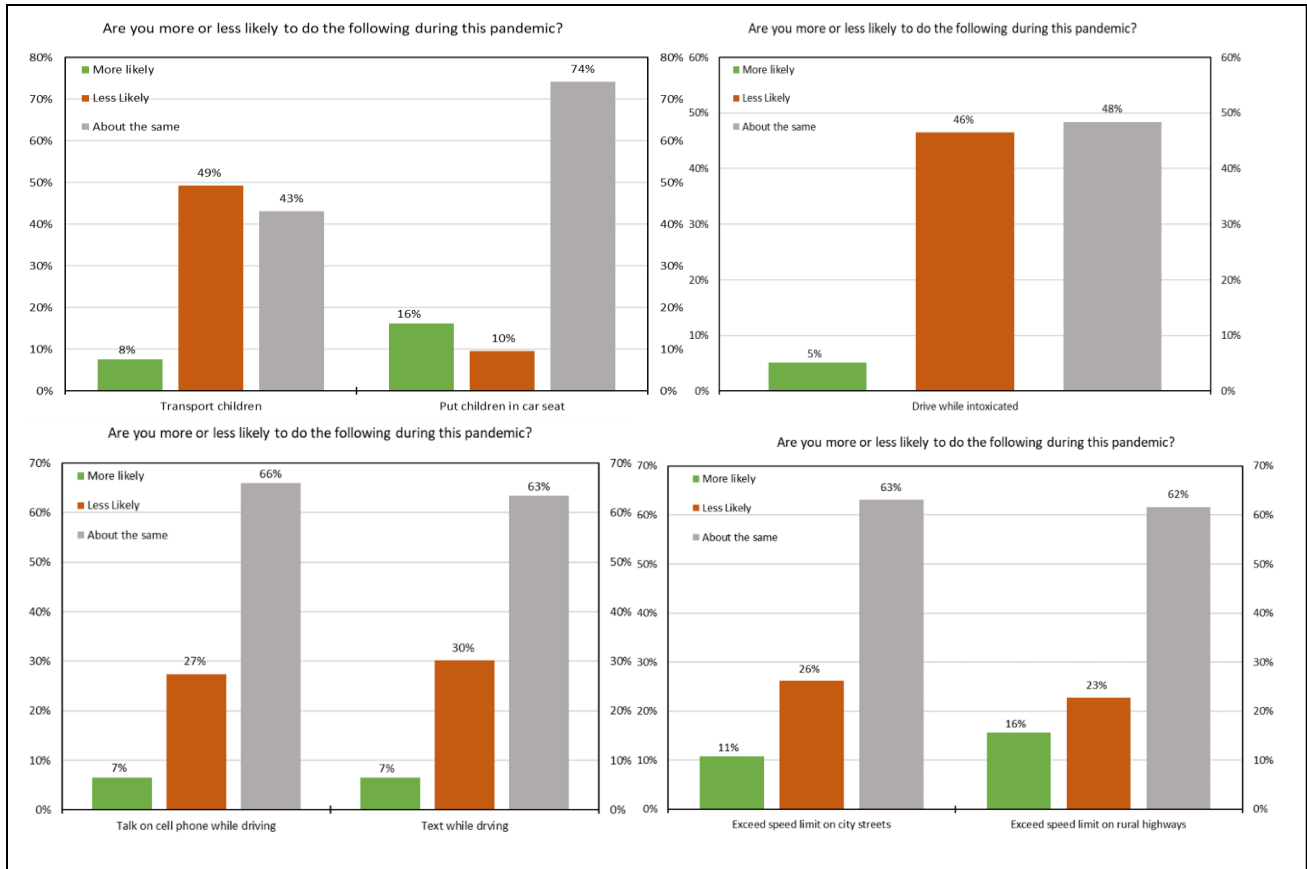


Figure 2. Self-Reported Driving Behavior During Pandemic.

Child Vehicular Heatstroke

Texans tend to underestimate the magnitude of the child vehicular heatstroke problem, as indicated by the percent guessing a lower number of cases than actual. Fewer than half of the respondents (41.7 percent) correctly answered that over 50 children died of vehicular heatstroke in the U.S. in 2019. A majority of the respondents (53.3%) selected Texas as the state they thought had the highest number of child heatstroke deaths, which is correct.

It takes only 10 minutes for temperatures in a closed vehicle to rise from 75 to 94 degrees on an 80-degree day. Only 48 percent of the respondents answered this question correctly, with the remaining 52 percent believing it would take longer.

The Texans surveyed were unfamiliar with Texas law on this issue. A majority of respondents thought the law on leaving children unattended in a vehicle is stronger than it actually is. With regard to the minimum age it is legal to leave an unattended child in a vehicle, 71.5 percent said 10 years or older, and the minimum age under the law is actually seven years. The question was posed for how those who do leave a child unattended should be judged or prosecuted. A purely opinion question, the intent was to measure public sentiment with respect to those affected by or causing a vehicular heatstroke tragedy. The results indicated that 56.6 percent of the respondents were of the opinion that the situation should determine punishment. However, 31.1 percent think

anyone who leaves a child unattended in a vehicle resulting in death should be punished to the full extent of the law. The remaining 11.6 percent either thought no further punishment should be meted or simply preferred not to think about it.

Of interest is what factors lead to unattended children in vehicles and how aware is the public of these. There are three scenarios in which child vehicular heatstroke deaths generally occur: 1) the driver unintentionally forgets the child passenger; 2) the driver intentionally leaves the child, not intending harm but miscalculating the risk; or 3) a child gains entry into a parked vehicle and cannot get out. The public is not knowledgeable about these scenarios, as shown in Table 1.

Table 1. Situational Factors Leading to Child Vehicular Heatstroke.

Situational Factor	Correct % of Fatalities	% of Respondents Answering Correctly
Driver forgot child in the vehicle	55	22.4
Driver left child unattended in the vehicle intentionally	20	20.8
Child accidentally locked themselves in vehicle	25	7.5

A portion of the survey pertained to ways to prevent hot car deaths. Three-quarters of the respondents agreed that fewer child deaths would occur if more education was provided to parents and the public about this issue. Just over 80 percent (81.8%) of the respondents supported the premise that all new vehicles should have optional warning devices that lets the driver know if a child in a car seat is left in the vehicle. A larger percentage, 83.5 percent supported this feature as standard equipment on new vehicles. Almost 62 percent of the survey respondents (61.8%) thought stiffer penalties would deter child deaths in this manner.

There are safety messages and campaigns focused on preventing child vehicular heatstroke. The survey included a set of questions designed to measure awareness of these. Figure 3 presents the results of recent or currently used state and national awareness efforts. None of the efforts were recognized by more than 30 percent of the respondents, and 25 percent said they had not read, seen, or heard any of them. The most recognized were digital message signs, a frequently used messaging system on Texas roadways during the summer months. The least recognized message about hot car deaths is the current message of the National Highway Traffic Safety Administration, Park-Look-Lock, recognized by only 15.3 percent of respondents.

In the rare situation where one might witness an unattended child in a vehicle, it is important to know what to do, as a life-saving action. Texas has passed laws to enable passers-by to take action legally, but 16 percent of the survey respondents did not realize it. When asked the first action to be taken if one witnesses an unattended child in a vehicle, fewer than half (43.2%) answered correctly – call 911. When asked what condition does not have to be met before breaking a window to rescue an unattended child, the most frequent response was the incorrect one, look for parents first, given by one-third of the respondents.

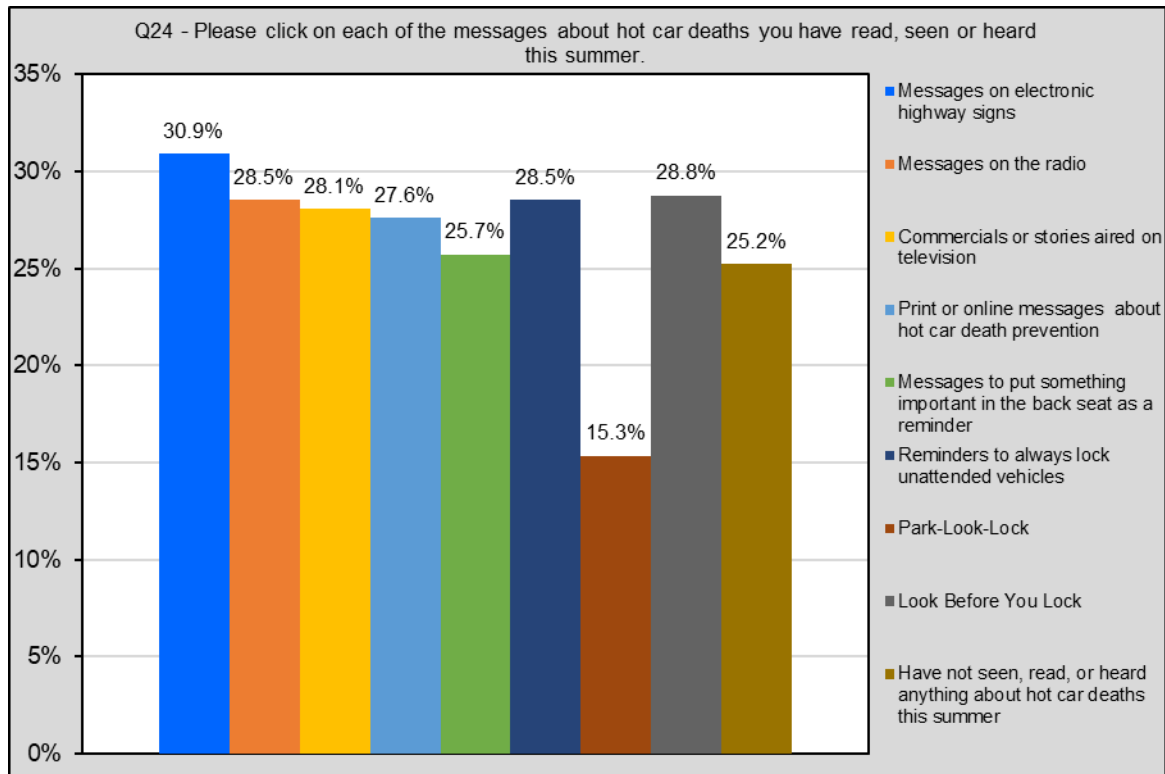


Figure 3. Heatstroke Campaign Awareness.

Seat Belts and Face Masks

A portion of the population is generally conscientious about matters of both safety and health. A portion are compliant with laws and regulations regardless of the issue. The seat belt and face mask use survey was conducted to measure the degree to which these two behaviors relate to each other in Texas. It is interesting to note that seat belt use and mask use was regular behavior reported by about the same percentage of the survey respondents – 87%.

A higher percentage of respondents (61.5%) use seat belts for personal safety benefits than wear masks for personal safety benefits (46.2%), although an additional 29.4% add the safety benefits of others as a reason for mask use. Compliance with the law was a primary factor for seat belt use by 16%, but for mask wearing compliance with state or local mandate was a primary factor for about 10%. The infringement of personal rights as a counter to use differed by only two percentage points on belts and masks. The four figures that follow are illustrative of only a few of the variables included in the survey.

Also of note are opinions on mandating as opposed to personal choice with regard to safety behaviors, as well as the belief in efficacy of seat belts and masks. As shown in Table 2, texting while driving was least likely to be viewed as a personal choice issue, motorcycle helmet use as most likely to be viewed as a personal choice. Overall, the efficacy of seat belts was recognized by 77.4 percent of respondents, compared to 73.9 percent who agreed that face masks have proven safety benefits. A plurality of respondents (47.3%) agreed that requirements to wear seat belts and masks should not be considered comparable.

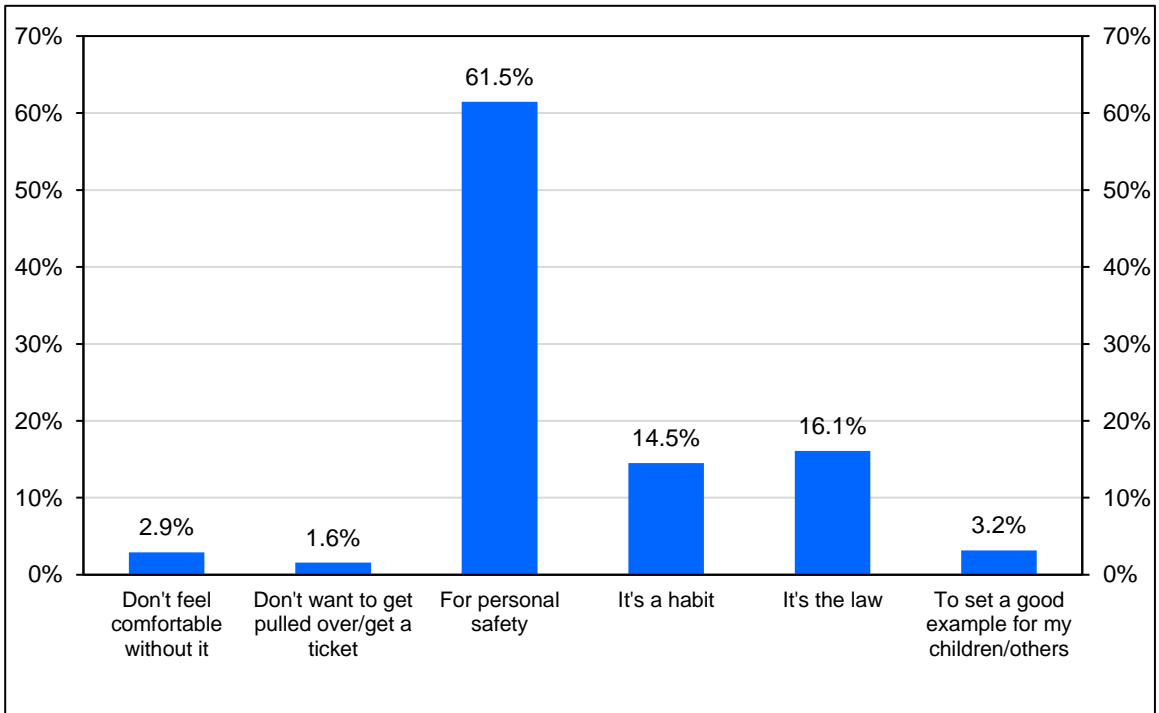


Figure 4. Reasons for Seat Belt Use

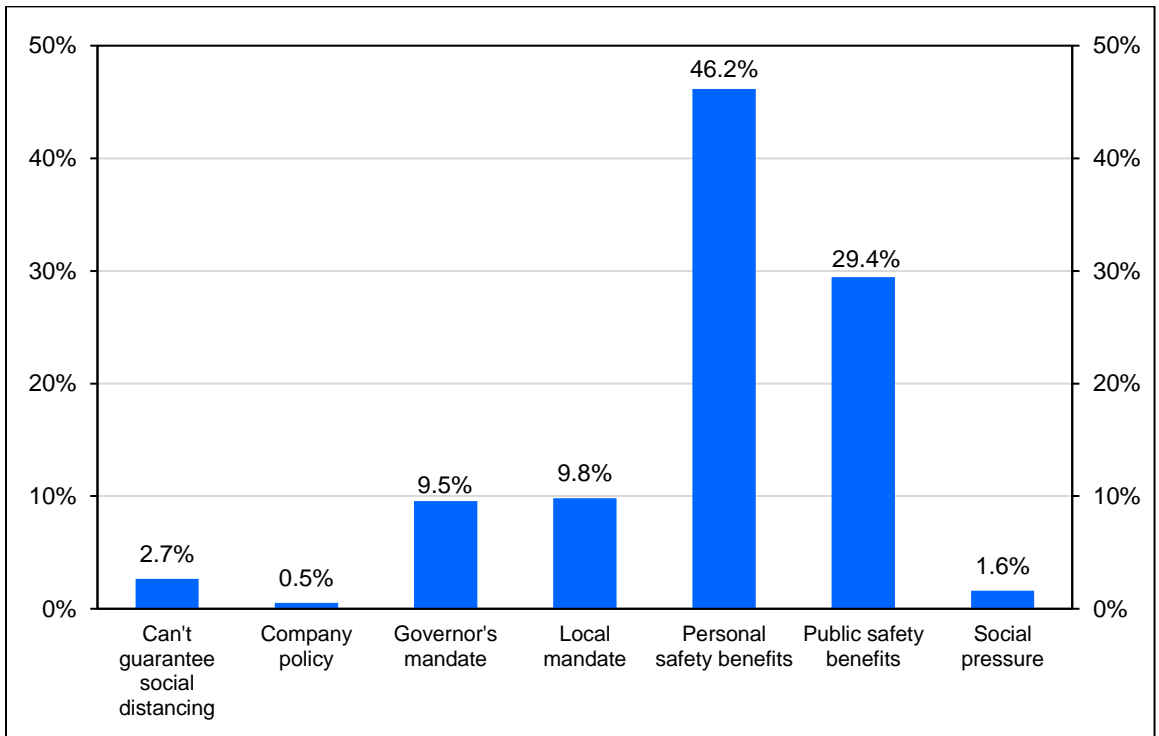


Figure 5. Reasons for Face Mask Use

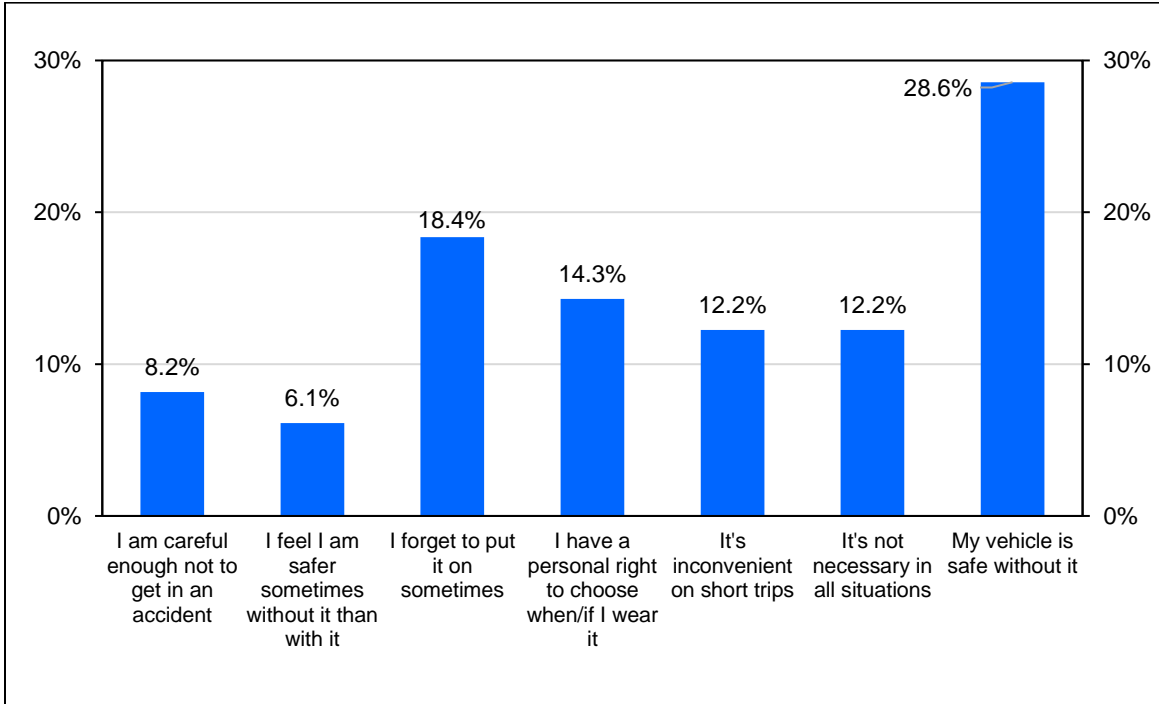


Figure 6. Reasons For Not Always Using Seat Belts.

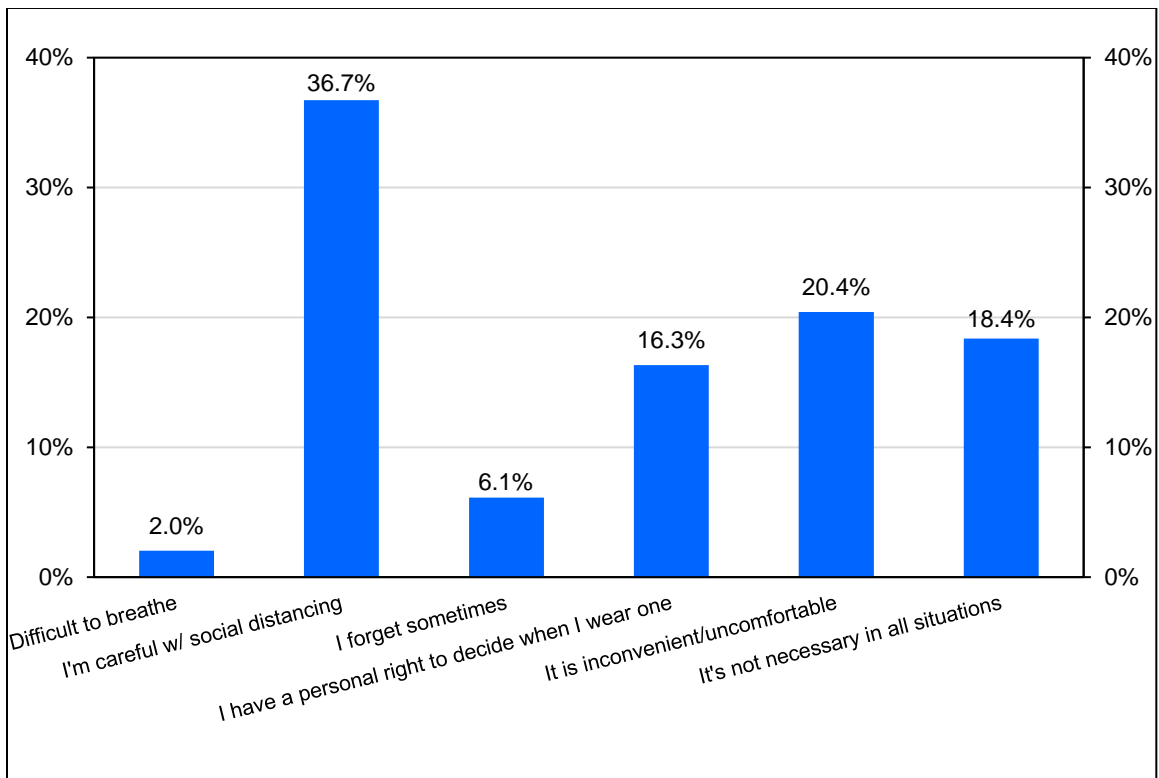


Figure 7. Reasons for Not Always Wearing Face Masks.

Table 2. Opinions on Mandates and Benefits.

Question	% Strongly Agree	% Agree	% Neutral	% Disagree	% Strongly Disagree
Wearing a seat belt should be a personal choice for adults	23.6	16.9	12.9	18.7	25.6
Wearing a mask/face covering should be a personal choice for adults.	17.1	20.6	15.2	17.8	27.7
Texting while driving should be a personal choice.	8.3	20.3	15.0	15.7	37.6
Wearing a motorcycle helmet should be a personal choice for adults.	18.7	23.8	14.8	14.5	26.8
There are proven safety benefits of seat belt use.	48.3	29.1	12.9	4.2	3.2
There are proven safety benefits of mask/face covering use.	38.8	35.1	12.0	6.2	5.8

Texting and Driving

According to the Traffic Safety Monitor, drivers are no more aware of the texting ban now than they were when it was new. As shown in Table 4, drivers are also texting more now than a year ago, according to self-reports of texting behavior. For those who are aware, a higher percentage perceive the law as strongly enforced than weakly enforced, and a higher percentage this year said the law is not enforced at all. Texas drivers in general are less favorable towards the texting ban than they were two years ago.

Table 3. Texting 2020 Compared to 2018.

Question	% Responses by Year	
	2018	2020
Has the amount of your texting and driving changed since this time last year?		
Increased.....	17.0	21.9
Decreased.....	32.0	23.8
Stayed the same.....	31.5	38.4
How often have you texted while driving in the past 30 days?		
None.....	31.8	28.6
1-10 times.....	49.8	49.4
11-30 times.....	11.1	16.2
>30 times.....	5.9	4.9
Is there a law against texting and driving in Texas?		
Yes.....	78.3	79.7
No.....	7.3	7.7
Not Sure/Don't Know.....	14.4	12.6

Table 3. Continued.

Question	% Responses by Year	
	2018	2020
Do police enforce a texting law in your area?		
Not enforced.....	15.8	21.2
Enforced, but not strongly.....	30.7	25.6
Strongly enforced.....	12.8	20.9
Texting bans in Texas should be repealed.		
Strongly agree.....	10.1	16.2
Agree.....	14.2	25.5
Neutral.....	20.4	23.1
Disagree.....	19.1	11.1
Strongly disagree.....	36.3	24.1

DISCUSSION

The Traffic Safety Monitor examined four different topics in 2020 that were reflective of current events and issues in the spring and summer in Texas. As the coronavirus began to permeate the everyday lives of Texans, actions were taken by state and local officials to curb the amount of interaction among everyone. This had an immediate impact on traffic volumes as workers, students, shoppers, and socializers sheltered in place. The Traffic Safety Monitor survey conducted in April indicated that Texas drivers perceived a safer driving environment, believed that safe driving behavior should still be enforced, although with a different priority for some, and in some cases reported they were driving more safely. This survey provided a glimpse at perceptions and driving behavior changes that can be used as a baseline against which to measure improvements in traffic safety as a longer term effect of the decreased traffic volume associated with the pandemic.

A second pandemic-related survey looked at Texans’ views of government actions to promote the use of face masks in contrast with the requirement to use seat belts, as had been used as an example argument by news commentators and public spokespeople. The survey respondents were not on board with the similarity, with 47 percent disagreeing on the comparison. However, benefits of seat belts and face masks were both recognized by just over 75 percent; and the issue of personal choice as an argument against seat belt and face mask mandates was agreed with by 40.5 and 37.8 percent respectively. A slightly higher percentage (42.5%) considered the choice not to wear a motorcycle helmet a personal one. Texting while driving was seen as a personal choice by only 28.6 percent of respondents. The differences allude to an assessment of personal risk to oneself versus being a danger to others. In this regard, the mask message as protection for others was not as strongly recognized.

Although not unique to Texas, the tragedy of child vehicular heatstroke has been experienced more in Texas than any other state over the long term. The Traffic Safety Monitor reveals that there is more to be done to educate Texans on the danger of these avoidable fatalities – i.e., under what conditions they occur, how quickly they occur, and what can be done in response to

an encounter with an unattended child in a vehicle. Among survey respondents, the reminder messages were not as well recognized as other Texas traffic safety messages. There was support by those surveyed for more widespread education on the issue, as well as in-vehicle warning technology as standard or optional equipment.

The Traffic Safety Monitor is a tool for measuring countermeasure impacts. This year a follow-up survey to a 2018 survey on texting while driving was conducted. The results indicated that neither awareness of the statewide texting while driving ban nor behavior as a result of the ban have improved. The survey demonstrates the need for more public information and education on the Texas texting ban while driving. The effectiveness of the law continues to be diminished by perceived lack of enforcement.

TECHNICAL APPROACH

The Traffic Safety Monitor is conducted through the Amazon Mechanical Turk (MTurk) website, where the public can participate in surveys they select for Amazon cash credit of a small amount (typically less than a dollar for a 15-minute survey). Each of the four surveys was formatted in Qualtrics and uploaded to the MTurk website, along with a description, the criteria for participation, and the incentive amount. In all cases, survey respondents must be at least 18 years old and the criteria was set to apply to Texas residents only. Survey respondents were anonymous. Sample sizes were a minimum of 400 for each survey. The details for respondent demographics for each survey are available from the authors upon request.

TECHNOLOGY TRANSFER

A two-page summary of highlights from each of the surveys is available to the Center for Transportation Safety (CTS) staff and others. News stories were prepared by the TTI Communications Group to appeal to news outlets in the State for the pandemic-related survey results. However, internal reservations related to timing and political sensitivities prevented their full release.

The heatstroke survey results were likewise prepared for wider distribution to the public but timing and other priorities interfered with a release. Survey results were provided to the Texas Heat Stroke Task Force and will be used for guidance with programs conducted by the Task Force. Plans are for TTI to highlight the survey findings in advance of the next high temperature season starting in the spring to bring attention to the issue earlier in the high-risk window.

The texting and driving survey results are used as supporting data for demonstrating the continuing need to address this traffic safety problem. In addition to this report and the summary report, these data are included in presentations and proposals. The authors encourage CTS staff and other researchers to obtain further details on survey specifics and the many additional analyses available but not presented in this report.