2020 Safe Driving and Technologies Report

EXECUTIVE SUMMARY

The use of technology in vehicles to facilitate safer driving has gained massive traction over the past few years. Over the course of this time, USAA has provided members with a variety of programs to help them develop and maintain safe driving habits. Based on de-personalized and aggregated data from these programs, USAA has uncovered the following insights from these programs:

1. Experience counts – As drivers age, driving habits improve.
2. Drivers will alter their behaviors when presented with personalized challenges and rewards.
3. Smartphones are both a help and a hindrance in cars.
4. Regardless of technology use, the deadliest times on the road are weekend nights.

INTRODUCTION

USAA has a long history of facilitating the financial and physical security of its members by strongly advocating for vehicle safety and promoting safe driving programs. USAA continues this tradition today by testing and deploying programs that leverage the latest telematics technologies to facilitate safe driving behaviors.

The purpose of this report is to share some interesting insights learned from these telematics-based safe driving programs¹. Specifically, these programs include:

1. USAA SafePilot™
2. Safest Driver Contests
3. Discount for Driving Research*
4. Teen Safe Driving*
5. Smaller field tests of safe driving program concepts

KEY FINDING: EXPERIENCE COUNTS – AS DRIVERS AGE, DRIVING HABITS IMPROVE.

Early indicators from the USAA SafePilot program, which scores drivers specifically based on phone handling and hard braking, show that older drivers exhibit safer behavior on the road than their younger counterparts. Years of experience may have proven that it is important to pay attention to the traffic ahead and to allow plenty of space between themselves and the vehicle in front of them.

¹ Programs marked with an asterisk* have recently been retired.
On the other end of the spectrum, younger drivers show room for improvement compared to older drivers. However, as evidenced by USAA’s teen safe driving program, Automatic License+, that monitoring and coaching can help improve their driving performance. It is expected that younger drivers will make driving behavior changes based on personalized coaching from the USAA SafePilot app, as well as from fact-based conversations with their parents.

**KEY FINDING: PERSONALIZED CHALLENGES AND REWARDS CAN WORK TOGETHER TO IMPROVE DRIVING BEHAVIOR.**

USAA sponsored eight week safe driving contests in both San Antonio (2018) and Los Angeles (2019) with the aim of facilitating safer driving and empowering citizens to see how they measure up. Cash prizes were awarded to drivers with the best driving scores. Scores were based on driving behaviors in the following categories:

- PHONE HANDLING
- SPEEDING
- HARD BRAKING
- HARSH ACCELERATION
- CORNERING

Contest participants in Los Angeles improved their overall scores by nearly 45% compared to their initial baseline within the first week of the contest. While driving scores steadily decreased over the 8-week period (a dynamic we have seen in other short-term programs), drivers still maintained a 25% score improvement by the end of the contest. Even after the contest ended and all incentives were removed, drivers who kept the app on their phones maintained improved scores in all of the scoring categories, equating to an overall score improvement of 8%. The biggest improvements were in acceleration, braking and cornering, with smaller improvements in phone handling and speeding.

An interesting note is that commercial drivers showed greater improvement than everyday drivers (i.e. those not getting paid to drive). Commercial drivers improved their scores by 32% by the end of the contest, whereas everyday drivers improved by 24%. This may be attributed to the fact that safe driving is top-of-mind for those who get paid to drive, and they have learned that the negative consequences of unsafe behaviors far outweigh any perceived benefits.
In a survey\(^2\) commissioned by USAA, 63% of drivers are willing to change behavior for a monetary incentive. So far, data from these programs support findings that personalized challenges and rewards can work together to incentivize and improve driving behavior. USAA saw the following improvements among test program participants:

These results suggest that drivers are quite capable of driving safely when they are motivated and have awareness on specific areas of improvement. One challenge, validated by the USAA survey\(^3\) on driver behaviors and attitudes, is that 40% of respondents believe they do not need to stop or change risky behaviors. For example, while 38% of respondents admit to regularly driving above the speed limit, only 17% actually want to stop speeding. This is why USAA believes it is effective to leverage technologies that enable fact-based driving analysis and a simple mechanism for rewarding safe behaviors.

**KEY FINDING: SMARTPHONES ARE BOTH A HELP AND A HINDRANCE IN THE CAR.**

Data from the USAA SafePilot program indicates that non-phone call distractions are *three times more numerous* than phone call distractions. While these could be helpful aids to the driving task, such as navigation assistance, the concern is that other non-essential activities take attention away from the primary driving task. As such, it is no surprise that USAA’s survey\(^4\) indicates that 60% of respondents believe that phone usage while driving is the *most important traffic safety issue to address.*

As an example to add some perspective to this issue, if sending or reading a text message takes around 4 seconds, doing so while driving at 55mph is the equivalent of driving the entire length of a football field *blindfolded*!

On the positive side, 74% of phone calls are hands free vs. 26% that are handheld. This is good news as 20 states ban handheld phone use while driving.

\(^2\)USAA online survey of members regarding their driving behaviors and attitudes. September 2019. N=2,194.
\(^3\)USAA online survey.
\(^4\)USAA online survey.
KEY FINDING: WEEKEND NIGHTS ARE THE DEADLIEST TIMES TO BE DRIVING

USAA merged driving data from its Discount for Driving Research program with publicly available crash statistics from the National Highway Traffic Safety Administration (NHTSA)⁵ to gain insights on the deadliest times of day to drive. Using the NHTSA fatality crash statistics as a starting point, USAA factored in its own estimates regarding the number of people actually driving on that day/time to develop a relative risk estimate. A key insight uncovered is that driving between midnight and 3 a.m. is ten times as deadly as the average drive. This elevated risk is especially high on Saturday and Sunday. In contrast, driving between 6 a.m. – 6 p.m. on Monday through Friday are the least deadly times to drive (even though non-fatal crash risk goes up during these weekday drive times).

The reasons are likely due to the following:

- **Speed**: Roads tend to be less crowded at night, allowing for increased speed of travel. Higher speeds increase the likelihood of a fatality when a crash does happen. During the day, higher levels of traffic congestion may mean more non-fatal crashes, but the slower speeds mean fewer fatalities.
- **Visibility**: Low levels of light make it harder to detect hazardous road conditions, obstacles, and sometimes other vehicles.
- **Fatigue**: Drivers are more likely to be drowsy at night, increasing the likelihood that they will either fall asleep while driving, or not fail to recognize a dangerous situation and react in time to avoid a crash.
- **Impairment**: At night, there is often a greater chance that people will be driving under the influence of alcohol and drugs (legal and illegal). Like fatigue, impaired driving can cause drivers to make catastrophic errors in recognition, judgment, and significantly slow their reaction times.
- **Routes**: Nighttime routes traveled may be more unplanned, and thus less familiar, than routine routes traveled during the day (work, school, errands, etc.).

### Relative Fatal Crash Risk

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CALLS TO ACTION

USAA strongly urges all drivers to develop and maintain safe driving habits. These include:

- Keep your eyes on the road and your hands on the wheel, maintaining a focus on your primary driving tasks. (see Avoid These 10 Deadly Driving Distractions)
- It Can Wait - Take the pledge to drive distraction free.
- Consider a parent and teen safe driving agreement. (see Tips for Promoting Teen Driver Safety)
- Stay on top of your driving skills as you age. (see 3 Steps Mature Drivers Can Take to Stay Safe)
- Obey the speed limit, and slow down if road conditions and/or visibility warrant a reduced speed.
- Keep a safe distance from the car in front of you, allowing sufficient space to stop quickly if needed.
- Do not drive while sleepy or otherwise impaired by alcohol or drugs.
- Exercise extra caution while driving after midnight, especially on weekends.

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