



2024 Research Report

# A Road Map for Safer Roads



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The true danger behind smartphone-based distracted driving may not be as widely known as other road risks, but new data sources reveal that it is one of the most dangerous – yet prevalent – behaviors responsible for crashes that are 100% preventable. As part of a recent [Advanced Notice of Proposed Rulemaking for advanced impaired driving prevention technologies](#), NHTSA estimates that distracted driving caused 12,405 fatalities in 2021, 28% of all traffic deaths that year. This represents a societal safety cost of approximately \$158 billion. This figure is derived from an imputation model which is much higher than those crashes which are directly attributed to distracted driving. The challenge in confirming the presence of smartphone distraction, and understanding its impact as a whole has muted safety efforts needed to combat the problem. This report aims to highlight new methods road safety officials are undertaking to mitigate it.

While distracted driving might seem like an issue that's too pervasive to eradicate, history shows that's not the case. There is a precedent for culture change that reduces dangerous behaviors and makes roads safer for everyone. Consider the progress that has been made with seat belts. Thirty years ago, only 58% of passengers buckled up, according to National Highway Traffic Safety Administration (NHTSA) data. A decades-long, holistic strategy with buy-in from multiple partners helped move the needle. This plan included a combination of strong state laws that encouraged people to buckle up, fair and equitable enforcement of those laws, public outreach to educate motorists about how a seat belt can save their life in the event of a crash, and technology solutions such as in-vehicle feedback. Three decades later, more than 91% of people buckle up, and thousands of lives have been saved.

Alcohol-impaired driving is another example of how driver behavior can be changed. In 2007, more than 17,000 people were killed in crashes involving alcohol-impaired drivers, accounting for 41% of all traffic deaths. Using the same comprehensive approach of outreach, enforcement, state laws, and more, drunk driving deaths fell to just over 10,000 in 2019 – 28% of all roadway fatalities. While some progress has been lost due to the pandemic, the 13,500 impaired driving fatalities in 2021 remain well below the number recorded 15 years ago. A federal mandate requiring the installation of passive alcohol detection in all new cars will help to significantly reduce these numbers, saving tens of thousands of lives and moving the nation closer to fully eradicating drunk driving.

We can make similar progress toward our goal of eliminating distracted driving. The nuances of the distraction challenge are different, but the progress we've made with seat belts and alcohol-impaired driving offers a roadmap for success. Traffic deaths are finally starting to fall after surging during the pandemic. We must build on this momentum and act now.

## What Can Be Done?

Much like impaired driving and seat belt use, it will take a comprehensive strategy that includes strong and clear state laws coupled with public awareness campaigns, equitable enforcement, and technology countermeasures.

State laws can have a significant impact on safety. But what makes a state law effective at combating smartphone distraction behind the wheel? A 2021 [report](#) from the Behavioral Traffic Safety Cooperative Research Program, a partnership between GHSA, NHTSA, and the Transportation Research Board, outlines four key aspects that are essential to reducing distracted driving:

- Unambiguous statutory language that clearly defines when and how a wireless device can and cannot be used.
- Penalties and fines in line with other traffic citations.
- A combination of high visibility enforcement (HVE) of the law and public information, education and outreach campaigns delivered by authentic voices using the most appropriate channels.
- Sustained coalition-building efforts that are established at the community level.

Amid a renewed national focus on traffic enforcement and reductions in police staffing across the country, we cannot forget that HVE is a proven countermeasure. In 2022, NHTSA researchers looked at 80 studies that explored the relationship between HVE efforts and safety outcomes, with a focus on distracted driving and other dangerous driving behaviors. The results indicated that HVE efforts reduced drivers' handheld cellphone use by an average of 1.7 percentage points – meaning fewer distracted drivers where HVE was present.

Traffic safety cameras can also be used to supplement traditional traffic enforcement while addressing potential inequities since cameras do not see race or ethnicity. While this technology is most commonly used for speeding and red-light running, cameras that detect and cite distracted drivers are being tested. More data will be key to reducing smartphone distraction, and as the state examples in this report show, the comprehensive approach outlined above, enhanced with new data analysis techniques, can amplify efforts to improve safety.

Telematics technology significantly enhances roadway safety by enabling officials to make data-driven decisions. It allows for the adjustment of speed limits based on analyses of driver behavior and the identification of high-risk areas for targeted safety interventions. Safe driving technology also supports comprehensive statewide speed studies, facilitating the prioritization of areas for enforcement and behavior change campaigns. The technology enables the

assessment of current road safety and the ability to understand the effectiveness of interventions meant to reduce risk.

While technology has created new risks, it also offers new solutions. One of those has been recognized by the Federal Highway Administration ([FHWA](#)) as a road safety success story. In 2016, cities like Boston, Seattle, San Antonio, and Los Angeles (L.A.), along with the State of Oklahoma, began partnering with Cambridge Mobile Telematics (CMT) to run programs that use technology to encourage and incentivize safe driving. These programs analyze how participating drivers are doing and provide encouragement with the goal of reducing distracted driving and other risks that lead to crashes.

Private sector partners provide prizes for participants in categories like least distracted, slow and steady, safest youth driver, and overall safest driver. This support not only provides excellent visibility to partners but also positions them as roadway safety champions committed to improving safety for all. Grand prizes for these programs have been as high as \$20,000.

This strategy has yielded measurable results in reducing risky driving behaviors. In 2019, the riskiest drivers — those in the bottom 25% — participating in Boston's Safest Driver program exhibited significant changes in behavior throughout the competition. Distracted driving fell by 48%, speeding by 38%, and hard braking by 57%. This resulted in a 12% reduction in crashes and injuries.

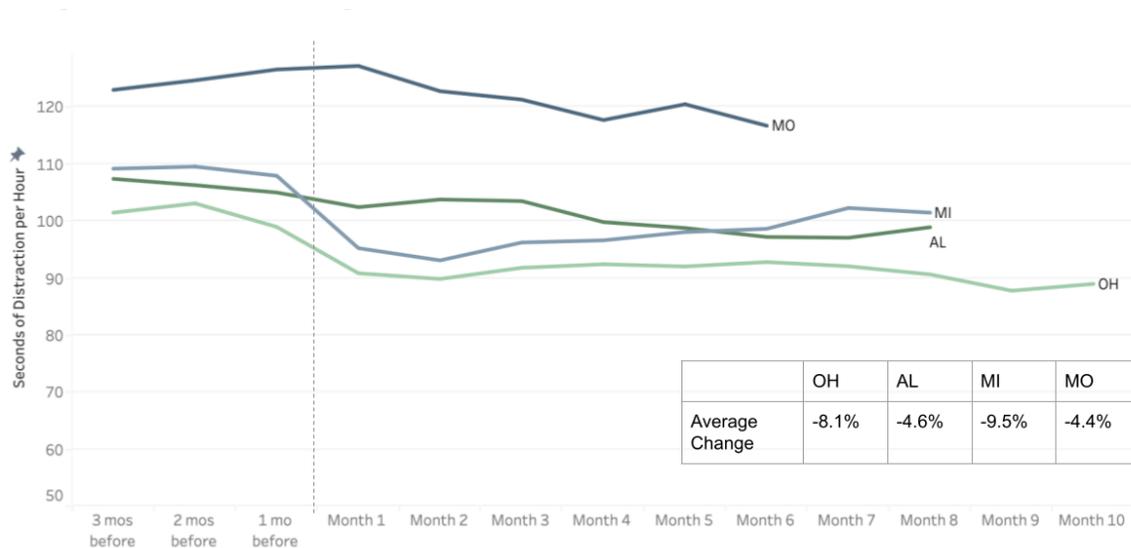
The cost reduction associated with improved driver behavior is also significant. Applying NHTSA's crash cost estimates to the 12,000 drivers that participated in L.A.'s Safest Driver program shows that it prevented \$2.1 million in economic damages from the risk improvements drivers made. Like Boston, L.A.'s riskiest participants showed significant improvements in crash risk, resulting in 745 fewer crashes and two lives saved.

Campaigns such as these drive significant media coverage. For example, L.A.'s Safest Driver program generated sustained earned media coverage by local networks as well as some national outlets. Boston's Safest Driver initiative garnered similar media coverage. Research has shown direct correlations between organic media coverage and the reduction of risky behavior.

# The Impact of Hands-Free Laws

Data are essential for understanding how any given behavior impacts crash risk and the extent to which that behavior is prevalent on our roads. CMT began measuring driver behavior in 2004, before smartphones. As the technology matured, CMT added the ability to identify risky behavior. As a result, CMT has found that 34% of crashes involve a driver who was using their phone a minute before the crash.

## Impact of Safety Laws

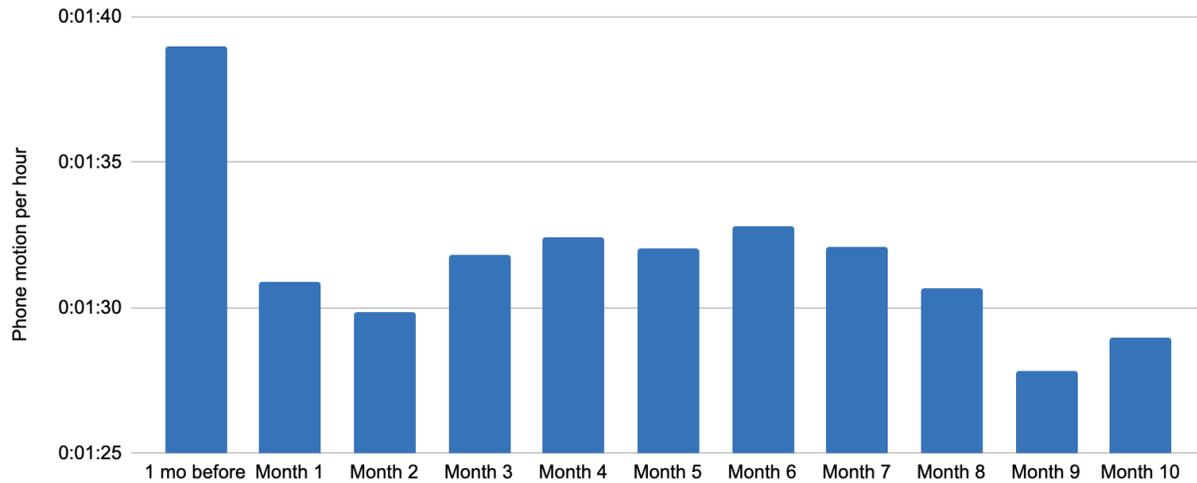


The implementation of hands-free legislation has helped mitigate distracted driving, contingent upon its enforcement. Distracted driving rates have consistently decreased in states that have adopted hands-free laws.

Cambridge Mobile Telematics has new analyses on distracted driving trends in Ohio, Michigan, Alabama and Missouri, all of which enacted hands-free laws between 2018 and 2024. During the first three months following the enactment of these laws, distraction declined an average of 6.6%.

CMT's analyses measure millions of trips involving millions of drivers in each state.

## Ohio Hands-Free: Phone Motion Per Hour After Law

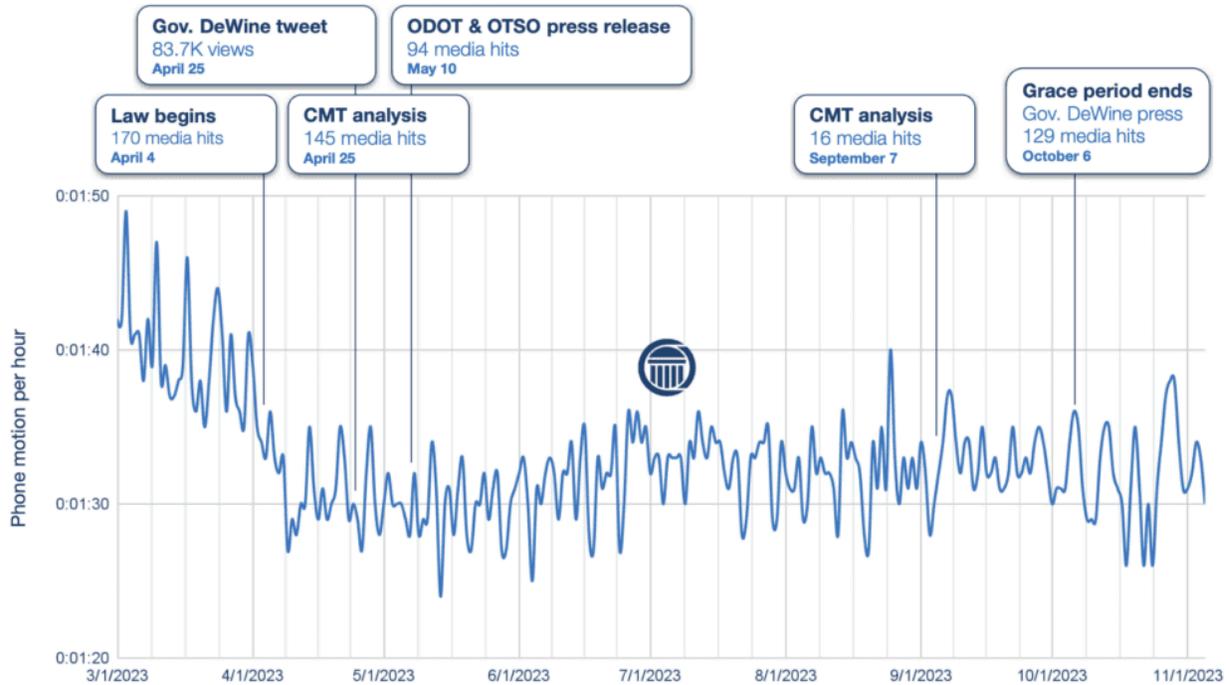


On April 4, 2023, Ohio took a significant step towards enhancing road safety with the enactment of a hands-free law. CMT has closely monitored the impact of this legislation, observing a notable 8.1% decrease in driver distraction since enforcement began six months later.

In the three months leading up to the law’s enforcement, data showed that drivers were distracted for an average of 1 minute and 42 seconds. In month two of the law, this figure dropped to an average of 1 minute and 30 seconds of distraction. CMT’s analysis indicates a consistent month-over-month decline in distracted driving, culminating in a reduction to 1 minute and 29 seconds by the tenth month.

Since Ohio adopted its hands-free law, CMT estimates it has prevented 3,060 crashes, 1,700 injuries, and 14 fatalities. The law has also reduced economic damages across 8 million drivers by more than \$121 million. This underscores the safety and economic benefits of enforcing hands-free driving laws.

## Distracted Driving & Media Coverage in Ohio

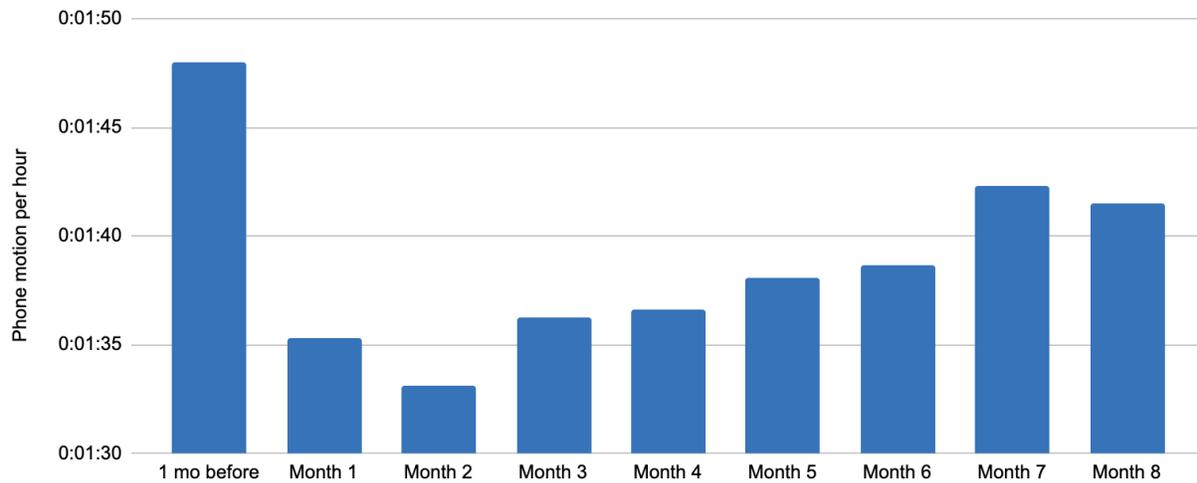


CMT has observed that the effectiveness of hands-free laws tends to wane over time. This observation is attributed to the surge of initial awareness campaigns and media attention that gradually diminishes. When a law first takes effect, the media cover the new requirement and governments launch educational campaigns to increase driver awareness. Sustaining such efforts; however, proves challenging over time.

Ohio illustrates the critical role that the media plays in the successful deployment of a hands-free law. The state benefited from widespread media coverage when the law took effect and leveraged a CMT report that found distracted driving declined significantly in the first month of the law's enforcement. Ohio Governor Mike DeWine's engagement, including a tweet about the law's positive impact, further amplified this attention. Following the Governor's lead, the Ohio Department of Transportation and the Traffic Safety Office also issued press releases emphasizing the law's success. These tactics not only extended the duration of media coverage but also enhanced the law's overall effectiveness and public awareness.

The impact of these efforts on public awareness has been profound. A survey conducted by Fix Our Roads Ohio found that [90% of the state's drivers](#) were aware of the hands-free law, and 75% expressed a commitment to reduce their distracted driving. This underscores the critical importance of media engagement and public awareness campaigns in reinforcing the long-term effectiveness of hands-free driving laws.

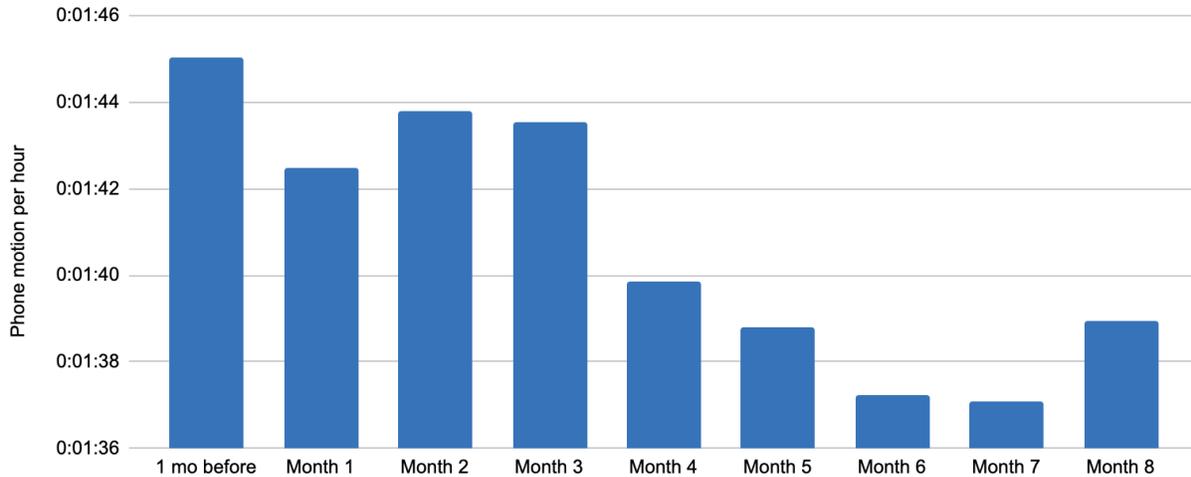
## Michigan Hands-Free: Phone Motion Per Hour After Law



Michigan mirrored Ohio’s approach of making distraction a primary offense and experienced a quick drop in distracted driving following the law’s implementation on June 30, 2023. The law prohibits the use of handheld devices while driving. In the first 30 days following the law’s enactment, Michigan experienced a 12% reduction in distraction, with drivers spending an average of 1 minute and 35 seconds per hour distracted. By the second month of the law, the rate of distracted driving declined an additional 2 percentage points to 14%.

Despite these challenges, Michigan has achieved an average reduction of 9.5% in distracted driving since the law’s inception 222 days ago. Based on this performance, CMT estimates that the law has prevented 2,485 crashes, 11 fatalities, 1,400 injuries and \$98 million in economic damages across Michigan’s 8 million drivers since taking effect.

## Alabama Hands-Free: Phone Motion Per Hour After Law



Alabama introduced its hands-free law as a secondary offense on June 16, 2023, making enforcement more challenging. Unlike Ohio, Alabama's grace period lasted for 12 months with officers able to issue tickets beginning on June 16, 2024.

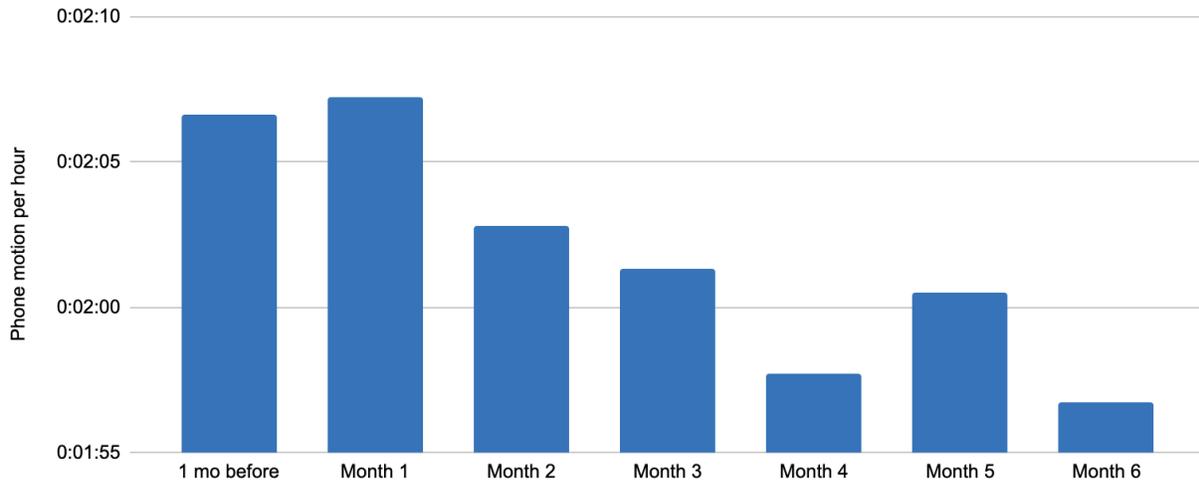
Initial results in Alabama showed a slight decrease in distracted driving, but by the second month, distraction levels started to rise again. Three months in, distraction increased by 1.6%. However, by the seventh month, CMT observed a 7.6% reduction, with drivers distracted for 1 minute and 37 seconds. This is an 8-second improvement over what occurred before the law's enactment.

Several publications reported on Alabama's hands-free law, highlighting its impact and efforts to reduce distracted driving. They detailed the strategic initiatives that the hands-free law represents for improving roadway safety by reducing smartphone distractions. Despite the law's effectiveness, the fact that a violation is a secondary offense makes enforcement challenging.

This report underscores the hands-free law's critical role in enhancing road safety in Alabama. At the same time, the results seen in other states affirm the value of strengthening Alabama's law, so that a violation is a primary offense and the importance of ongoing public awareness campaigns.

CMT estimates that Alabama's law prevented 650 crashes, three fatalities, 360 injuries, and \$26 million in economic damages.

## Missouri Hands-Free: Phone Motion Per Hour After Law



Missouri enacted a secondary, hands-free distracted driving law on August 28, 2023, leading to a 7.8% reduction in distraction rates. In the first month of the law, distraction increased slightly, exceeding pre-law levels. By the third month, distraction was 4.2% lower than before the law, and by the sixth month, it decreased by 7.8%, with drivers distracted an average of 1 minute and 57 seconds.

There was significant media coverage of the state’s hands-free law around the time it went into effect. In the days leading up to and following the law’s implementation, news outlets published stories addressing its provisions and the broader effort to reduce distracted driving in the state. For example, [ABC17 News](#) detailed the specifics of the Siddens Bening Hands-Free Law. There would be a grace period during which only warnings would be issued, with penalties imposed beginning January 1, 2025. An article by [Spectrum News](#) highlighted the law’s prohibition on manually typing, scrolling or holding a cellphone while driving, as well as its significance in making Missouri the 28th state to require drivers of all ages to use hands-free devices.

CMT estimates that Missouri’s hands-free law was able to prevent 450 car crashes, two fatalities, 250 injuries, and \$18 million in economic damages.

## Which Mobile Apps Did You Use in the Last Month?

Cambridge Mobile Telematics conducted a survey to uncover the app usage habits of more than 1,600 drivers. The research confirmed the prevalence of mobile app use while driving. Instagram topped the list, with a staggering 24% of drivers using the social networking app behind the wheel. The use of the camera app and WhatsApp Messenger was also significant, with an average of 20% of drivers' attention diverted to these apps rather than the road.

Shockingly, 19% of drivers admitted to using the YouTube app for entertainment while driving in the past month. Out of the top 10 most used apps, the Phone app was in tenth place with 15% of drivers admitting using it.

CMT's analysis of driver behavior by age group revealed that individuals aged 30-44 are particularly prone to distracted driving, showing a strong inclination towards using social and communication apps. Instagram was the most popular among these drivers, with a usage rate of 28%, closely followed by WhatsApp Messenger at 26% and the Camera app at 24%. Facebook and Facebook Messenger were also frequently used by the drivers in this age group at 20% and 19%, respectively. Productivity and entertainment apps, including Gmail, Google Chrome, Adobe Acrobat Reader, YouTube, and Afterpay, were used by nearly 20% of drivers.

## New problems require new solutions

New problems require new solutions. When it comes to smartphone distraction, however, data indicate that a comprehensive approach that includes the proven countermeasures of strong legislation coupled with equitable enforcement, data, and public education and outreach can change driver behavior. This approach has resulted in increased seat belt use and a reduction in alcohol-impaired driving. It is showing promising results in reducing distracted driving in states like Ohio, Michigan, Alabama and Missouri.

In addition, incentive-based programs such as Safest Driver and others implemented in U.S. cities and states can encourage drivers to stay focused on the road. The data indicate these initiatives decrease risky driving actions, resulting in a corresponding drop in crashes and injuries.

Achieving zero traffic deaths and ensuring everyone arrives at their destination safely is possible. But only if we solve the problem of distracted driving. It starts with each driver making a concerted effort to be 100% focused on the activity of driving. Contrary to what some may believe, driving is a complex task that requires the driver's full attention. When smartphone use is added to the equation, the driver simply can't process what is happening around them and

make the split-second decisions needed to avoid a crash. Just like buckling up, developing the “no-cell phone use while driving habit” for every trip is essential. Turn off or place your phone out of reach, use Do Not Disturb While Driving to notify others when you’re behind the wheel, have a passenger make or take a call, or pull over when you need to connect.

Want to learn more about distracted driving research? Get CMT’s report: [The State of Distracted Driving in 2023](#).

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## **CMT’s mission is to make the world’s roads & drivers safer.**

Cambridge Mobile Telematics (CMT) is the world’s largest telematics service provider. Its mission is to make the world’s roads and drivers safer. The company’s AI-driven platform, DriveWell®, gathers sensor data from millions of IoT devices — including smartphones, proprietary Tags, connected vehicles, dash cams, and third-party devices — and fuses them with contextual data to create a unified view of vehicle and driver behavior. Companies from personal and commercial auto insurance, automotive, rideshare, smart cities, wireless, financial services, and family safety industries use insights from CMT’s platform to power their risk assessment, safety, claims, and driver improvement programs. Headquartered in Cambridge, MA, with offices in Budapest, Chennai, Seattle, Tokyo, and Zagreb, CMT serves millions of people through over 110 programs in 25 countries. Learn more at [CMT.ai](#).

The Governors Highway Safety Association (GHSA) is a nonprofit association representing the highway safety offices of states, territories, the District of Columbia, and Puerto Rico. GHSA provides leadership and representation for the states and territories to improve traffic safety, influence national policy, enhance program management, and promote best practices. Its members are appointed by their Governors to administer federal and state highway safety funds and implement state highway safety plans. Visit [ghsa.org](#) for more information.

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