

MASSACHUSETTS VISION ZERO COALITION

Friday, May 20th, 2022

As members of the Massachusetts Vision Zero Coalition, we are writing to provide comments on the updates to the New Car Assessment Program.

The [Massachusetts Vision Zero Coalition](#) is composed of transportation advocacy organizations, community-based groups, and individuals representing communities across the state who are dedicated to improving traffic safety in Massachusetts.

The executive summary of the report shares the following information: “...a statistical projection of traffic fatalities for the first half of 2021 shows that an estimated 20,160 people died in motor vehicle traffic crashes—the highest number of fatalities during the first half of the year since 2006, and the highest half-year percentage increase in the history of data recorded by the Fatality Analysis Reporting System (FARS). In addition, the projected 11,225 fatalities during the second quarter of 2021 represents the highest second quarter fatalities since 1990, and the highest quarterly percentage change (+23.1 percent) in FARS data recorded history”.

The role that cars themselves play in these crashes cannot be ignored. For many many years, vehicles have been continually designed to improve safety for those inside the vehicle, to the detriment of those outside the vehicle, such as vulnerable road users like people on foot and on bike. We appreciate that the National Highway Traffic Safety Administration (NHTSA) is taking the safety of those outside of the vehicle into consideration in the adjustment of the New Car Assessment Program (NCAP) safety ratings and the requirement for a 10 year roadmap for the future of NCAP. The NCAP is both a way to educate the public on the safety of new cars and an opportunity to encourage car manufacturers to make the safest products possible. Though this update is a step in the right direction, we believe that there are additional things that NHTSA should consider to even more greatly improve the efficacy of the safety rating program.

US DOT recently released the first ever National Roadway Safety Strategy, which included the NCAP update as one of the first concrete steps to address the increase in fatalities on America’s roadways through a safe system approach. Yet despite the National Roadway Safety Strategy stating “*Under the Safe System Approach, efforts to make our roads safer should affirmatively improve equity outcomes,*” NHTSA’s plan for both this update of the NCAP and its 10 year plan fail to adequately consider vulnerable road users other than people walking, people with disabilities, or Indigenous, Black, and Hispanic people who are disproportionately represented in traffic fatalities and serious injuries.¹ We ask

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https://www.ghsa.org/sites/default/files/2021-06/An%20Analysis%20of%20Traffic%20Fatalities%20by%20Race%20and%20Ethnicity_0.pdf

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NHTSA to take our following comments into consideration to improve this once in a decade opportunity to address the NCAP.

Vehicle size, height, & weight:

Increasing vehicle size has been continuously linked to fatal pedestrian and bicyclist crashes across the country. A recent study from the Insurance Institute of Highway Safety demonstrated that drivers of larger vehicles like SUVs, vans, and trucks are more likely to hit pedestrians while making right turns than drivers of other vehicles.² This suggests issues of visibility and larger blindspots. This is especially concerning given the additional danger that the size, height, and weight of larger vehicles causes to vulnerable road users.³ Direct vision, visibility, and blindspots/zones for vehicles should be rated as part of NCAP. Europe and other countries have had a direct vision standard for passenger vehicles (cars, pickup trucks, and SUVs) since 2009⁴, and are expanding this standard to newly-built trucks as well.⁵ This [blind zone measurement tool](#) demonstrates just what the blind spots are for different vehicles, and shows, for example, that a driver of a Ford F-150 truck has a blind spot in front of the vehicle so deep that eight standing elementary school children lined up from the bumper of the vehicle would be invisible.⁶

Human-Machine Interface (HMI) and In-vehicle Infotainment System (IVIS):

This should prioritize ease of use and minimize distraction, including less reliance on touch screens and more buttons and dials for basic vehicle functions (like climate control and radio). There should be restrictions on screens built into vehicles (maximum size limit, for instance). Any vehicle with a screen that **does not** lock when the vehicle is in motion should have a lower safety rating.

Intelligent speed assistance (ISA):

NHTSA should take Intelligent Speed Assistance into consideration for NCAP. The EU's European Transport Safety Council found a safety benefit in using these technologies and the General Safety Regulation made an overridable version of ISA mandatory in 2019. They expect ISA to result in a 30% reduction in collisions, and 20% reduction in deaths.⁷

Advanced driver assistance systems (ADAS):

The inclusion of additional ADAS, including pedestrian automated emergency braking, lane keeping support, and blind spot detection and intervention, is encouraging as these all aim to protect those outside the vehicle. However these ADAS are not without issues and limitations, which we outline below.

² <https://www.iihs.org/news/detail/suvs-other-large-vehicles-often-hit-pedestrians-while-turning>

³ <https://www.iihs.org/news/detail/new-study-suggests-todays-suvs-are-more-lethal-to-pedestrians-than-cars>

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A42018X0116>

⁵ <https://eurocities.eu/wp-content/uploads/2021/03/Letter-from-cities-on-truck-direct-vision-standard.pdf>

⁶ <https://blindzonecalculator.herokuapp.com/getinfo/699>

⁷ <https://etsc.eu/intelligent-speed-assistance-isa/>

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The inclusion of **Pedestrian Automatic Emergency Braking** (PAEB) systems does not go far enough to truly consider the safety of vulnerable road users. The Bipartisan Infrastructure Law defines vulnerable road users as pedestrians, bicyclists, other cyclists or persons using a personal conveyance as defined by the American National Standards /Manual on Classification of Motor Vehicle Traffic Crashes.⁸ This definition includes people using personal conveyances, motorized and non motorized such as wheelchairs and scooters used by people with disabilities, and multiple micro mobility devices. In addition to neglecting all kinds of vulnerable road users beyond pedestrians, the sensors used for PAEB have been proven to not work at night,⁹ and concerningly, are not as accurate in sensing people with darker skinned, raising serious equity and safety concerns. A [2019 Study by the Georgia Institute of Technology](#) found that Automated Vehicles do not identify people with darker skin as well as they identify people with lighter skin.¹⁰ The study concludes, in part, that more data and research is necessary. Additionally, these sensors are not accurate at detecting people riding bikes, an important feature that the European Union will be including in their standards.

The **Lane Keeping Support** (LKS) systems keep vehicles centered in the lane, even when drivers need to shift to make room for a cyclist who is passing and may not be in a designated lane. This technology should be tested for how it impacts passing people on bikes at a safe distance.

The **blind spot detection** and **blind spot intervention** systems must detect people in wheelchairs, bicyclists, and scooter riders as well as pedestrians.

The ADAS systems NHTSA is now testing are very likely to be the building blocks for more automated vehicles. As NHTSA moves forward with testing of Advanced Driver Assistance Systems it must include tests of different races, ethnicities, and genders, as well as people using wheelchairs and other common mobility devices. Otherwise the outcome of these tests risk increasing the safety inequities in our transportation system.

Testing crash avoidance technology on its ability to detect and respond to vulnerable road users, especially those with darker skin, could avoid future disparities in vulnerable road user crashes and fatalities by encouraging car manufactures to test for people of all races and ethnicities with ADAS now. Vehicles that lack ADAS features that effectively protect people outside vehicles should not receive 5-star ratings.

NCAP Roadmap:

In the 10 year NCAP roadmap outlined in the request for comments, NHTSA stated it would release a plan for testing for crashworthiness (the damage done to a person in the event of crash) of hoods and

⁸ <https://www.transportation.gov/sites/dot.gov/files/docs/resources/government/traffic-records/304331/ansid16-2017.pdf>

⁹ <https://www.consumerreports.org/car-safety/automatic-emergency-braking-struggle-to-stop-for-pedestrians-a9924685047/>

¹⁰ <https://arxiv.org/pdf/1902.11097.pdf>

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bumpers this year. When testing for crashworthiness of pedestrians and vulnerable road users, NHTSA should be required to also use women-specific test mannequins, as opposed to solely using male mannequins. NHTSA's own research has shown that women are 17 percent more likely to die and 73 percent more likely to be severely injured in car crashes than men. Testing with women-specific test mannequins will help determine if vulnerable road users experience similar gender disparities, and help car manufacturers avoid that outcome.

The Bipartisan Infrastructure Law also requires NHTSA to consider the benefits of being consistent with other rating systems both within the United States and internationally. The EuroNCAP has been testing for cyclists since 2018, the Australasian New Car Assessment Program (ANCAP) tests for cyclists, as does the Insurance Institute for Highway Safety (IIHS) in the US. NHTSA's ten year plan does not include testing for cyclists until the 2025-2031 timeframe, showing the US will likely be a decade behind other countries.

Overall, it is crucial that new vehicles be strictly measured against the NCAP rating system in order for the system to be an effective consumer resource tool and make vulnerable populations safer on our streets. Data suggests that Americans keep their cars for nearly 12 years,¹¹ meaning vehicles built today will be on the road for at least a decade, if not longer. Any delay to including additional important changes to the NCAP means a generation of vehicles without these safety measures.

We appreciate the opportunity to provide comments on the NCAP, and encourage NHTSA to incorporate our suggestions. Thank you for your time and consideration.

Sincerely,

The MA Vision Zero Coalition

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https://news.ihsmarket.com/prviewer/release_only/slug/automotive-average-age-cars-and-light-trucks-us-rises-again-2019-118-years-ihs-market-