JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

May 12, 2020

Mr. James Clayton Owens, Acting Administrator
National Highway Traffic Safety Administration
1200 New Jersey Ave, SE
Washington, DC 20590-0001

Re: Comments on Notice of Proposed Rulemaking, National Highway Traffic Safety Administration (Docket no: NHTSA-2020-0014) RIN 2127-AM06

Dear Acting Administrator Owens:

I appreciate this opportunity to comment on the Notice of Proposed Rulemaking (NPRM) titled, Occupant Protection for Automated Driving Systems, NHTSA-2020-0014. I direct the Johns Hopkins Center for Injury Research and Policy ("the Center"), which is one of nine CDC-funded centers of excellence in injury research in the U.S. The Center has a long history of research and service in transportation safety, including recent work on automated driving systems.

We are optimistic about the safety potential of automated driving systems but share the view expressed in the NPRM that the prudent path forward is to ensure that vehicles equipped with such technology provide at least the level of crash protection for occupants as afforded by current regulations. These current regulations have proven effective in reducing crash deaths,[1] and new vehicles equipped with automated driving systems should not compromise on these crash protection measures.

The NPRM proposes an approach to prevent a potential safety compromise that could occur in vehicles designed to allow either conventional operation with a driver or automated operation without a human driver. In such dual-mode vehicles, it may be possible for children to occupy the driver position in a vehicle that was being operated by the automated driving system. This could compromise crash protection for a child since the driver seating position is not required to have crash protection that is appropriate for children, including protection from the dangers of air bag deployment for out-of-position occupants. The NPRM proposes that vehicles permitting dual-mode operation should not be capable of motion if a child is detected in the driver seating position. The Center agrees with this proposed precaution. Children are likely to be attracted to the novelty of sitting in a driver seating position, and this situation would pose a significant new crash risk. Preventing vehicle operation if a child occupies the driver seating position would be an effective means to ensure that this new danger to children is prevented.

The NPRM requests comments on whether NHTSA should pursue research to further explore how best to protect children who may be seated behind driving controls in dual-mode vehicles. We recommend that NHTSA conduct research on compliance measures that could ensure that a dual-mode vehicle is incapable of being operated with a child in the driver position.

We also recommend that NHTSA conduct research on the safety of passengers other than children who may occupy the driver seat of a dual-mode vehicle being operated without a human driver. While we agree that the safety of child passengers deserves special attention, we are concerned that occupants of any age in this seating position while the vehicle is in automated driving mode could be out of position and thereby not receive the same level of crash protection as provided for drivers. Research on the behavior of occupants of various ages and sizes when seated as passengers in the driver position will be important to ensure that current levels of crash protection are at least maintained in a dual-mode vehicle configuration.

Thank you for this opportunity to comment on plans for extending current crashworthiness standards to vehicles equipped with automated driving systems. We would be pleased to discuss our views if this would be helpful for regulatory or research planning, and can be reached at the contact information below.

Sincerely,

Andrea C. Gielen, ScD, ScM
Director, Johns Hopkins Center for Injury Research and Policy
Agielen1@jhu.edu

[1] Kahane, C.J., (2006). An evaluation of the 1998-1999 redesign of frontal air bags. National highway traffic safety administration. DOTHS 810 685. August 2006.