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DOT HS 813 311

June 2022

# Research on Older Adults' Mobility: 2021 Meeting Summary Report

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16. Abstract

A meeting to spotlight research on older adults' mobility – dubbed ROAM – was held virtually due to COVID-19 on January 11, 2021. Under NHTSA sponsorship, this meeting provided a multi-disciplinary forum oriented toward interested parties sharing news of completed research, reporting on the progress of ongoing studies, and highlighting priorities for future work. The meeting of about 70 participants included physicians and other medical professionals, occupational therapists and certified driver rehabilitation specialists, State DMV officials, mobility service provider specialists, public health practitioners, automated driving system /advanced driver assistance system experts, and other academic and private sector research professionals. ROAM 2021 included a general session and three breakout sessions devoted to medical fitness-to-drive and licensing policy, driving automation and older adults, and transportation alternatives. The meeting supported equity in traffic safety as it addressed disparities faced by older adults.

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# Introduction

This report highlights key points in the presentations and discussion during a one-day *Research on Older Adults' Mobility* (ROAM) meeting of former members and friends of the now-dissolved Transportation Research Board (TRB) *Committee on Safe Mobility of Older Persons* (ANB60), plus others interested in this research. This was a virtual meeting scheduled to coincide with the TRB Annual Meeting in January 2021. ROAM attendees presented findings from recently concluded projects, ongoing research, and planned projects related to older adults' mobility. The ROAM 2021 meeting included an approximately 2-hour general session followed by three 1-hour breakout sessions. The meeting agenda is presented in Appendix A. The meeting supported equity in traffic safety research by discussing disparities in safe mobility options for older adults and people with medical conditions and explored ways to enhance their safe mobility.

## General Session

The general session was devoted to news of broad interest, research opportunities, attendee comments and input about their own research activities, and upcoming conferences. The group discussed mid-year meeting options in coordination with a new TRB committee, ACH60, Vehicle User Education, Training, and Licensing. The general session opened with a welcome message from Dr. Loren Staplin, the session moderator, who explained that the meeting was held virtually due to the ongoing COVID-19 pandemic. He provided an overview of the virtual meeting platform, and he reiterated that the purpose of this meeting was to provide an avenue for those interested in collaborating for the benefit of older adults' mobility research. The meeting gave these professionals more time to engage productively about ongoing research and ideas for new directions than the ACH60 subcommittee meeting would allow.

The platform was then passed to Dr. Kathy Sifrit, representative from the National Highway Traffic Safety Administration and the contract manager of this initiative. She noted that NHTSA's goal for this group was to provide a forum to discuss potential, planned, ongoing, and recently completed projects, maintaining a structure similar to that of the former ANB60 committee and its subcommittees while complementing the new TRB older driver subcommittee under ACH60. Dr. Lesley Ross, the chair of the newly formed ACH60 subcommittee, then gave an update on efforts for prior ANB60 committee members to maintain a presence at TRB under the ACH60 Standing Committee on Vehicle User Education, Training, and Licensing, pointing out that the new committee structure will support many of the former ANB60 committee activities, such as the newsletter and opportunities for mid-year (summer) meetings.

Next, attendees introduced themselves and briefly commented on their current research interests and activities as they related to older adults' mobility. Those participating from time zones other than Washington, DC, spoke first, followed by members of the Government, members of nonprofits and other organizations, and finally the remaining attendees in alphabetical order by last name. A speaker schedule was shown in a chat window so attendees knew when to expect their turns. Some areas of interest among attendees were general and focused on older adults' overall driving performance and safety, while others were interested in learning about issues related to older adults' mobility and how it can be applied to additional research fields such as the interaction between older road users and vulnerable road users like motorcyclists, pedestrians, and bicyclists.

Medical fitness to drive emerged as a major theme among attendees' current research activities and interests. Research in this category included the political nature of medical advisory boards and questions surrounding older driver reassessment. Many attendees stressed the importance of bringing medical and health care professionals into the licensing conversation rather than relying on licensing agencies alone to identify at-risk older drivers. Attendees discussed education and training for medical care professionals regarding older adults' fitness to drive, and they noted increased awareness of older driver safety issues in this community. Some attendees emphasized driver rehabilitation for older drivers rather than license revocation, with professionals identifying risk and directing drivers to appropriate intervention (e.g., vehicle modification); others pointed out that "access" refers not only to buildings but also to mobility, information, and services. Other research related to medical fitness to drive included public perception, policy, marijuana use, glaucoma, and vision and processing visual information. Researchers highlighted the role of cognitive function in fitness to drive, with interest in this area concerning overall functional ability and safety, the relationship between functional capacity and medical

conditions, pre-MCI (mild cognitive impairment), dementia, and the potential safety gains associated with advanced driver assistance systems (ADAS) and Automated Driving Systems (ADS) for older adults with cognitive impairment. This theme was highlighted in Breakout Session 1: *Perspectives on Medical Fitness to Drive and Licensing Policies*.

Discussion regarding the role of ADAS and ADS in supporting older adult's mobility included older adults' perceptions of and ability to use advanced vehicle technologies. Attendees focused on how older drivers would interact with the technology, which safety features were most important to older drivers, and which were most likely to reduce crash risk. Attendees also were interested in older adults' transition to ADS-equipped vehicles, how education might move their attitudes toward this technology, and what impact ADS-equipped vehicles might have on older adults' mobility. This area of research was expanded upon in Breakout Session 2: *The New Frontier – Driving Automation and Older Adults*.

Many attendees were interested in transportation options, with emphasis on barriers and facilitators of, approaches to, and the availability and accessibility of these services for older adults. Attendees discussed challenges and access specific to transportation options in rural communities. Attendees raised concern over how the COVID-19 pandemic affected older adults' use of transportation options and their perceptions of the effectiveness of COVID-19 countermeasures in ride-share services, as well as their perceptions of ride-sharing overall. *Alternative Transportation* was the focus of Breakout Session 3.

Several attendees mentioned research on older adults' overall mobility to support community engagement. Researchers were interested in the predictors of older adults' transportation mode selection and satisfaction with transportation options, as well as their reliance on and relationship with mobility, and their general driving habits. Attendees were also interested in how technology could enhance mobility in this population.

Information and services was another popular topic among meeting attendees. Research focused on the access and barriers to information and services, the education needs for older road users (e.g., road safety and awareness, available services), community outreach for accessibility, and providing safety modules online and providing virtual services. Some attendees were involved in research that informed infrastructure needs based on older adults' safety, incorporating human factors into road design and investigating how older road users interact with the road environment, road safety improvements, and planning and policy issues for this cohort.

Attendees discussed exploring novel data sources including cognitive screening data collected by the Maryland Motor Vehicle Administration, sources linking crash and hospital data, and a mobile device to track driving behavior. Other areas of research on older road users included the impact of the COVID-19 pandemic on older adults' mobility and driving skills, media portrayal of older adults, transportation's role in age-friendly universities and communities, driving performance assessment strategies and scoring, distracted driving, drowsy driving, population demographics, and driving simulator research.

Finally, attendees mentioned several resources during the general session that may be of interest to the older adult driving safety and mobility research community:

- Centers for Disease Control and Prevention (CDC): MyMobility Plan – A resource for older adults to plan to help stay safe, mobile, and independent. www.cdc.gov/transportationsafety/older_adult_drivers/mymobility/index.html

- AAA Foundation for Traffic Safety: Evidence-based Behavior Change Campaigns to Improve Traffic Safety Toolkit - A hands-on resource designed for traffic safety practitioners to develop behavior change campaigns that are both evidence-based and effective. https://aaafoundation.org/evidence-based-behavior-change-campaigns-to-improve-traffic-safety-toolkit/

- American Occupational Therapy Association (AOTA), AAA, AARP: CarFit Virtual Workshops and Focus Sessions - An in-depth look at several key aspects involved in getting a proper fit in your vehicle, and a small group discussion with CarFit volunteers designed to explore common challenges to making adjustments and finding a safe and comfortable fit in the car. CarFit Virtual Workshops and Focus Sessions were held in January 2022.

- Clearinghouse for Older Road User Safety (ChORUS) – A centralized, user-friendly, and dynamic source of information pertaining to highway safety for aging drivers, passengers, pedestrians, and cyclists. www.roadsafeseniors.org/

- East Carolina University: Plan for the Road Ahead – An interactive website where older adults can plan for driving retirement. https://planfortheroadahead.com

- ITNAmerica: Rides in Sight – A comprehensive, up-to-date database of senior transportation options nationwide. https://ridesinsight.org

- National Safety Council (NSC) and University of Iowa: My Car Does What – A national campaign to help educate drivers on new vehicle safety technologies designed to help prevent crashes. https://mycardoeswhat.org

- University of Florida: Fitness-to-Drive Screening Measure Online – A web-based tool for caregivers and family members of older drivers and clinicians to identify at-risk older drivers. http://fitnesstodrive.phhp.ufl.edu/us/

# Breakout Session 1: Perspectives on Medical Fitness to Drive and Licensing Policies

Dr. Gina Pervall, chief of the Medical Advisory Board (MAB) with the Maryland Department of Transportation, Motor Vehicle Administration, moderated this breakout session. She introduced the session, noting the importance of driver fitness as the number of older adult drivers increases and as more drivers now remain functionally intact as they age. She identified this session as a venue for discussion that could lead to revisions, updates, or development of additional policies or procedures. Both presenters in this session -- Dr. David B. Carr and Dr. Desmond O'Neill -- were actively involved in research on older drivers and safe mobility, with hundreds of peer-reviewed publications.

## First Presentation

**Speaker.** Dr. David B. Carr, clinical director, Division of Geriatrics and Nutritional Science and medical director, the Rehabilitation Institute of St. Louis, Washington University School of Medicine, St. Louis, MO.

**Title.** *Evidenced-based Medicine Review of the Impact of Driver's License Renewal Policies and Fitness to Drive Evaluations on Crash Risk in Older Adults*

**Summary.** This presentation reviewed publications in peer-review journals from 2000 onward that described the effects of driver license renewal policies on the crash risk of older adults. The studies were presented in three sections, license renewal, mandatory reporting, and voluntary reporting. Countries, States, and provinces have a variety of policies and procedures to screen for medically impaired drivers and at-risk older adults. Most of these practices have failed to consistently demonstrate safety benefits, while possibly promoting de-licensing of older adults, thereby limiting their autonomy. This discussion reviewed the evidence on the impact of fitness to drive referrals in licensing settings on crash risk. Studies showed that in-person license renewal at age 85 and older was associated with safety benefits, as was vision screening. Studies on mandatory physician reporting showed mixed results. Studies with voluntary reporting were scarce, but one study suggested a crash reduction accomplished by delicensing older drivers. The research literature provided limited information regarding non-fatal crashes, mandatory versus voluntary reporting laws with data on referral source, the presence of an active or passive medical advisory board, and the specific methodology of fitness-to-drive evaluations in the licensing setting.

**Discussion.** One attendee commented that road tests typically only test operational and tactical levels - not strategic level skills. This may seem surprising, because processing speed is likely to affect strategic performance first; but it takes longer, is more difficult to implement a consistent test protocol, and may introduce unacceptable risk to present strategic level challenges during an on-road test. Only the most impaired (regardless of age) will be required to take Department of Motor Vehicle (DMV) tests.

Carr agreed and noted that this was demonstrated in a study on a group of drivers referred in Missouri. The drivers were unable to pass the performance-based road tests even after multiple attempts. Pervall speculated that a driver who is less likely to pass a road test may not appear at in-person renewal. Carr elaborated that while the research reviewed could not prove a benefit of in-person renewal, it suggested that if drivers were required to renew in person they may be

screened and identified at that point. However, he reiterated that some drivers might decide not to attempt to renew their license if it involved an in-person process.

Further discussion of Carr's presentation centered on mandatory reporting of loss of consciousness in several States (California, Oregon, Pennsylvania) and whether there would be a benefit of expanding such reporting to cognitive and physical impairments as well. Carr cautioned a distinction between the acute loss of consciousness versus a chronic disease that could be progressive, as the data show acute loss of consciousness while driving due to epilepsy or diabetes is rare.

## Second Presentation

**Speaker.** Dr. Desmond O'Neill, professor of medical gerontology, Trinity College, Institute of Neurosciences, Dublin, Ireland

**Title.** *Update on International Guidelines on Medical Fitness-to-Drive*

**Summary.** As asserted by O'Neill, much of the methodology for ascertaining medical fitness to drive for the general population has arisen from gerontology and geriatric medicine due to a mistaken belief that older drivers have an increased crash risk. Arising from this body of literature, the evidence base for medical fitness to drive is slender, and a number of international initiatives are working to review and further develop guidelines on medical fitness to drive. O'Neill presented a recent evidence synthesis from CIECA, the International Commission for Driver Testing (www.cieca.eu), focusing on the European Union's (EU) directives on medical fitness to drive, as well as from an international group overviewing literature syntheses on a range of conditions. Emphasizing themes from the general session, O'Neill said that medical fitness to drive should not be left solely to the licensing agencies, but he indicated that traffic medicine be mainstreamed into the healthcare profession, including the development of effective physician education and training in medical fitness to drive. Other identified research needs were a quantification of the benefits of adequate transportation, alternative transportation methods and how using them earlier in life may be important, and exploring data linkages between health care records and crash data.

A discussion of the European model followed. Beginning in 2006 the EU instituted coordinated directives on various medical conditions (i.e., diabetes, epilepsy, vision, sleep apnea, and cardiovascular conditions) that were underpinned by relevant expert reviews. A CIECA[1] assessment found that across the European Union, medical certification was largely provided by a person's doctor or specialist, except for Spain, where each driver undergoes a medical, psychological, and optometric examination as part of license renewal. In the rest of the EU, each case is processed by a licensing agency, equivalent to a DMV. Recommended new directives included rehabilitative (rather than punitive) measures for alcohol and substance abuse and a greater focus on neurodevelopmental disorders such as attention deficit hyperactivity disorder and autism spectrum disorder, as well as the development of an EU medical advisory committee and a clearinghouse of information and updates in emerging knowledge concerning medical fitness to drive. Finally, a broad literature review underscored the significance of alcohol use

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[1] Collision Industry Electronic Commerce Association. From its website: "CIECA develops electronic standards, codes[,] and standard messages and provides implementation guides to make the industry more efficient. …. CIECA membership is open to the collision repair and property restoration industries, and related segments: repairers, insurers, OEMs, parts and material suppliers, information and software providers, car rental companies, towing companies, salvage and recycled parts providers, auto glass replacement facilities, subrogation providers, general service providers[,] and property restoration providers."

disorder as a risk for motor vehicle crashes, advocating increased attention on ensuring its accurate diagnosis and treatment.

**Discussion.** Session leader Pervall, as a clinician, emphasized the need for a curriculum for students, interns, and residents on driving assessments, concerns, and risks. She noted that many healthcare professionals have limited knowledge of the risks of driving for older adults impaired by factors such as functional loss and polypharmacy. O'Neill said that a range of studies show that doctors support continued driving through rehabilitation and appropriate medication use that takes a more therapeutic approach to medical fitness to drive. Pervall then asked about the process for reporting a medical condition. O'Neill replied that the process varied across the EU, with little mandatory reporting, though most countries in Europe have a licensing or insurance stricture for *not* reporting a condition to the licensing authority and insurance company.

Comments from the general session were cited indicating that the prevailing focus has shifted from testing and identifying risk factors to a broader perspective on mobility. O'Neill agreed that this shift is encouraging and highlighted the need to approach the transition out of driving with sensitivity. He encouraged working with advocacy groups to foster a balance between safe driving and an early transition to multi-modality. An attendee noted that this shift can be aided by discussions about driving proactively by identifying and directing people to appropriate services, rather than framing conversations about driving in a negative light. An attendee from Great Britain noted that it offers a fitness to drive assessment as an alternative to prosecution for older drivers involved in minor crashes. This suggests a benefit of refresher training. Pervall likened this to the MDOT's Driver Improvement Program, which is required based on offenses. O'Neill affirmed that identifying at-risk drivers based on violations and crashes is a more refined approach than focusing on general older driver refresher courses. Carr agreed that targeting those who are functionally impaired, rather than focusing resources on screening based on driver age is sensible, but he advised caution when deciding *who* is targeted for evaluation by focusing solely on driving history, which could discount evidence of mobility issues (e.g., a person observed to be unable to walk without assistance when appearing for license renewal).

# Breakout Session 2: The New Frontier: Driving Automation and Older Adults

Dr. Jessica Cicchino, vice president, research, Insurance Institute for Highway Safety, moderated this breakout session. Cicchino provided an overview of the discourse on ADAS technologies, including questions about how older drivers are using them now and how these technologies may affect older drivers in the future, based on drivers' perceptions of these technologies and their potential effects on mobility and driver performance. She provided background information on the levels of technologies discussed in this session and introduced the session speakers.

## First Presentation

**Speaker**. Dr. Jon Antin, director, Center for Vulnerable Road User Safety, Virginia Tech Transportation Institute.

**Title.** *Older Drivers Using ADAS: A Naturalistic Pilot Study*

**Summary.** This study examined whether driver exposure to ADAS such as adaptive cruise control (ACC) can improve the mobility and driving performance of older adults. Data collected in the current pilot naturalistic driving study (NDS), which included ADAS-equipped vehicles, were compared with data collected in the SHRP2 NDS, which included no ADAS-equipped vehicles. Analyses showed no significant difference in mobility between drivers with and without ADAS-equipped vehicles. Driving performance results indicated that driving ADAS-equipped vehicles had mixed effects on older drivers' performance. Using ACC may help seniors reduce the frequency and level of higher g-force accelerations. However, drivers in these vehicles exhibited poorer lateral control. Ongoing work with this dataset includes using object detection methods to characterize ADAS use objectively (rather than through self-report) on a trip-by-trip basis.

**Discussion.** An attendee asked if there was evidence the ADAS system posed a distraction. Antin responded that there did not appear to be, though this was not a part of the study. Another attendee asked if the participants received training or practice with the ADAS features before data were collected. Antin confirmed that, yes, participants were trained on all the features in the vehicle, and specifically on the various ADAS technologies under investigation in the study. An attendee pointed out that proper use of ADAS depends on driver awareness, knowledge of how the system works, and the driver's role in using the system. She asked if there was language that initiatives such as CarFit, where trained professionals explain a vehicle's features to the vehicle owner, could help older adults understand how to get the intended benefit from ADAS features. Antin noted that such language should be an important part of such activities going forward. Dr. Sherrilene Classen highlighted that some original equipment manufacturers (OEMs) use different terms for the same types of technologies, which presents a linguistic challenge. Antin added that OEMs implement these technologies in subtly different ways, which could lead to unintended consequences such as increases in driver distraction, lack of vigilance, and misunderstanding the capabilities of the technology, especially when drivers are moving between different vehicles. Antin also noted the possibility of *positive* unintended consequences such as the reduction of fatigue, which could facilitate longer trips and increase mobility among the older driver cohort.

## Second Presentation

**Speaker**. Dr. Sherrilene Classen, professor and chair, Department of Occupational Therapy, University of Florida.

**Title.** *Older Adults' Perceptions of Level 4 Automated Vehicle Technology*

**Summary.** People 65 and older are over-represented in multiple-vehicle crashes. ADS-equipped vehicles may hold safety benefits for older drivers if they adopt this emerging technology. Therefore, this study used a randomized, crossover design with pre- and post-exposure surveys, to quantify the perceptions of older drivers who were exposed to a simulated ADS-equipped vehicle, and to riding in a highly automated shuttle. A final analysis (N=106) compared users' perceptions before and after exposure to the simulated ADS and automated shuttle. Early findings indicate that exposure to AV technology may positively affect older adults' perceptions of this emerging technology—specifically related to safety, trust, and intention to use. As such, exposure to AV technology may promote older adults' acceptance and adoption of AVs. Classen noted barriers to implementation such as the shuttle not being able to detect lane markings during rainy weather and other concerns such cyber security and ethical concerns surrounding optimal decision-making for safety benefits for inhabitants and other motorists.

**Discussion.** In response to a question on the implications for teaching people about new vehicle technology and ADS-equipped vehicles, Classen said the importance of drivers having conceptual knowledge of the technology barriers like disuse, misuse, abuse, and negative transfer of knowledge. She drew attention to the fact that user manuals for ADAS systems do not use accessible language, so it is important to educate the public on exactly what these technologies can and cannot do so they have realistic expectations. Cicchino asked audience member Alycia Bayne of the National Opinion Research Center (NORC) at the University of Chicago to speak to their current research on older adult perceptions of ADS-equipped vehicles. This research asked a sample of older adults if they would be willing to use an AV, specifically with respect to ride-sharing, as well as their attitudes and beliefs regrading AVs. NORC's research, consistent with a body of literature on this subject, showed that older adults were reluctant overall to use AVs.

# Breakout Session 3: Alternative Transportation

Katherine Freund, president and executive director, ITNAmerica, moderated this session. Freund said that, currently, the two big influencers on (older adult) transportation are technology and the pandemic, with the former helping to move transportation options for older adults forward, and the latter slowing it down and changing it. With the pandemic, people are more isolated and moving away from higher density areas. Mass transit use is down, and land use patterns are changing with future use patterns uncertain. Freund noted that a major technological change has been the introduction of ride-sharing services such as Uber and Lyft. She then introduced the research presentations to follow in this session.

## First Presentation

**Speaker**. Alycia Bayne, principal research scientist, National Opinion Research Center.

**Title.** *Ride Share Service Business Models: Implications for Older Adults*

**Summary.** Bayne shared findings from the white paper *Environmental Scan of Ride Share Services Available for Older Adults*, which is based on secondary data analysis from two transportation databases (ITNAmerica's *Rides in Sight* and ITN *Rides*), a targeted review of literature, and key informant interviews with representatives from ride share services and other stakeholders. This study was conducted by NORC at the University of Chicago and ITNAmerica, with funding from the CDC. The study's purpose was to describe the rideshare services currently available to older adults and identify the types of services and the barriers and facilitators to their use. Bayne presented the characteristics of older drivers and then an overview of for-profit ride-share services whose representatives describe their businesses as technology companies with a mission to provide reliable and affordable transportation to improve people's lives. The for-profit ride-share services state that they are looking into new ways to better serve older adults, but Bayne noted this is limited by driver status as independent contractors, such that employers are not able to require them to offer a level of assistance to customers that many older adults need.

Bayne then gave an overview of nonprofit ride-share services, whose missions include empowering older adults to maintain independence and enhance health and quality of life. Many nonprofit services train volunteer drivers to assist older adults (i.e., "door-through-door"), and offer services for free. Bayne noted that among the limitations to the volunteer driver business model is an insufficient number of volunteers, resulting in the need to ration the number of rides given to older adults, while the on-demand nature of for-profit ride-share services do not have this limitation. Bayne noted research opportunities include the impact of ride-share service business models on how people use these services and users' perceptions of the services, the differences based on market served (urban, suburban, rural), and the differences in the level of service offered by businesses relying on paid hourly staff as opposed to independent contractors, or a combination of hourly and volunteer staff.

**Discussion.** Staplin asked about the state of the current labor challenge, particularly in California, where ride-share drivers are defined as independent contractors rather than employees. Bayne replied this is currently not settled; there will likely be variability across State legislative rulings on this matter. She also noted interest in what the U.S. Department of Labor will put into effect with a change in the administration. Freund noted that, due to the nature of the for-profit business model, it is difficult for ride-share businesses to survive in lower density

areas, which may lead to different ride-share services available to different populations. She emphasized the role ADS-equipped vehicles and volunteer services may play in the future, particularly the next five years. Bayne reiterated that the pandemic may also contribute substantially to changes in the transportation needs of and services for older adults, and Freund suggested that the increase in virtual technologies may create positive changes for community transportation and nonprofit services.

An attendee asked if the ITN *Rides* data were public and if travel trends of older adults were available. Freund replied that the data are not public, but ITNAmerica is happy to share published data. She said that data mining requests are considered on a case-by-case basis and would entail a separate effort. And finally, an attendee asked if transportation network companies (TNCs) are willing to share their data regarding drivers or users. Freund explained that, to her knowledge, they were not often willing to share data, and that their data are mostly business-related, focused on volumes rather than trip or customer characteristics, and it wouldn't likely have the granularity of interest to this group.

## Second Presentation

**Speaker.** Jana Lynott, senior strategic policy advisor, AARP Public Policy Institute.

**Titles.** *Volunteer Driver Insurance in the Age of Ridehailing and Modernizing Demand Responsive Transportation in the Age of New Mobility and Universal Mobility as a Service*

**Summary.** Lynott discussed barriers to both volunteerism and the coordination of human services transportation. She focused on volunteer driver insurance in the age of ridehailing (ride-sharing) and the modernization of demand-responsive transportation using data standards. Lynott noted an anecdotal increase in reports of volunteer drivers having difficulties with insurance, which coincided with the rise in for-profit ride-share services such as Uber and Lyft. Many insurance companies now have policies for ride-share drivers, but those policies do not address volunteer drivers. Her research included a survey of applicable State laws, interviews with people in the insurance industry, and formal solicitation to insurance company CEOs for clarification of policy impacts on volunteer drivers.

Her research found that just two States differentiated between volunteer drivers and delivery services and that there were no TNC laws that addressed volunteer drivers explicitly. Cold calls to personal policy insurance agents revealed no definitive answers and much variability in the way a claim would be processed if covered. Inquiries to insurance company CEOs found that most companies would cover volunteer drivers barring any other circumstances of a specific claim, issues of State law regarding conditions and exclusions, and depending on whether the number of miles they were driving as a result of being a volunteer driver was consistent with their coverage. Her inquiries revealed a disconnect between what was understood formally by the heads of these companies as to how they would treat volunteer drivers, and what insurance agents were telling customers. Recommendations for State legislators included insurance policy protections for volunteer drivers, clearly defined TNC laws that distinguish between volunteer drivers and for-hire service providers, and the exclusion of volunteer-provided transportation programs from for-hire transportation and livery laws. Recommendations for the insurance industry included well-defined and consistently applied terminology associated with TNCs and volunteer drivers, as well as increased workforce education. Finally, recommendations for nonprofits included purchasing adequate automobile liability insurance for volunteer drivers,

establishing routine safety protocols, and properly screening drivers and requiring them to complete a training course to protect all parties from liability.

**Discussion.** An attendee asked about the intersection between medical transport (i.e., for dialysis) and paratransit and funding barriers (profit versus nonprofit), particularly in relation to insurance. Freund replied that one difficulty is that nonprofits tend to be local, individualized efforts, so it is difficult for a large insurance provider to connect with these smaller organizations as opposed to a larger organization with an infrastructure. Willing parties can bridge the gap to connect with one another. The attendee highlighted that this research may contribute to connecting with the healthcare sector. Another attendee asked if there was new information about volunteer recruitment becoming more difficult as the insurance issue increases in frequency. Lynott said that as volunteers or potential volunteers are having difficulty with insurance, recruitment faces a real barrier. She hopes the research presented here can provide evidence that is helpful not only to drivers but also to insurance agents on what coverage their company CEOs say is available for volunteer drivers. However, its relevancy is time-limited, and changes in State-level legislation are also necessary to protect volunteer drivers.

## Summary and Conclusions

A planned in-person meeting to spotlight research on older adults' mobility was held virtually due to COVID-19 on January 11, 2021. Under NHTSA sponsorship, this meeting provided a multi-disciplinary forum oriented toward prior members and friends of TRB's now-dissolved Committee on Safe Mobility of Older Persons (ANB60). ROAM provided a venue where interested parties could share news of completed research, report on the progress of ongoing studies, and highlight priorities for future work, without a registration fee. About 70 meeting participants included physicians and other medical professionals, occupational therapists and certified driver rehabilitation specialists, State DMV officials, mobility service provider specialists, public health practitioners, ADS/ADAS experts, and other academic and private sector research professionals. ROAM 2021 included a general session and three breakout sessions devoted to medical fitness to drive and licensing policy, driving automation and older adults, and alternative transportation.

Feedback from meeting participants indicated that they found it helpful that ROAM was coordinated with the TRB Annual Meeting with an agenda that complemented TRB offerings. Attendees liked that there was no cost to participate, and some preferred virtual participation and would have attended virtually even if an in-person option had been available. Priority topics for future meetings included an emphasis on translating research results to States as well as addressing transportation equity concerns, such as the need for rural as well as urban mobility solutions and potential unintended consequences of automation whereby those older adults with lower incomes are largely excluded from the anticipated safety benefits of this technology.

**Appendix A: ROAM 2021 Agenda**

# ROAM 2021 Agenda
January 11, 2021 (all times EST [UTC minus 5 hours])

**10:00 a.m. – 11:30 (est.) General Session**
- Welcome: Loren Staplin, PhD, *TransAnalytics*
- ROAM sponsor comments: Kathy J. Sifrit, PhD, *National Highway Traffic Safety Administration*
- TRB liaison comments: Lesley Ross, PhD, *Associate Professor, Clemson University*
- Roundtable introductions with opportunity for <u>brief comments</u> on current research interests/ activities bearing on safe mobility for older persons, afforded to all meeting participants

**12:00 p.m. – 12:50 p.m. Breakout Session 1**
**Perspectives on Medical Fitness to Drive and Licensing Policy**

Session Leader: Gina C. Pervall, MD, *Chief, Medical Advisory Board, Maryland MVA*
David B. Carr, MD: *Evidenced-Based Medicine Review of the Impact of Driver License Renewal Policies and Fitness to Drive Evaluations on Crash Risk in Older Adults*
Desmond J. O'Neill, MD: *Update on International Guidelines on Medical Fitness-to-Drive*

Session Q & A period

**12:50 p.m. – 1:00 p.m. Break**

**1:00 p.m. – 1:50 p.m. Breakout Session 2**
**The New Frontier: Driving Automation and Older Adults**

Session Leader: Jessica Cicchino, PhD, *Vice President*, *Research*, *Insurance Institute for Highway Safety*
Sherrilene Classen, PhD: *Older Adults' Perceptions of Level 4 Automated Vehicle Technology*
Jon Anton, PhD: *Older Drivers Using ADAS – A Naturalistic Pilot Study*

Session Q & A period

**1:50 p.m. – 2:00 p.m. Break**

**2:00 p.m. – 2:50 p.m. Breakout Session 3**
**Alternative Transportation for Older Adults**

Session Leader: Katherine Freund, MA, *President & Executive Director*, ITN*America*
Jana Lynott, MA: *Barriers to Volunteerism and the Coordination of Human Services Transportation*
Alycia Bayne, MPA: *Ride Share Services' Business Models and Implications for Meeting Older Adults' Transportation Needs*

Session Q & A period

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U.S. Department
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