Safe Mobility of Older Persons

The National Academies
2101 Constitution Ave NW
Washington, DC 20418

Transportation Research Board
Committee ANB60
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Dear Colleagues,

TRB 2008 will mark the 20th year since the TRB Report 218 Transportation for an Aging Society was published. There were many recommendations from that report and it was the stimulus for much of the research that has been done on the safe mobility of older persons. These twenty years have seen lots of things accomplished that have improved the safety and mobility of older people. In conjunction with other committees that address older person transportation issues, we will have two sessions devoted to what has been accomplished since the 218 report. This issue is full of information regarding the call for papers and upcoming meetings for TRB.. It provides an extensive update on research and programs being developed and implemented around the world. We all owe our thanks once again to Kent Milton and John Eberhard as well as our new editor Jeff Finn for pulling all of this information together for us, and keeping us up to date on current meetings and projects through the newsletter. Thanks also to Rick Pain for his assistance in organizing the TRB program, and to everyone who will help in reviewing the paper submissions

As many of you know, Kent Milton had open heart surgery mid-May. He is now home continuing to recover. His wife Barbara reports that he can now walk upstairs and is able to work on his computer. Their address is 6936 Toluca Lane, Citrus Heights, CA, 95621 for those of you who have asked where to send a card. We have gained an even greater appreciation for all Kent does in producing this newsletter as John and I have been working to coordinate all the incoming information and try to fill his shoes temporarily.

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In addition to the call for papers, the committee needs your help in developing the agenda for the Committee meeting. If you have an item for the agenda please e-mail me at kball@uab.edu. Also, please remember to If go to the TRB website to register early (www.trb.org).

Best regards,
Karlene

Committee on Safe Mobility of Older Persons Newsletter
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For an electronic version of the newsletter, go to:
http://www.crag.uab.edu/safemobility.

Upcoming Conferences and Call for Papers

TRB 87th Annual Meeting Washington, D.C., January 13–17, 2008.

Plan now to attend the TRB 87th Annual Meeting, an information-packed program that will attract approximately 10,000 transportation professionals from around the world to Washington, D.C., January 13–17, 2008.

The TRB Annual Meeting program covers all transportation modes, with more than 3,000 presentations in nearly 600 sessions addressing topics of interest to all attendees—policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions. The spotlight theme for 2008 is "Partnerships for Progress in Transportation".

View Call for Papers

Register early for the Annual Meeting. The 2008 Announcement (containing general workshop, meeting registration, and hotel reservation information) will be available by mid-September. The Interactive Preliminary Program contains full session and individual presentation information, and registration enables access to session room location. You will be able to use the Interactive Preliminary Program on the website in mid-November to conduct searches by session title, paper title, keywords, author, and subject area to plan your personalized itinerary which includes meeting room names.

The TRB 87th Annual Meeting Paper Submission and Review site opens on June 4, 2007. TRB has implemented dual paper submittal deadlines for the 2008 Annual meeting: Papers in non-PDF formats must be submitted by midnight of July 27, 2007; and Papers in PDF format must be submitted by midnight of August 1, 2007. (see Participant Guides for details). Authors are strongly encouraged to convert their paper to PDF format prior to submission to the TRB website to take advantage of the later deadline and to facilitate quicker processing of their paper. TRB also reminds authors that the best way to avoid last minute complications is to submit their paper well before these deadlines.

For new attendees, TRB has assembled an informational brochure to help you get the most out of the TRB Annual Meeting.

Recent Publications

Wood, J.M., Chaparro, A., Carberry, T, and Hickson, L. How Multitasking Interacts with Visual Impairment and Age on Measures of Driving Performance. Transportation Research Record: Journal of the Transportation Research Board, No. 1980, Transportation Research Board of the National Academies, Washington, D.C., 2006, pp.65-69

Ulfarsson, G. F., Kim, S., and Lentz, E.T. Factors Affecting Common Vehicle-to-Vehicle Collision Types: Road Safety Priorities in an Aging Society. Transportation Research Record: Journal of the Transportation Research Board, No. 1980, Transportation Research Board of the National Academies, Washington, D.C., 2006, pp.70-78

TRANSED 2007 Program

The 11th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED) will be held on June 18-22, 2007 In Montréal, Québec, Canada**.** It is h*osted by Transport Canada under the auspices of the United States Transportation Research Board.*

The TRANSED 2007 technical and social programs start on Sunday, June 17, and end on Friday, June 22, 2007..

PRE-CONFERENCE TUTORIALS
Monday, June 18, 2007, from 9:00 a.m. to 12:00 p.m. These pre-conference sessions are open to all registered delegates. The tutorials are:
Tutorial 1 Accessible Transport Strategies to Address Problems Unique to Developing Countries

Tutorial 2 Screening Innovations for Drivers with Mild Cognitive Impairment and Mild Dementia:

Tutorial 3
Transportation Options that Promote Independent Living

Tutorial 4
Improving Access to Taxis

Tutorial 5
Designing Accessible Public Transport and Pedestrian Infrastructure

TECHNICAL SESSIONS

Included are three days of technical sessions, a two-day public exhibition showcasing innovations in accessible transportation, technical visits of local accessible transportation facilities and installations, and a variety of social activities highlighting the cultural diversity and historic beauty of Montréal. The TRANSED 2007 technical sessions will feature plenary, panel and roundtable sessions, and an extensive and dynamic poster session

TECHNICAL TOURS

The TRANSED 2007 Program includes one and a half days of technical tours to accessible transportation facilities in the Montréal area. These tours will take place in the afternoon on Monday, June 18, 2007, and all day Friday, June 22, 2007. Tours are divided into two categories: **Accessible Transportation Operations** and **Accessible Transportation Manufacturing**.

REGISTRATION AND ACCOMMODATION

How to Register
The preferred method to register is to complete the secure online registration form:
http://www.transe2007comotred-abstractsresumes.com/public/RegFull.asp
If unable to register online, download the PDF version at
http://www.tc.gc.ca/pol/en/transed2007/pdf/registration.pdf
and send it with full payment to: The Registration Secretariat – Transport Canada Intergovernmental Affairs and Accessibility, TRANSED 2007
Place de Ville, Tower C, 330 Sparks Street
Ottawa, Ontario, K1A 0N5, Canada
Attention: Hélène Parent (ACCF)
E-mail: transed-registration@jpdl.com
Phone: 1-800-665-6478 (Canada only) or +1-613-941-0980
TTY: 1-800-823-3823 (Canada only) or +1-613-998-5368
Fax: +1-613-991-6422
Only registration forms accompanied by full payment will be processed.

Accommodation
Delegates are encouraged to book rooms early as the conference is during Montréal's high tourist season.
• If you prefer a hotel room from one of the official conference hotels, you need to complete the Hotel Section of the online registration form (http://www.transed2007comotred-abstractsresumes.com/public/RegFull.asp).
• If you wish to reserve a different room for your attendant, you will be able to do so when registering this person.
• Your hotel confirmation number will be sent to you directly by the hotel before the conference.
We have arranged special rates at two hotels in downtown Montréal. The guarantee

required, by credit card only, is equivalent to the room rate for a one-night stay. Room rates are in Canadian dollars and are subject to federal and provincial taxes (6% GST, 7.5% TVQ), plus a room tax of 3% per night. Please note that your credit card payment will not be processed until your arrival.

NCOA-ASA Aging in America Conference: March 27-30, 2008
Call for Presentations: May 30, 2007
Deadline for Presentation Submissions: June 30, 2007

The 2008 Conference of the National Council on Aging and the American Society on Aging will be held in our national's capital, Washington, DC March 27-30, 2008. The NCOA-ASA Aging in America Conference, with more than 4,000 attendees, is recognized as a showcase of best practices for programs and projects that can be replicated. It will serve as a forum for policy discussion and advocacy, and will be a prime source of information on new research findings in aging.

Join us as we debate the issues, work together to find solutions, and share exciting and innovative ideas. Network with your colleagues, learn about best-practice programs, and gain insights to help you work more effectively and with renewed inspiration. Because 2008 is an election year, there is no better time for our collective voices to be heard in Washington regarding the critical issues in aging. We look forward to creating an inclusive forum for dialogue, debate and the sharing of knowledge among professionals in the aging field and other leaders and key influencers in Washington, DC.

The Aging in America Conference will ask, and answer, the questions:

- What's new?
- Why is it important?
- What works?
- How can we make it work in other communities?

The transportation track is co-chaired by Nina Silverstein at Nina.Silverstein@umb.edu and Jeff Finn at finn49@comcast.net . If you have some thoughts about organizing a symposium or other special activity contact them. Prepare to be enlightened and challenged as we explore innovative programs, debate public policy issues and discover new ways to approach the many facets of aging in our dynamic society.

Submissions to present at the Aging in America conference began Wednesday, **May 30, 2007** and you will have until Saturday, **June 30, 2007** to submit your proposal. The conference program committee seeks outstanding educational sessions that will inform, excite and engage attendees, and ultimately provide the tools and resources for them to do their jobs better. If you have a presentation that meets any of these qualifications, prepare to send it our way.

Transportation Research Forum Call for Papers

The Transportation Research Forum (TRF) is announcing its Call for Papers for the 49th Annual Forum to be held **March 17-19, 2008,** in Fort Worth, Texas. The meetings will be hosted by the Texas Transportation Institute and sponsored by Burlington Northern Santa Fe Railway.

Transportation Research Board June 2007

TRF is one of the oldest professional transportation organizations in existence and is dedicated to providing an impartial forum for the exchange of ideas among practitioners, researchers, and government officials regarding all aspects of logistics and for both domestic and international issues. Our purpose is to provide a common meeting ground or forum for the discussion of ideas and research techniques applicable to economic, management, and public policy problems involving transportation. The Annual Forum will be hosted by the Texas Transportation Institute. This year's conference themes include: Corridor Planning, Capacity Management, Strategies, Transportation Funding, Energy and the Environment, and Air Cargo.

Deadline for Submissions:
Abstracts: Jul. 1, 2007,

Final Papers: Oct. 1, 2007,

Panel Session Proposals: Oct. 1, 2007

Please visit the TRF website at http://www.trforum.org/ for additional information.

International Conference on Aging, Disability and Independence (ICADI 2008)
Hilton Hotel; St. Petersburg, Florida USA
February 20-23, 2008
Call For Submissions: Proposals due September 1, 2007.

This Fourth International Conference on Aging, Disability and Independence is hosted by the University of Florida (UF), and chaired by William C. Mann, OTR, PhD, Distinguished Professor and Director of the UF National Older Driver Research and Training Center.

The International Conference on Aging, Disability and Independence (ICADI) will focus on approaches to support people as they age in maintaining independence in daily living at home, at work and in the community. Transportation plays a key role in enabling the aged and disabled in being independent. Aging in the workplace is a new and significant area of focus for ICADI this year. Livable communities is another new focus, representing a broadening of the concepts of home modification and universal design to address design of communities so they are livable for all people. Transportation and Mobility play a key role in enabling older people and the disabled to get to work move about their communities. It s a important component of independence as it relates to walking and wheeling, to driving and to using other methods of transportation..

Aging, disability and independence will be addressed in eight ICADI tracks an international cadre of presenters representing research and development, policy, practice and services, business, and consumer perspectives. The tracks are: transportation, injury prevention, assistive devices, livable homes and communities, smart homes, work and aging, telehealth and robotics. For more information on the conference go to www.icadi.phhp.ufl.edu

The transportation track is co-chaired by Dennis McCarthy, Helen Kerschner and John Eberhard. This track of ICADI will have a pre-conference on the development of transportation and mobility guides for local areas and will also present evidence based best practices. It will be led by John Eberhard and Frank Carroll from AARP. The track has also selected Jim Langford to address the senior driver issues and Bonnie Dobbs to address the transportation issues. Helen Kerschner will have a session where several speakers representing both older driver issues and options will provide their views of an integrative approach to senior mobility.

You may submit a proposal for one of the following:

- Lecture - single paper, 15 to 20 minutes
- Symposium - related group of presentations
- Poster - sessions held during evening reception
- Technology Demonstration - a demonstration of prototype applications or new products to support independence

Full Paper - optional and additional to any of the above. Selected papers will be included in a book or special issue of peer-reviewed journal.

Login or create an account now to submit your proposal.

Scholarships are available to qualified graduate students.

Twenty scholarships of $650 each will be awarded to cover the conference registration fee ($395) and travel / lodging /meals ($255) to support graduate students in non-professional degree programs who submit and present a paper, poster or technology demonstration at ICADI.

Conference Registration is now available.

Early Bird: $395 USD Early registration ends November 30, 2007.

Late Registration: $495 USD (after November 30, 2007)

Hotel Reservations

The group rate for the ICADI conference is $139 USD per night. For reservations, contact the Hilton - St. Petersburg, FL at (727) 894-5000 or (800) 445-8667 and let the reservation clerk know you are with ICADI in order to get the group rate.

GAO releases report on: "Knowledge Sharing Should Help States Prepare for Increase in Older Driver Population"

In April of 2007 GAO released its report on older driver safety. Here are the highlights of the report as provided by GAO.

As people age, their physical, visual, and cognitive abilities may decline, making it more difficult for them to drive safely. Older drivers are also more likely to suffer injuries or die in crashes than drivers in other age groups (see fig.). These safety issues will increase in significance because older adults represent the fastest-growing U.S. population segment. GAO examined (1) what the federal government has done to promote practices to make roads safer for older drivers and the extent to which states have implemented those practices, (2) the extent to which states assess the fitness of older drivers and what support the federal government has provided, and (3) what initiatives selected states have implemented to improve the safety of older drivers. To conduct this study, GAO surveyed 51 state departments of transportation (DOT), visited six states, and interviewed federal transportation officials.

What GAO Recommends

GAO is recommending that the Secretary of Transportation direct the FHWA and NHTSA Administrators to implement a mechanism to allow states to share information on older driver safety practices. The Department of Health and Human Services agreed with the report. The Department of Transportation provided technical corrections but did not offer overall comments on the report.

The Federal Highway Administration (FHWA) has recommended practices—such as using larger letters on signs—targeted to making roadways easier for older drivers to navigate. FHWA also provides funding that states may use for projects that address older driver safety. States have, to varying degrees,

adopted FHWA's recommended practices. For example, 24 states reported including about half or more of FHWA's practices in state design guides, while the majority of states reported implementing certain FHWA practices in roadway construction, operations, and maintenance activities. States generally do not place high priority on projects that specifically address older driver safety but try to include practices that benefit older drivers in all projects.

More than half of the states have implemented licensing requirements for older drivers that are more stringent than requirements for younger drivers, but states' assessment practices are not comprehensive. For example, these practices primarily involve more frequent or in-person renewals and mandatory vision screening but do not generally include assessments of physical and cognitive functions. While requirements for in-person license renewals generally appear to correspond with lower crash rates for drivers over age 85, the validity of other assessment tools is less clear. The National Highway Traffic Safety Administration (NHTSA) is sponsoring research and other initiatives to develop and assist states in implementing more comprehensive driver fitness assessment practices.

Five of the six states GAO visited have implemented coordination groups to assemble a broad range of stakeholders to develop strategies and foster efforts to improve older driver safety in areas of strategic planning, education and awareness, licensing and driver fitness assessment, roadway engineering, and data analysis. However, knowledge sharing among states on older driver safety initiatives is limited, and officials said states could benefit from knowledge of other states' initiatives.

To view the full product, including the scope and methodology, click on www.gao.gov/cgi-bin/getrpt?GAO-07-517SP. For more information, contact Katherine Siggerud at (202) 512-6570 or siggerudk@ **group0123456789 75+65-7455-6445-5435-4425-3416-24**

National Center on Senior Transportation

Increasing community transportation options for older adults is the mission of the new National Center on Senior Transportation (NCST). As the Washington, D.C.-based initiative closes in on its first year, two milestones are expected this summer:

- A new Web site will be launched at the end of June.
- A much-anticipated draft report of a comprehensive needs assessment is expected in July.

Following an extensive series of interviews with partnering agencies and stakeholders, the Web site is in final stages of construction. It will feature resources for aging and human service providers, transit providers, and older adults and caregivers. The Web address is www.seniortransportation.net and until the launch, temporary pages offer the project description, background, goals, partner list, news, announcements and resources.

The needs assessment is being conducted by Nelson/Nygaard, a firm specializing in transit and multimodal transportation. Results of the survey will guide the direction of the center's efforts to provide technical assistance.

The NCST has begun a round of exhibits and presentations at conferences around the nation, most recently the May 19-25 Expo of the Community Transportation Association of America in Reno, Nev. CTAA is one of the center's official team members.

Aug. 6 will mark the one-year anniversary of the NCST, which is funded through a cooperative agreement between the Federal

Transit Administration and Easter Seals Inc. in partnership with the National Association of Area Agencies on Aging. In addition to CTAA, other team members include the National Association of State Units on Aging (NASUA), the American Society on Aging (ASA) and the Beverly Foundation. All are collaborating with communities to address unmet needs in senior transportation services.

Programs and research

AARP's new efforts on "We need to Talk" and "Street Audits"

AARP continues to work on keeping everyone safe on the road and providing mobility options for the 50+ population. On the driving front, we are committed to making sure that our roads are safe and, to that end, we are committed to keeping unsafe drivers off the road and improving the travel environment.

Several years ago, *The Hartford*, and the MIT AgeLab conducted research and produced *We Need to Talk…Family conversation with older drivers*—a brochure that is available to help family members who are concerned about loved ones' driving abilities. The publication is available on *The Hartford* website.

AARP working with the *The Hartford* and the MIT AgeLab took the brochure and developed an award winning video and is now piloting a series of *We Need to Talk* seminars at different locations throughout the country. Each 90-minute session provides a safe and confidential place to explore this complex issue. The professionally facilitated sessions will identify key local and national resources that can help attendees have fruitful conversations about driving safety. The seminars identify warning signs for older drivers that may indicate problems, as well as pointers on how best to talk about the issue of driving safety with individuals who family members feel are at risk.

Currently, the *We Need to Talk* (WNTT) seminar is being offered in AL, AZ, AR, CA, GA, KY, LA, MI, NC, ND, OR, PA, SC, and VA. Additional states are expected to begin offering the seminar later in this year. For information about WNTT in the states listed please contact the AARP State Office or AARP Driver Safety Program & Mobility Options staff member Susan Hardenburgh at 202-434-6008 or SHardenburgh@aarp.org.

Also on the safety front, AARP is working with the Institute of Transportation Engineers (ITE) to conduct street audits. The first of these audits will be conducted in concert with the August ITE annual conference in Pittsburgh. AARP volunteers and ITE members will evaluate select locations, and ITE staff will develop a checklist of engineering features to look for during the evaluation. This work is an outgrowth of AARP's focus on safety for all users of the street—whether as drivers, pedestrians, bicyclists or transit users. For information about AARP and ITE work contact Frank Carroll, Interim Director, **AARP** Driver Safety Program & Mobility Options, 727-592-8023 (FL Office), 202-434-3919 (DC Office), fcarroll@aarp.org.

Senior CarFit helps keep aging drivers safe

A new service created by the American Society on Aging, AAA, the American Occupational Therapy Association and AARP that can help keep older drivers safe and driving longer. Here's what you should know. As we age, changes in our vision, flexibility, strength, range of motion and even size and height make driving more challenging. One thing older drivers can do to adapt to these changes is to make their vehicle fit better. CarFit is a new assessment program that can help, by providing a free, comprehensive check of how well an older driver and their vehicle work together. The assessment (done by a trained professional) takes about 15 minutes,

and provides drivers with a list of recommended car adjustments, adaptive devices and local resources that can help insure their driving safety. Here are some of the key CarFit questions that can help determine if an older driver and their vehicle are a good fit.

• Does he/she have a clear line of sight (at least three inches) over the steering wheel?
• Does he/she have plenty of room between her chest and steering wheel? The ideal distance is at least 10 to 12 inches. This helps reduce injuries should the airbag deploy in an accident.
• Does the seat fit comfortably and safely? He/she should be able to adjust the seat easily for good visibility and safe access to controls.
• Can the headrests adjust properly? The center of the headrest should be against the back of the head, not against the neck. This helps prevent neck injury.
• Can he/she easily access the gas and brake pedals? He/she should be able to reach the pedals without having to stretch too far, and should be able to completely depress the brake pedal. He/she should also be able to move her foot easily from the gas to the brake.
• Does the seat belt hold him/her in the proper position and remains comfortable as he/she drives? The lower part of the belt should go across the hips, and the shoulder harness should go across the rib cage and not be under the arm. He/she also should be able to reach the shoulder harness and buckle and unbuckle the seat belt without difficulty.

• Can he/she get into and out of the vehicle easily?
• Does he/she know how to adjust mirrors properly or have the flexibility to use mirrors?

For more information or to find an assessment event in your area visit www.asaging.org/carfit , contact your state AARP office -- call (888) 687-2277 to get the number -- or your local AAA (www.aaa.com) office.

Changes at AAMVA
Lori Cohen is moving to AARP. After 15 years with the American Association of Motor Vehicle Administrators, she will be joining AARP as Senior Project Manager, Driver Safety, State and National Initiatives. This is a new position to expand the scope of AARP's Driver Safety Program.

Lori says that her proudest achievement at AAMVA was conducting the Aging and Medically At-Risk Driver Forum. While this event was targeted toward driver licensing administrators, a significant portion of the program discussed coalitions, public awareness programs, older driver education and other means to improve driver safety and mobility. She also worked with the AAMVA GrandDriver project to promote awareness about how aging can affect driving.
Lori is currently a member of TRB's Operator Education and Regulation Committee and looks forward to continuing her work on older driver safety with the TRB community. Meanwhile, Kevin Lewis, Vice President of Driver Programs, will serve as AAMVA's contact until Lori's position is filled.

University of Michigan's Transportation Research Institute (UMTRI) continues to expand it older driver and older person transportation programs

UMTRI develops data collection tool for longitudinal studies of older drivers
UMTRI recently completed a project 0n Development and Testing of an Assessment Battery for Older Drivers (funded through a grant from CDC), The purpose was to develop and test an inexpensive and easy-to-administer

comprehensive battery of assessment instruments that could be used in a longitudinal study of older drivers. Development of the battery was based on extensive review of the literature with the aim of choosing individual instruments already validated. The battery was administered to a convenience sample of 38 drivers aged 65 years or older, with the average completion time being under 1 hour. Data from the assessment outcomes fell within normative ranges. Feedback obtained from subjects and the battery administer indicated that the battery was easy to complete and easy to administer. Results suggest that the battery provides a comprehensive assessment of a person's physical health, mental health, and driving behaviors, and could, with minor modifications, serve as a valuable data collection tool for a longitudinal study of older drivers.

UMTRI develops self-screening tool for older drivers based on health concerns

UMTRI recently completed Development of a Self-Screening Tool for Older Drivers Based on Health Concerns (sponsored by NHTSA). It purpose was to create a web-based self-screening instrument to provide older drivers with individualized information to help them make better decisions about driving. The project was intended to improve upon existing self-screening instruments by focusing on health concerns – that is, the symptoms people experience due to medical conditions, medications used to treat them, and the general aging process – rather than the medical conditions or medications themselves. Development of the self-screening instrument was based on an extensive review of the literature and feedback from an expert panel and focus groups. An evaluation/validation study was conducted using a sample of 68 older drivers who completed the self-screening instrument, as well as clinical evaluation and on-road driving assessment administered through the University of Michigan Drive-Ability program, a comprehensive driving assessment program. Feedback obtained from subjects indicated that the self-screening instrument provided useful information and that subjects intended to make changes in their driving or seek further evaluation as a result of completing it. Overall, subjects' scores on the self-screening instrument were significantly correlated with the clinical evaluation scores and on-road driving performance scores.

UMTRI Develops Promising Approaches to Promoting Lifelong Community Mobility for Seniors

Another UMTRI older project of note, Promising Approaches to Promoting Lifelong Community Mobility for Seniors (funded by AARP) follows earlier work that resulted in Promising Approaches for Enhancing Elderly Mobility, a guide highlighting programs and practices in a number of areas considered to hold promise for enhancing the safety and mobility of seniors. Since publication of the original guide in 2003, a number of new initiatives in the areas of senior safety and mobility have been launched at the federal, state, and local levels. In addition, there has been widespread recognition that safety and mobility go hand in hand. Thus, two complementary but interdependent goals have emerged with respect to senior drivers: to help those who are able to drive safely continue to do so; and to identify and provide community mobility support to those who are no longer able to drive. The purpose of Promising Approaches for Promoting Lifelong Community Mobility for Seniors is to update and expand upon our earlier work, particularly with regard to the transitioning process from driving to transportation dependence, and the need for alternative transportation options for seniors who are no longer able to or choose not to drive. The guide will be available later this year.

Instrumented vehicles to study behaviors of drivers diagnosed with early-stage dementia

UMTRI is also currently working on two projects using instrumented vehicles to study the behaviors of drivers diagnosed with early-stage dementia. Both projects are being conducted in collaboration with Dr. Nina Silverstein (U-Mass, Boston) and Dr. Geri Adler (U-Houston). One of the projects, sponsored by the National Highway Traffic Safety Administration, has a primary objective of evaluating the feasibility of using existing in-vehicle technology to monitor a set of potentially hazardous driving behaviors common in persons with early stage dementia. In this project we will demonstrate the feasibility of using instrumented vehicle monitoring devices to monitor driving performance in older drivers with early-stage dementia, and will develop a study to use the technology to track changes in driving performance in older drivers as the severity of the dementia increases. The second project, sponsored by the Alzheimer's Association, is focusing on the use of instrumented vehicle data to help occupational therapists better evaluate drivers with early stage dementia. The specific aims of this exploratory study are to compare the validity of multiple forms of assessment of driving skills with naturalistic driving in persons with early stage dementia; bring greater visibility to deficits in driving performance unique to people with early stage dementia; increase understanding of behaviors and issues of drivers with dementia and their families; and inform decision-makers about appropriate intervals for checking driving competency.

The University of Michigan (U-M) and UMTRI Establishes Center's for Advancing Safe Transportation throughout the Lifespan

The University of Michigan (U-M) and UMTRI recently won a Tier One University Transportation Center from the US Department of Transportation that will have a partial focus on older adults. The Center will be called the Michigan Center for Advancing Safe Transportation throughout the Lifespan (M-CASTL). The Center's theme is Safety and Mobility throughout the Lifespan. The M-CASTL will strive to advance expertise and US technology in the many disciplines comprising the safety and mobility of both young people and older adults. This will be achieved through basic and applied research, and by fostering the application of transportation science and technology through education of new professionals and technology transfer to those in transportation-related fields. Both young people and older adults present unique safety and mobility challenges. The U-M will establish the M-CASTL to increase understanding of and address—across the different dimensions of the roadway, vehicle, and driver—the risks related to the two ends of the age spectrum. Specific thrusts of the Center will focus on understanding and addressing: the changing perceptual, cognitive, and psychomotor abilities of older drivers; the transportation needs of young people and older adults when they are unable or choose not to drive themselves; and the elevated crash risk of young drivers. Center activities are planned to begin in August, 2007 and continue for three years. The M-CASTL will be managed by Dr. David W. Eby as Director, Lisa J. Molnar as the Co-Director, and Jonathon M. Vivoda as the Program Coordinator. An Executive Committee composed of U-M faculty will provide will provide guidance for all activities and an External Advisory Board composed of a wide range of non U-M stakeholders will provide input on M-CASTL activities.

University of Alabama at Birmingham Center for Translational Research on Aging and Mobility

The UAB Roybal Center focuses on translational research designed to enhance mobility in older adults. Mobility problems are associated with adverse health outcomes,

increased risk for falls and injuries, increased risk for automotive crashes and injuries, increased risk for depression, and social and economic dependence on family members and society at large.

Recent Highlights

1) A collaborative field study (D. Roenker, PI) with the Maryland Motor Vehicle Administration, Western Kentucky University, Transanalytics, LLC., and Visual Awareness, Inc evaluated a brief functional performance battery as a predictor of crash risk for older drivers in several MVA field offices (initially in 1999 and five years later in 2004). Additionally, participants were contacted each year to track their health, mobility, and driving habits longitudinally. Recent papers from this study include:

Ball KK, Roenker DL, Wadley VG, Edwards JD, Roth DL, McGwin Jr G, Raleigh R, Joyce JJ, Cissell GM and Dube, T. Can High-Risk Older Drivers Be Identified Through Performance-Based Measures in a Department of Motor Vehicles Setting? *J Am Geriatr Soc*; 54(1):77-84,2006. {PMID: 16420201}

Vance DE, Roenker DL, Cissell GM, Edwards JD, Wadley VG and Ball KK. Predictors of driving exposure and avoidance in a field study of older drivers from the state of Maryland. *Accid Anal Prev*; 38(4):823-831,2006. {PMID: 16545765}

Vance DE, Ball KK, Roenker DL, Wadley VG, Edwards JD and Cissell GM. Predictors of Falling in Older Maryland Drivers: A Structural-Equation Model. *Journal of Aging and Physical Activity*; 14(3):254-269,2006. {PMID: 17090804}

Viamonte SM, Ball KK and Kilgore M. A Cost-Benefit Analysis of Risk-Reduction Strategies Targeted at Older Drivers. *Traffic Injury Prevention*; 7:1-8,2006. {PMID: 17114092}

2) In another collaboration with State Farm Insurance Co. and Visual Awareness, Inc., we are conducting an SBIR Phase II study (P. Keirn, PI) that is screening thousands of drivers aged 75 and older throughout the state of Alabama and validating a brief self-administered version of the Useful Field of View (UFOV) test against the full UFOV® assessment. As an incentive for participation, individuals who score in the low-risk range qualify for a two year discount on their auto insurance premiums. Those who do not qualify receive information on driving safety and intervention options. Performance data will be merged with both insurance claims data and Alabama Department of Public Safety records to validate these measures. Consistent with past research, results of this study to date suggest that some drivers aged 75 and older may be at increased risk for crash involvement based on their test performance (approximately 1/3 of those participating). Even so, 99% of the participants have responded that this type of screening program is beneficial. A follow-up study is pending to evaluate self-administered speed of processing training for those who do not immediately qualify for a discount and track the impact of the intervention over time on crash and claims data. Recent publications from this study include:

Okonkwo O, Crowe M, Wadley V G and Ball K. Visual attention and self-regulation of driving among older adults. *International Psychogeriatrics.*

3) Another SBIR study (P. Keirn, PI) developed technical parameters for a videotape-based speed of processing training protocol for home use, evaluated the feasibility of self-administration, and then evaluated the protocol's effectiveness in improving processing speed and divided attention—abilities linked in previous studies to driving performance and safety.

Wadley VG, Benz RL, Ball KK, Roenker DL, Edwards JD and Vance DE. Development and Evaluation of Home-Based Speed-of-Processing Training for Older Adults. *Arch Phys Med Rehabil*; 87(6):757-763,2006. {PMID: 16731209}

4) The primary project of the UAB Alzheimer's Disease Research Center (V. Wadley, PI) is using Roybal Center testing resources and the UAB Driving Assessment Clinic (C. Owsley, Director) to directly evaluate the impact of cognitive changes in Mild Cognitive Impairment (MCI) on the performance of everyday tasks. By virtue of their high risk for progression to dementia, individuals with MCI are at high risk for decline in the abilities needed to function effectively and independently in society. This study is examining the relationships between specific cognitive abilities and a spectrum of real world tasks that are strongly tied to autonomous functioning and evaluating how these relationships change over time among individuals with MCI relative to normal controls. The research aims to: (1) compare the performance of individuals diagnosed with MCI to that of age- and education-matched normal controls on a variety of indices of everyday function, with primary emphasis on driving and financial skills; (2) compare longitudinal changes in functional performance in individuals with MCI to longitudinal changes in controls with annual assessments over intervals of 2 to 4 years; (3) examine cognitive predictors of functional performance and functional change over time in individuals with MCI and in normal controls; and (4) explore the hierarchy of functional change in MCI by examining decrements in functional abilities compared to those of normal controls and by comparing the magnitude of loss in each functional domain to losses across the range of functional abilities under evaluation, both at baseline and over time. Because these functional abilities are essential for quality of life, health, and avoidance of adverse outcomes such as hospitalization and mortality, those areas of function in which individuals with MCI demonstrate declines or deficits will become the focus of future multi-component intervention studies. Publications associated with this study thus far include:

Okonkwo OC, Wadley VG, Griffith HR, Ball K and Marson DC. Cognitive Correlates of Financial Abilities in Mild Cognitive Impairment. *J Am Geriatr Soc*; 54(11):1745-1750,2006. {PMID: 17087703}.

Okonkwo OC, Wadley VG, Griffith HR, Ball K, Marson DC. Cognitive Correlates of Financial Abilities in Mild Cognitive Impairment. *Journal of the American Geriatrics Society;* 54 (11): 1745-50,2006. {PMID: 17087703}

5) Several studies on cognitive training are ongoing, including the ACTIVE clinical trial, the ACCELERATE study, and a recently initiated study called PACES. The PACES (Physical and Cognitive Exercise Study) is evaluating the combined effect of cognitive training and exercise on the cognitive and everyday abilities of older adults (focusing on mobility). Recent papers on this topic include:

Willis SL, Tennstedt SL, Marsiske M, Ball K, Elias J, Koepke KM, Morris JN, Rebok GW, Unverzagt FW, Stoddard AM, Wright E, for the ACTIVE Study Group. Long-term Effects of Cognitive Training on Everyday Functional Outcomes in Older Adults. *JAMA*; 296(23):2805-2814,2006. {PMID: 17179457}

Edwards JD, Ross LA, Wadley VG, Clay OJ, Crowe M, Roenker DL and Ball KK. The useful field of view test: Normative data for older adults. *Arch Clin Neuropsychol*; 21(4):275-786,2006. {PMID: 16704918}

Crowe M, Andel R, Wadley V, Cook S, Unverzagt F, Marsiske M and Ball K. Subjective cognitive function and decline among older adults with psychometrically defined amnestic MCI. *Int J Geriatr Psychiatry*; 21:1187-1192,2006. {PMID: 16955448}

Vance D, Dawson J, Wadley V, Edwards J, Roenker D, Rizzo M, and Ball K. The Accelerate Study: The Longitudinal Effect of Speed of Processing Training on Cognitive Performance of Older Adults. *Rehabilitation Psychology*; 52(1):89-96,2007.

Ball KK and Edwards JD and Ross, L. The impact of speed of processing training on cognitive and everyday functions. *Journals of Gerontology: Psychological Sciences*

Wolinsky, F., Unverzagt, F., Smith, D., Jones, R., Wright, E., & Tennstedt, S. The effects of the ACTIVE cognitive training trial on clinically relevant declines in health-rellated quality of life. *Journal of Gerontology: Social Sciences*, 2006, 61B(5): S281-287.

Wolinsky, F., Unverzagt, F., Smith, D., Jones, R., Stoddard, A., & Tennstedt, S. The ACTIVE cognitive training trial: Effects on quality of life that last for 5 years. *Journal of Gerontology: Medical Sciences*, 2006, 61(12): 1324-9.

6) Ongoing studies on vision and driving conducted by Dr. Cynthia Owsley in the Clinical Research Unit of the Department of Ophthalmology include: 1) The Impact of Hemianopsia and Quadranopsia on On-Road Driving Performance (with Dr. Joanna Wood of Queesland University of Technology, Australia), 2) The Impact of the AARP Older Driver Program in Florida (with Dr. Gerald McGwin at UAB), 3) Older Drivers' Experience with the Florida Mandatory Vision Re-Screening Law (with Dr. Gerald McGwin), and 4) A Process Evaluation of a Driving Assessment Clinic Within a Health System.

UNIVERSITY OF FLORIDA AND CLEVELAND CLINIC COLLABORATE TO STUDY MEDICATION EFFECTS ON OLDER DRIVER'S PERFORMANCE.

There has been very little research on the impact of medications on driving performance. Faculty at the University of Florida's College of Public Health and Health Professions, and College of Nursing, and the Cleveland Clinic, Cleveland,Ohio will be collaborating on a study to address this issue. This study is led by UF's Sherrilene Classen, PhD, MPH, OTR, with co-Investigators Barbara Messinger Rapport, PhD, MD, Director of the Cleveland Clinic Geriatric Fellowship Program, and Ann Horgas, PhD, RN, Associate Dean of Research, College of Nursing, UF. Other members of the research team include Drs. Youngsung Joo, Orit Shechtman and Kezia Awadzi, all from UF.

We know that some medications affect the functional status of older adults, and may impact driving performance (Lococo et al., 2007), while others may increase the risk of crashes (McGwin et al., 2000). These studies have limitations as they: (1) are mainly descriptive or cross sectional in nature and may underestimate the true risk associated with crashes; (2) use crashes, the most extreme form of driver error as the outcome measure, and do not reveal less severe effects of medications on driver performance; (3) address mainly prescription medications, not over the counter medications and nutraceuticals -- therefore underestimating the effect of the entire medication regime on driver performance; and (4) they do not quantify the relationships among medications, simulator sickness, and simulated driving performance.

The UF/Cleveland Clinic study will use data collected by the National Older Driver Research and Training Center during 2005-2007. We have 260 mutually exclusive adult drivers (39 young, ages 25-45; and 221 old, ages 65+) with completed demographic and

driving history data, up-to-date medication data reflecting current prescription, over-the-counter and nutraceutical profiles, clinical data related to sensory, motor, cognitive, and social functioning, as well as on-the-road performance data on each driver.

"The importance of this study is that we will determine which types/classes of medications, including combinations of medications, relate to driving performance in older adults" says William Mann, PhD, Director of the UF National Older Driver Research and Training Center.

This project, funded by UF's Age Network, is expected to disseminate findings by December 2007.

MAG Safety and Elderly Mobility Sign Project

The Maricopa Association of Governments (MAG), as the metropolitan planning agency for the region, approved $400,000 in the 2007 MAG Unified Planning Work Program (UPWP) to fund a Safety and Elderly Mobility Sign Project. The funding has been allocated proportionately to jurisdictions based on the percentage of elderly residents (60+ years of age) as per the 2000 Census. This project will promote the use of Clearview font as recommended in the FHWA Guidelines and Recommendations To Accommodate Older Drivers and Pedestrians. The goal of the Clearview font is to increase legibility and reduce halation of sign legends in comparison to that of other FHWA Standard Alphabets for Traffic Control Devices (E-Modified and Series D). The research development effort resulted in final design of Clearview font letters in 2003.

Clearview font letters were developed to specifically address four issues with the legibility of other alphabets:

1. Accommodate the needs of older drivers
2. Improve word pattern recognition by using mixed case words
3. Improve the speed and accuracy of destination recognition
4. Control or minimize the halation of words.

The MAG Transportation Safety Committee and the MAG Elderly Mobility Stakeholders Group have recommended that the Sign Project provide funds to upgrade street signs or provide advanced street name signs. The funding is available for the production costs of the sign, including materials, extra posts, mounting brackets, and costs for Clearview software. Funds are not provided for any installation costs as labor and installation will be considered as an in-kind contribution. MAG will conduct a regional evaluation of the safety impact of the project in conjunction with the cities and towns and which may include focus groups, a survey, and an analysis of crash data. The project is expected to conclude at the end of 2008.

If you would like further information, please contact Maureen DeCindis, Transportation Planner at mdecindis@mag.maricopa.gov.

Florida's Safe Mobility for Life Program

According to Gail Holley of the Florida Department of Transportation (FDOT) the FDOT has been working to address mature driver issues for over 17 years as we were one of the first states to standardize and implement roadway improvements on our State Highway System based on the Federal Highway Administration's (FHWA) "Older Driver Design Handbook for Older Drivers and Pedestrians.

While this was a tremendous accomplishment, we learned that it just wasn't enough to help prepare the roads within our state for the inevitable increases in our over 65 driving population. Therefore, we set out to establish a more collaborative approach to address this

issue by developing a strategic plan where our program's goal is to improve the safety, access, and mobility of Florida's growing older population.

We also needed to create a more positive program name so we changed from Florida's "Elder Road User Program" to "Safe Mobility for Life Program". This new program name and logo reinforces that while our program does focus on improving our roadway systems for the mature driver, we help create a safer system for every driver, no matter what their age.

Partnerships have also proven to be an essential part of their program. Florida already has many existing programs, both state and local, that address senior transportation or mobility issues. On a state level, they have partnered with the Department of Elder Affairs (Communities for a Lifetime Initiative) and the Department of Highway Safety and Motor Vehicles (Florida GrandDriver Program). Together they are addressing senior mobility in Florida, not only from their roadway perspective, but from the driver and the community as well. Detailed information on our program's partnerships, resources, and tools can be viewed at our website:

www.dot.state.fl.us/TrafficOperations/Operations/SafetyisGolden.htm

Through the implementation of our Safe Mobility for Life Program we will continue to strive towards safely preparing our roadways for the inevitable increase in our aging (65+) driving population with improvements that will benefit every driver.

Gail Holley is the Program Manager for the Florida Department of Transportation Safe Mobility for Life Program. If you would like to learn more about this program please contact Mrs. Holley at (850) 410-5414 or e-mail gail.holley@dot.state.fl.us

NC Senior Driver Safety Coalition

Since spring of 2004, North Carolina's Senior Driver Safety Coalition has led efforts in that state to improve safety and mobility for its older residents. During its early years, the Coalition received funding from a NC Governor's Highway Safety Program grant. Starting in 2005, it was asked to serve as the official Older Driver Working Group of the NC Executive Committee for Highway Safety (ECHS). This is a DOT-led initiative to develop the state's Strategic Highway Safety Plan, modeled after the guidelines put forth in the NCHRP Report 500 Series (see http://safety.transportation.org/guides.aspx for a link to *A Guide for Reducing Collisions Involving Older Drivers*.)

The Coalition is chaired by Dr. Jane Stutts, HSRC Associate Director for Social and Behavioral Research. Over 25 individuals are currently identified on the Coalition's list of members and friends, representing a broad array of stakeholders and interests including NC DOT, GHSP, DMV, Division of Aging and Adult Services, NC State Highway Patrol, AARP, AAA Carolinas, the NC Medical Society, NC Assistive Technology Program, the National MS Society, and occupational therapists, as well as the private sector. The full Coalition meets approximately every two months, with additional smaller gatherings (sometimes involving external partners) to address specific issues and tasks.

As an official Working Group of the state's ECHS, the Coalition is charged with developing strategies for presentation to the Committee, and if approved, to develop a plan for implementing those strategies. To date, the group has presented four strategies to the

ECHS, with all of these being approved. They include:

1) Improve Signage at Non-Standard Interchange Approaches

2) Identify Hazardous Intersections and Improve their Safety

3) Improve the Roadway and Driving Environment: Building Capacity

4) Increase Public Awareness of Issues and Resources

Copies of these strategies are available on the ECHS web site at http://www.ncdot.org/doh/PRECONSTRUCT/traffic/ECHS/groups/older.html. Two additional strategies are being considered by the group: one targeting the law enforcement community, and the other targeting the medical community and focusing on identifying and assisting medically at-risk drivers (regardless of their age).

Despite the absence of dedicated funding, steps have already been taken to implement these strategies. As one example, Coalition members are working to develop a senior driver safe mobility website as part of their efforts to increase public awareness of issues and resources impacting older adults (Strategy #4). The Coalition has recommended that the website be hosted by the Division of Aging and Adult Services, with links to partnering agencies and organizations.

Apart from its efforts to develop sound strategies for recommendation to the ECHS and to assist in seeing that these are implemented, the ODWG has pursued a number of activities in its role as a volunteer statewide Coalition. One of these involved partnering with the NC AARP to develop a toolkit of useful information and resources and hosting a series of five community forums across the state. The forums were designed to foster local partnerships for addressing community safe mobility. Coalition members also participated in training for the statewide rollout of CarFit, and organized a workshop on helping older adults drive safely longer for the NC Conference on Aging. Just recently, the NC AARP hosted the first statewide training for a new program to assist families in talking with older members about driving safety. These efforts all reflect the benefits of a strong statewide partnership committed to addressing older driver safety and mobility issues in North Carolina.

ITNAmerica Research

The Impact of ITN (Independent Transportation Network) on Quality of Life

Research and impact measurement are essential areas of activity for ITNAmerica—part of the organization's commitment to integrating practice, research and policy as it works to support replication of the ITN model and serve as a leading voice for senior mobility. One of the earliest ITNAmerica research studies, a four-year evaluation project funded by the Atlantic Philanthropies, received IRB approval and officially launched in early May. The first phase of the study is designed to understand the impact of ITN on the quality of life for older adults who stop or limit their driving.

Telephone interviews will be administered to samples in up to five ITN affiliate communities at three points in time. ITN customers will be contacted when they initially register to become involved with the local ITN program, then six months and twelve months later. Telephone interviewing will begin in the ITNPortland community and then will expand to other ITN affiliate communities. The evaluation plan also calls for the identification of older adults, not involved in the ITN program, in similar-sized communities geographically near each ITNAmerica community. Telephone interviews will be conducted with older adults in these comparison communities as well.

The Physician's Willingness to Address the Driving Issue with Patients

The health care community is often called upon by families and sometimes by the state to make recommendations regarding driving safety, although the only legal entity with authority to remove or limit driving privileges is the state motor vehicle licensing division. Families are increasingly turning to their physicians for guidance, but the health care community is poorly trained to address these issues and is largely unfamiliar with associated ethical and legal responsibilities. In addition, because driving is such a powerful symbol of independence and because the transportation options are inadequate, there has been great reluctance by clinicians to address these concerns with the patient or to involve the state. Practices range from ignoring the issue completely, to aggressively prescribing cessation of driving and reporting a patient to the state.

Funded by a grant from the Silver Century Foundation, ITNAmerica initiated a pilot study to measure the impact of training on the knowledge, attitudes and practice behavior of health care practitioners regarding their elderly patients who drive. Dr. Germaine Odenheimer, a member of the ITNAmerica Research Group and an AMA designated trainer, presented AMA older driver materials and local alternative transportation options at the Maine Medical Center 'Geriatric Education Day' conference in April 2007. Pre- and post-test surveys were conducted onsite and a follow up survey is scheduled for July. The objective is to learn how the availability of alternative transportation, such as the ITN, impacts the physician's willingness to address the driving issue with patients. Dr. Odenheimer plans to present findings from this project as part of a submitted symposium at the Annual Scientific Meeting of the Gerontological Society of America (GSA) conference in November.

Mobility Patterns of Older Adults Who Stop or Limit Driving

Little is known about the travel patterns of older adults after they stop driving. When alternative transportation is readily available, where do older adults go, and to what extent are their choices influenced by gender and age? For more than 10 years, ITNPortland has provided rides in greater Portland, Maine to older adults and people with visual impairments who have stopped or limited their driving. The organization's data base provides a unique opportunity to examine actual destinations from home of ITNPortland customers.

Using the ITNRides data base, ITNAmerica is conducting research that will provide a portrait of mobility patterns among a cohort of older adults who stopped or limited their driving. The research includes 665 ITNPortland customers who took at least one ride from 1/1/04 to 12/31/06; 75% were female, the mean age was 80 ($\pm$11), and 98% were Caucasian. The largest percentage of customers took at least one ride for medical purposes (85%), followed by consumer-related purposes (42%) such as grocery shopping, and social trips (23%) such as visits to family and friends. ITNAmerica plans to present findings from this research, including age group and gender comparisons, as part of a submitted symposium at the Annual Scientific Meeting of the Gerontological Society of America (GSA) conference in November.

Getting Around Without Driving: An Exploration of Community Mobility Options

Getting Around Without Driving: An Exploration of Community Mobility Options was the title of a two-semester undergraduate Capstone Seminar led by Professor Nina Silverstein with graduate assistance from gerontology PhD student Cathy Wong at the University of Massachusetts Boston, College of Public and Community Service. The class

explored model supplementary transportation options including paid and volunteer drivers, faith-based organizations, public transit, and other community transit and paratransit options and policies that support or are barriers to elder mobility. Applying the Beverly Foundation's 5As of Senior-Friendly Transportation (Availability, Acceptability, Accessibility, Adaptability, Affordability), class members accessed the Senior-Friendliness of community mobility options in two Massachusetts communities, Newton and Taunton. According to the *Beverly Foundation's Senior Friendly Calculator* which is scored on a scale of 0 to 25 where 0 is "just starting on the road to Senior Friendliness" and 25 is "Senior Friendly," both communities scored between 15 and 20 indicating that they were "chugging along" to "good show." The transit providers interviewed appreciated the opportunity to discuss their strengths and challenges in meeting the mobility needs of older adults in their communities. The communities were limited in their ability to provide evening and weekend service and also in their use of volunteer drivers. In fact, only one volunteer program was found and that program required advance scheduling and was available only for limited destinations. The students presented their findings to Community Partners and invited guests on May 1, 2007. Helen Kerschner, President and CEO of the Beverly Foundation, Pasadena, CA, attended the final presentation and received direct feedback on the use of the Foundation's survey instruments. It was a very positive and productive applied learning experience. E-mail Nina if you are interested in the syllabi or ppt. nina.silverstein@umb.edu. E-mail the Beverly Foundation if you are interested in the Senior Friendly Calculator e-mail you request to info@beverlyfoundation.org.

CanDRIVE – helping older drivers remain safe on the road – an update.

CanDRIVE, a Canadian research program aimed at improving the safety and quality-of-life of older drivers, is now into its fifth year of activity. The program is led by co-principal investigators Dr. Malcolm Man-Son-Hing and Dr. Shawn Marshall of the Élisabeth Bruyère Research Institute. Using an interdisciplinary approach to identify, analyze and address the health-related safety and quality of life issues pertinent to older drivers, CanDRIVE has accomplished much in five years.

Partnerships have been formed with key seniors' groups, research organizations and governmental and non-governmental agencies, to develop political, legislative and moral support for CanDRIVE's research agenda. A Canada-wide research network is conducting studies pertaining to driver competence and behaviour, addressing such issues as the psychosocial, cultural, social and legal aspects of ensuring safety and quality of life for older drivers. The network is facilitated by the maintenance of a strong communication system, including a website and a web-accessible database of published articles.

To date CanDRIVE members have collectively published over 80 papers and made nearly 200 local, national and international scientific and educational presentations. Some of this research has already influenced transportation policies, such as the Canadian Council of Motor Transport Administrators (CCMTA), an umbrella organization of provincial and territorial ministries of transport and the federal Transport Canada, the Canadian Medical Association (CMA) and the Canadian Consensus Conference on Dementia. International linkages with researchers and administrators have also been developed. A study evaluating the efficacy of the CanDRIVE-supported Driving and Dementia Toolkit, an older driver resource guide for family physicians, was recently published. Numerous other publications demonstrating an approach to assessing driving fitness have been completed and CanDRIVE members conduct many local and national workshops for

clinicians on determining the medical fitness to drive.

CanDRIVE's ultimate future goal in the coming months is to develop and implement a validated, easy-to-use clinical screening tool that will allow family practitioners to identify older drivers with medical conditions who are at risk to continue operating a motor vehicle.

For more information about CanDRIVE visit www.candrive.ca

Recent Canadian Publications

Dobbs, B.M. (2006). Driving Cessation. In The Canadian Medical Association (Ed.). Determining Medical Fitness to Operate Motor Vehicles CMA Driver's Guide, 7th Edition (pp. 14-17).

Dobbs, B.M., Dobbs, A.R., & Triscott, J. (2007). The senior driver: Common myths and facts. Information for physicians on assessment and referral issues (2nd Edition). Edmonton, AB: The DR Group.

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Menard I, Korner-Bitensky N, Dobbs B, Casacalenda N, Beck PR, Gélinas I, Molnar F, Naglie G. Canadian psychiatrists' current attitudes, practices, and knowledge regarding fitness-to-drive in persons with mental illness: A cross-Canada survey. Canadian Journal of Psychiatry. 2006. 51(13):836-846. (Masters student).

Molnar FJ. (2006). Assessment of Fitness to Drive - the older driver. 4th Ed. of the Encyclopedia on Aging (pp. 334–336).

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Morris, J., Carr, R., & Dobbs, B.M. (2006). The driver with a dementia. In J.C. Morris, J. Galvin, & D. Holtzman (Eds.). *Handbook of Dementing Illnesses (2nd Ed.).*

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Tuokko, H., McGee, P., Gabriel, G. & Rhodes, R.E. (2007). Perception, attitudes and beliefs, and openness to change: Implications for older driver education. *Accident Analysis and Prevention, 39*, 812-817.

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Website Links:

Korner-Bitensky N. –a resource for those with a stroke or their families who want to better understand the driving assessment process. It is available at http://www.medicine.mcgill.ca/strokengine/module_driving_family-en.html

Canadian Educational Videos:

Dobbs, A. R., & Dobbs, B. M. in collaboration with Aherne, M., Powell, R., Brook, N., & Popowich, H. (2006). *An introduction to difficult conversations*. Edmonton, AB: The Pallium Project. [7-minute video].

Dobbs, A. R., & Dobbs, B. M. in collaboration with Aherne, M., Powell, R., Brook, N., & Popowich, H. (2006). *Difficult conversations: Communicating with your patients when it's time to stop driving.* Edmonton, AB: The Pallium Project. [60-minute video].

Dobbs, B. M., & Dobbs, A. R. in collaboration with Aherne, M., Powell, R., Brook, N., & Popowich, H. (2006). *After the keys are gone.* Edmonton, AB: The Pallium Project. [7-minute video].

Dobbs, B. M., & Dobbs, A. R. in collaboration with Aherne, M., Powell, R., Brook, N., & Popowich, H. (2006). *After the keys are gone - For health care professionals.* Edmonton, AB: The Pallium Project. [60-minute video].

Dobbs, B. M., & Dobbs, A. R. in collaboration with Aherne, M., Powell, R., Brook, N., & Popowich, H. (2006). *After the keys are gone - For individuals and families experiencing life with dementia.* Edmonton, AB: The Pallium Project. [60-minute video].

Dobbs, B. M., & Dobbs, A. R. in collaboration with Aherne, M., Powell, R., Brook, N., & Popowich, H. (2006). *After the keys are gone - For organizations interested in supporting those living with lost driving privileges*. Edmonton, AB: The Pallium Project. [60-minute video].

European Updates by Danae Penn

European Commission updates its recommendations on human/machine interfaces in vehicles

The European Commission published its update of its1999 recommendation on human/machine interfaces in vehicles. This update responds to the increased presence of portable devices in cars (for example, mobile telephones, PDAs, laptops etc). While still allowing competition to continue between manufacturers, the text aims at making the design and the installation of these systems safer.

Information and communication systems are increasingly present in vehicles. The choice grows everyday with many different GPS, navigational and traffic information systems available. While these are useful most of the time, there can be dangers involved. Whilst the European Commission encourages the development of such innovations, it recommends all involved to put the safety of the driver first.

The new recommendation covers a series of principles for the design, installation and the use of information and communication systems. These address all actors concerned: car and portable device manufacturers, designers and distributors of these products, fleet managers and rental agencies. To minimize risks, especially non-intentional distraction, drivers must be made fully aware of the use of the system intended by the manufacturer. The new recommendation also stresses the responsibility of the driver should the system be used beyond the manufacturer's intentions.

The Commission encourages Member States to respect and to promote these principles which apply to both in-vehicle systems and portable devices. The revised recommendation

follows a broad consultation amongst automobile industry professionals and public institutes of research and is part of the 'i2010 intelligent vehicle' and 'eSafety' initiatives.

http://ec.europa.eu/information_society/activities/esafety/index_en.htm

European Commission Announces Green Paper on urban transport

The European Commission has announced its intention to publish a Green Paper on urban transport in 2007 to identify potential European added value to action that is taken at the local level. Usually local authorities themselves rather than the EU take the lead on urban mobility policies. But the EU supports them, for example, through projects that help to identify, disseminate and exchange best practice in areas such as transport infrastructure, norm-setting, congestion and traffic management, public transport services, infrastructure charging, urban planning, traffic safety, security and co-operation with the surrounding regions. The Green Paper will examine whether obstacles to successful urban transport policies exist at the EU level. In addition, it will examine where, whilst fully respecting the subsidiary principle, there is a consensus among stakeholders to develop and implement joint solutions. The Green Paper will form the basis for the development of a European policy on urban transport as part of European transport policy. The Green Paper will address all transport modes, including walking, cycling, motor cycles and motor vehicles, and will cover both urban freight (and logistics) and passenger transport.

The preparation of the new Green Paper does not start without history. The Commission has presented its Citizen's Network Green Paper and the Citizen's Network 'Implementation' Communication in the mid-1990s. A number of recent Commission documents, proposals and initiatives have substantially touched upon urban transport issues and helped to build up the momentum for the new Green Paper on urban transport.

The Green Paper on urban transport is foreseen for adoption by the Commission in the autumn of 2007. The debate on its preparation was started on January 31, 2007 with a major stakeholders conference in Brussels when high level representatives from European cities and from the European Institutions presented the expectations of local authorities from the Green Paper. This conference has been followed by four technical workshops and a final conference will take place on June 4, 2007. The public consultation (via the internet) on the preparation of the Green Paper was closed on April 30, 2007.
http://www.ec.europa.eu/transport/clean/green_paper_urban_transport/index_en.htm

Norwich (UK) linking individual passenger transport information with healthcare appointments

This project in Norwich (UK) aims to provide personalized transport timetable and booking information linked to health-care appointments. This will draw on data available on community transport and specific health related transport, eg those provided by social services and the voluntary sector, in addition to conventional public transport.

It is one of the CIVITAS measures relating to :

- Transport for people with reduced mobility
- Flexible mobility services
- Accessibility
- Quality of service

http://www.civitas-initiative.org/measure_sheet.phtml?1an=en&id=242

Older Passengers traveling in ferries or cruise-liners

In 2006 the European Commission launched a Public Consultation on strengthening the protection of the rights of passengers traveling by sea or on inland waterway in the European Union, and it published a staff working paper on this subject. The Commission believed it was necessary to launch a public debate focusing in particular on the following two considerations:
(a) protection of the rights of people with reduced mobility (PRMs) during a journey by sea ; and
(b) protection of the rights of passengers, particularly in the event of denied boarding, interruption, delay or cancellation of a journey by sea.

Given these two considerations, and taking due account of all types of maritime transport, the aim of this consultation was to enable interested parties to express from the start of the consultation period :

- their views on whether the broad lines of existing Community policy on the protection of users of other means of transport should be applied to maritime transport ;
- how they viewed the general situation and the laws concerning the protection of the rights of passengers carried by sea and information provided to travelers ;
- their opinions and suggestions on how best to make any improvements that might be needed, and what general and legal means should be used to make them.

The European Commission defines people with reduced mobility (PRMs) as anyone who has a particular difficulty when using public transport, including elderly people, disabled people, people with sensory impediments and wheelchair users, pregnant women and people accompanying small children.

On January 18, 2007 the Commission held a meeting with 62 stakeholders concerning its staff working paper and its summary of contributions to the Public Consultation

Concerning the protection of the rights of PRMs during a journey by sea, there were two main issues: firstly, PRMs must not be discriminated against because of their disabilities, and secondly they must be able to travel like anyone else. Consequently, travel facilities must be accessible for them, and adequate assistance and sufficient information must be provided. Hence, the two main issues were to determine what kind of assistance was required in ships and ports, and who was responsible.

With regard to access and non-discrimination, it was generally argued that a lot needed to be done. Ports and ships were only partly accessible, and access must notably be extended to deaf, blind and intellectually impaired people, who were refused reservation or boarding on safety grounds, and therefore de facto discriminated against (European Disability Forum). This situation was all the more difficult to accept because blind people, for instance, are a substantial group : 1 in 7 European citizens over 70 years of age have a visual disability, and 1 in 4 over the age of 80 (European Blind Union). Assistance must also be provided to PRMs in the event of cancellation or long delays, when it was badly needed. Operators fully agreed with the four principles of accessibility, assistance, non-discrimination, and information, while cruise ports also considered that PRMs must have full access to cruise travel, for both excursions and resort activities. A clear message was also that voluntary codes have had no effect, and that not all ferry companies provide the same service to PRMs, despite the 1997 guidelines of the International Maritime Organization (IMO).

Putting these principles into practice to take into account fully the needs of all PRMs was not so complicated, according to most contributors.

Giving information to deaf, hard-of-hearing or visually impaired people called for simple solutions : for deaf and hard-of-hearing passengers, it has notably been mentioned that adequate signs allowed them to travel without needing to ask questions, and that very clear speech allowed staff to deal with inquiries if there were any. Vibrating or flash alerts in cruise or ferry ships could alert deaf and hard-of-hearing passengers to emergency situations at night. For blind people, cruise brochures must be published in an accessible format, Braille not being the only solution since many people who cannot see cannot feel either (European Blind Union).

Beyond physical adaptations (such as dedicated parking spaces on ferries), training was identified as crucial in preventing what can amount to degrading treatment of PRMs even where staff show goodwill. Training for all staff, including refresher and awareness courses, was indispensable to put easy solutions in place.

The importance of harmonization and cohesion was also stressed. Harmonization of the approach with other modes of transport which already have PRM-related legislation, such as air and rail transport, was very welcome. Operators pointed out that progress could also be achieved with the full implementation of EC Directive 2003/24 thanks to which PRM-friendly facilities were gradually being introduced on ships.

Operators insisted on the need to obtain information from passengers about their needs prior to the trip in order to be able to accommodate them and give seamless service. Ports must also provide adequate equipment so that shipping companies' efforts to give a seamless service to PRMs were not wasted.

It was pointed out that PRMs did not seek complicated and expensive quality standards. They simply expected to be able to get on and off the ship as any other person did, and they were convinced that this expectation was not so expensive most of the time. It called for changes in the mentality of the industry, on ways of doing things to adapt staff habits to PRMs' needs.
A clear consensus emerged on support for the four principles of accessibility, seamless assistance, non-discrimination and information and there was a consensus among stakeholders on the need to provide assistance to all passengers affected by long delays or cancellations.
http://ec.europa.eu/transport/maritime/consultation/2006_03_30_passenger_rights/index_en.htm

European Workgroup on Diabetes and Driving Report

The European Workgroup on Diabetes and Driving (an advisory board to the Driving License Committee of the European Union) has drawn up a report to the European Commission. The report is based upon an exhaustive review performed by the Monash University (Clayton, Australia) commissioned by the Swedish National Road Administration, and additional articles added from the workgroup's own literature search.

The literature indicated that diabetes and driving is a very relevant problem in our society:

- The disease is very frequent and in the older age group - it is epidemic (at least 25% incidence).
- The majority of people with diabetes will be treated with drugs (oral hypoglycaemic drugs or insulin) that eventually can provoke hypoglycaemia, resulting in temporary adverse effects on functional abilities (slower reaction time, impaired coordination, etc) and in some cases to loss of consciousness.
- Some diabetes complications can interfere with driving ability :
    - visual impairment by diabetic retinopathy

- physical impairment by neuropathy with loss of sensation or muscle weakness or by amputation.

Public safety (crash prevention) is the primary goal, but individual mobility rights should not be violated if there is no special risk for public safety. In the evaluation of the driving ability, there should be equal attention paid to the preventive measures that the patient can take(eg level of diabetes education and diabetes control, frequency of self blood glucose monitoring etc) as to the medical condition per se.

Responsibilities

It would appear that most drivers are not familiar with the legal issues concerning driving and the criteria used to evaluate the driving abilities of people with certain medical conditions. Licensing authorities should provide information to both drivers and health care professionals.. The health care professionals often appear unaware of the legal issues concerning driving and the criteria used to evaluate the driving abilities of people with relevant medical conditions. Clear guidelines concerning this matter (preferably on the web) would be very helpful. Good examples of these are in existence in Australia, Canada and New Zealand.
http://www.ec.europa.eu/transport/roadsafety/behavior/fitness_to_drive_en.htm
http://www.ltsa.govt.nz/factsheets/16.html
(Diabetes and driving. Know the risks)
http://www.addenbrookes.org.uk/diabetes/pi/pi023_di_driving.pdf
http://www.diabetes.ca/section_advocacy/diabetes_driving.asp

Many patients have never discussed the influence of hypoglycaemia on their driving abilities with their physicians. It is recognized that health care professionals have to cover numerous aspects of diabetes care and its complications during the short consultation period. Driving may not always be considered a priority topic at this time and may be omitted from discussions.
Drivers should honestly assess their driving capabilities with regard to their medical condition and treatments, and act appropriately. Drivers with a medical condition are often resistant to declare this to the authorities because they fear that in doing so this will result in an automatic ban to driving. This belief is often due to a lack of information and to misconception, and plays a major role in underreporting of relevant medical condition.

The Freiburg- sustainable development Rieselfeld Project

The Rieselfeld new residential area provides a good example of sustainable development underpinned by innovative public transport provision and illustrates the benefits of close integration between urban development and municipal transport policy.

Freiburg is called the ‘German Ecological Capital’ because of its integrated planning strategies and its excellent public transport system. An example of this planning strategy is the development of a new residential area at the western outskirts of the city – the Rieselfeld Project. The aims of the project were to create a compact settlement in order to save land and at the same time promote public transport. The design principles were:

- To plan a high-density compact residential area
- To create a residential area suitable for families, women and elderly people
- To develop a forward-looking transport concept with the priority on public transport and non-motorized modes
- To solve the conflict between landscape protection and the recreation demands of the residents
- To meet high ecological standards (climate, soil, water, energy etc)

Key transport improvements are:

- An existing tram line (Line 5) was extended into the new development
- In addition, a new tramline (Line 6) now runs along the main street of the new development
- Parking is provided for shop customers while all residents' parking is underground
- A 30 km/h (19 miles per hour) speed restriction was introduced throughout the new development

http://www.eltis.org/cs_search.phtml?search_start=1&concept_id=1
(scroll down to 7th on list)

PROCEED research project into public transport operations in small and medium sized cities in Europe

PROCEED is conducting research into public transport operations in small and medium sized cities in Europe and on how to improve their attractiveness to the users, their efficiency and their effectiveness. Initially the project will map and analyze successful case cities and this will lead to a tool for planning and delivering successful public transport. The project will give a better understanding of the key factors that influence public transport, as well as how the position of public transport in the transport system can be strengthened so that its market share can increase.

PROCEED will tackle the challenges and it will lead to an improved expertise and an extended knowledge-base, that on the one hand will help to develop, implement and assess European policy, and on the other hand will help to plan, develop and implement effective and efficient public transport (bus) systems in small and medium sized cities (between 25,000 and 200,000 inhabitants) and their surroundings all over Europe. Such provision of high quality public transport is an essential contribution to the European framework conditions supporting modal shift away from individual motorized traffic towards sustainable transport modes.

All findings of the three phases of PROCEED (analysis, synthesis, verification) will be synthesized to produce Public Transport Guidelines for Europe which will include detailed data and trends, methodologies to investigate local needs and expectations, and the best practices identified all over Europe.

http://www.proceedproject.net

Future road safety research projects

The European Commission is seeking research proposals about several aspects of road safety in Europe, including:

- Activities concerning older drivers, particularly projects integrating new technologies and medical and sociological research results to demonstrate, in a practical way, possibilities to improve older people's automobile mobility in complete safety
- Practical demonstrations throughout the European Union concerning the application of intelligent transport systems in favor of road safety. Demonstration projects in several Member States will have to contribute to the improvement of people's comprehension and use of intelligent systems.

http://ec.europa.eu/dgs/energy_transport/grants/proposal_en.htm

OLDER DRIVER RESEARCH PROGRAMS AT MONASH UNIVERSITY ACCIDENT RESEARCH CENTRE, MELBOURNE, AUSTRALIA.
Compiled by Jim Langford, 30 May 2007.

PART A: CURRENT PROGRAMS

MODEL LICENCE RE-ASSESSMENTPROCEDURE FOR OLDER AND DISABLE DRIVERS – STAGE 4

Stage 4 of the project is currently underway in an Australian jurisdiction. The main aim of is to conduct a full-scale case-control study, to assess the capacity of a series of cognitive and other screening instruments to meaningfully distinguish between older drivers recently involved in at-fault crashes and older drivers with no recent crash history.

EVALUATION OF THE AMERICAN AUTOMOBILE ASSOCIATION'S ROADWISE REVIEW
Australian automobile associations have funded the evaluation of Roadwise Review, with the initial objective being to assess the extent to which the instrument can identify at-risk older drivers. The evaluation will involve up to 50 older drivers recently involved in at-fault crashes and up to 50 older drivers with no recent crash history. Their performance on Roadwise Review and a range of other instruments designed to assess fitness to drive, will be compared, to determine the extent to which the different protocols succeed in identifying older driver fitness to drive.

VISUAL SEARCH STRATEGIES AMONG OLDER AND YOUNGER DRIVERS

This study investigated visual scanning and driving performance of 20 young (25-35 years) and 20 older drivers (65-75 years) in a high-level driving simulator that incorporated a range of complex and hazardous events known to be associated with older driver crashes. Preliminary results indicate that older drivers responded to hazardous events by traveling at a slower speed than younger drivers. They had a broader scanning pattern than younger drivers both laterally and vertically, were significantly slower in first fixating the hazard, spent less time looking at the hazard and a greater percentage of time looking at the speedometer. The findings of this study are reported in full in a report to the Auto CRC, August, 2006 (details of final release of report to follow).

A three-year follow-up project on Vision Impairment and Fitness-to-Drive commenced in 2005 (see below). The project will examine the impact of visual impairments on driver scanning and the usefulness of various behavioral countermeasures and ITS solutions for older drivers and drivers with vision impairment.

VISION IMPAIRMENT AND FITNESS TO DRIVE

. Many senior drivers have visual conditions that restrict their visual fields and potentially compromise driving performance, yet the basis of driving errors and the capacity of drivers to compensate remains poorly understood. A three-year collaborative research program (2005-2007), funded through the Australian Research Council Linkage Grants Scheme seeks to identify the way in which specific vision conditions affect driving performance. The study will examine the effects of visual field loss on drivers' ability to monitor and respond to information in the driving

THE ELDERLY AND MOBILITY

Driving offers an important mobility option for most elderly. For many, particularly those with a decline in health status, driving cessation is likely to lead to an increase in depressive symptoms and a decline in out-of-home activity levels and community mobility. Driving status thus plays a critical role in the complex interactions between ageing, physical and psychological health,

community mobility and use of health services. A good understanding of these relationships is required in order to enable older people to maintain economic and social participation and quality of life. A literature review, funded by the Swedish Road Administration (SRA), has assessed the current state of knowledge with regard to the complex relationships between changing driving and travel patterns, ageing, health status, and reduced mobility and the impact on quality of life. The findings were used to compile a set of recommendations to effectively manage the safe mobility of elderly road users. The final report will shortly be available on both the MUARC and SRA websites (www.vv.se). **Final report**: Whelan, M., Langford, J., Oxley, J., Koppel S., & Charlton, J. (2006). The elderly and mobility: A review of the literature.(Report no. 255) Monash University Accident Research Centre.

In addition, many of the issues identified and explored as part of the above exercise were further developed in an Australian context. In particular, the so-called 'older driver problem' was analyzed in terms especially of Australian data to present a 'Safe System' view of older driver issues and countermeasures. This has resulted in a paper being published in IATSS Research:
Langford, J., & Oxley, J. (2006). Using the safe system approach to keep older drivers safely mobile. IATSS Research, 30(2), 97-109.
Further, many of the findings from this review are discussed in a paper outlining the benefits of prolonged mobility for older drivers. This paper will be submitted for publication in Traffic Injury Prevention: Oxley J & Rosenbloom S (in press). It cannot be all about safety: The benefits of prolonged mobility. Traffic Injury Prevention.

DEVELOPMENT AND EVALUATION OF A TRAINING PACKAGE FOR OLDER DRIVERS

This project draws on the findings from the recent MUARC reports on older female drivers and self-regulatory practices of older drivers. The project will develop, trial and evaluate an innovative awareness, education and training package aimed to improve the adoption of safe driving practices amongst older drivers. The package will comprise three complementary components, i) a workshop, ii) supporting educational booklet, and iii) self-assessment and training tools. This project commenced in August 2006 and will be conducted over a 2-year period.

OLDER DRIVERS AND RISK TO OTHER ROAD USERS

This project seeks to determine first, the extent to which older drivers represent a risk either to themselves or to other road users. The study will use fatal crash data to identify the numbers and types of road users killed in crashes involving drivers of different age groups and will be conducted at both Victorian and national levels. The study will also compare Victorian older driver fatal crash outcomes with the outcomes in other jurisdictions to see whether different licensing policies can be associated with different outcomes.

OLDER DRIVERS AND CHANGES IN DRIVING STATUS

In June 2004, 2,000 older Victorian license-holders were surveyed particularly to determine whether they were still active drivers. In addition, the survey questionnaire covered a range of aspects relating to driving patterns, including extent of crash involvement and amount of driving activity. A follow-up survey based on the same cohort of drivers was conducted in mid-2007 to determine changes in driving status,

driving patterns and associated factors (including difficulties with driving).

PART B: RECENT PROGRAMS

B1MODEL LICENCE RE-ASSESSMENT PROCEDURE FOR OLDER AND DISABLED DRIVERS- STAGE 3

In 1998, Austroads commissioned the Monash University Accident Research Centre to develop and trial a model license re-assessment program for older drivers in Australasia. The proposed model represents a step away from mandatory age-based testing programs to a referral system whereby at-risk drivers undergo various levels of assessment, as required. A report on the model was published in 2000 (see http://www.austroads.com.au/). Stage 2 consists mainly of the validation of three off-road screening tests (GRIMPS, CALTEST and DriveABLE) against a range of driving performance measures. A report has been prepared and is also available from the Austroads website

Stage 3 of the project has now been completed in an Australian jurisdiction and comprises a large-scale process evaluation of the licensing model and a pilot case-control study (crash-involved and non crash-involved older drivers) aimed at validating a leading screening test of fitness to drive against crash involvement. Funding has recently been approved by Austroads to extend the project into Stage 4, which will consist of a full-scale case-control study evaluating the screening test against crash involvement.

DEVELOPMENT OF A POLICE CHECKLIST FOR IDENTIFYING AT-RISK DRIVERS.

Unlike General Practitioners and medical specialists who have guidelines and tools to assist in identifying at-risk older drivers (e.g. Austroads Assessing Fitness to Drive, 2003), police have no official guidelines to assist them. Referrals can be the result of a crash, police observation of poor driving or complaints from the public. This project has developed a police checklist based on a selection of “red flags” and is currently awaiting funding to support further evaluation and development.

DEVELOPMENT OF A REFERRAL ASSESSMENT TOOL FOR ASSESSING OLDER AND FUNCTIONALLY IMPAIRED DRIVERS

The aim of this project was to design and evaluate a referral instrument intended for use by GPs and other health care professionals as a pre-screen to identify whether a driver poses a significant risk of being involved in a motor vehicle crash due to functional impairments. Based on the outcome of the pre-screen assessment, drivers may be referred for a more detailed off-road screening assessment or in-depth specialized assessment.

Final Report: Charlton, J., Fildes, B., Koppel, S., Oxley, P. & Newstead, S. (2003). Health Screen for Drivers (HSD) referral instrument. Stage 3: Validation of HSD and evaluation of Victorian trial. VicRoads, Report GR2003 R+D871.

ROAD SAFETY ENVIRONMENT AND DESIGN FOR OLDER DRIVERS, STAGE 2

Stage 1 of this study reviewed the suitability of current road design requirements for older drivers in Australasia. The study included a literature review, a critical examination of the US Federal Highway Administration’s recently released “Older Driver Highway Design Handbook”, a one-day expert workshop, and an examination of older driver accident “black spots” in four Australasian jurisdictions.
In Stage 2, a workshop format and associated support materials have been developed to improve road engineers’ understanding of older driver difficulties and to promote use of the road design recommendations. Stage 1 report

(Report No. AP-R169) and Stage 2 report (Report No. AP-R261/04) are available at www.austroads.com.au. This project has resulted in a publication in a peer-reviewed journal: Oxley, J., Fildes, B., Corben, B., & Langford, J. (2006). Intersection design for older drivers. Transportation Research Part F, 9, 335-346.

EFFECTIVENESS OF MANDATORY LICENCE TESTING FOR OLDER DRIVERS IN REDUCING CRASH RISK AMONG URBAN OLDER DRIVERS IN AUSTRALIA

The first study examined older driver fatal and serious injury crash rates across all Australian States, to determine a possible association with the different licensing procedures by comparing per population and per driver crash rates in Victoria (whether there is no age-based mandatory system)] with rates in other jurisdictions which have such programs.. The second study compared the crash rates of older drivers in Melbourne (Victoria, no assessment) with older drivers in Sydney (New South Wales, both medical and on-road assessment), made on per population, per driver, per distance traveled and per time spent traveling bases. Neither study was able to show any road safety benefits associated with mandatory assessment programs. Papers have been prepared for both studies: Accident Analysis and Prevention 36 (2004) 993-1001; and Traffic Injury Prevention 3 (2004) 326-335.

ASSESSING RESPONSIBILITY FOR OLDER DRIVERS' CRASHES

This project sought to determine whether older drivers were overly responsible for any crashes in which they were involved. Based on both the available research and the analyses conducted as part of this report, it was concluded that older drivers are more likely to be judged as responsible for their crashes than other age groups. However it was also concluded that older drivers' additional crash responsibility (as judged by police and others), while valuable in explaining 'what went wrong' in crashes, made only a small contribution to the overall road toll. A report on the project is available from the Austroads website www.austroads.com.au and a paper has been prepared and under review for inclusion in the Traffic Injury Prevention journal.

INFLUENCE OF CHRONIC ILLNESS ON CRASH INVOLVEMENT OF MOTOR VEHICLE DRIVERS

This aim of this project was to conduct a systematic review of the evidence for the influence of chronic illness and impairments on crash involvement of motor vehicle drivers. Eight conditions were found to have at least a moderately elevated risk of crash involvement (relative risk greater than 2.0) compared with their relevant control group. These were alcohol abuse and dependence, dementia, epilepsy, multiple sclerosis, psychiatric disorders (considered as a group), schizophrenia, sleep apnoea, and cataracts. The full report is available on www.general.monash.edu/muarc MUARC Report 213.

OLDER FEMALE DRIVERS

There are issues that are specific to the safe mobility of older female drivers including driving experience, confidence, exposure, trauma consequences and mobility consequences of premature driving cessation. However, little is known about the contributing factors to their crash and injury risk, travel patterns, driving experiences and transportation needs. A study of the safety and associated transportation issues of older female drivers and former drivers has been conducted to describe gender effects on crash rates and to gain in-depth information on the issues surrounding the mobility and safety of older female drivers, specifically the effect of driving experience, lack of confidence and mobility needs. A final report (Report 226) is

available at www.general.monash.edu.au/muarc. A follow-up study has recently been completed to investigate the contributing factors to crash risk using two methodologies i) follow-up statistical analyses using existing survey data, and ii) a case-control study examining functional performance assessments of crash-involved and non-crash-involved participants. The full report is available on www.general.monash.edu/muarc MUARC Report 245.

OLDER PEDESTRIANS AND CYCLISTS

While car use is a dominant mode of transport for many older people, other forms of transport such as walking and cycling are still important transport modes, particularly for shorter trips. However, older pedestrians and cyclists are two of the most vulnerable road user groups. A literature review, funded by the Swedish Road Administration (SRA), was undertaken to assess the current state of knowledge in regard to the key issues affecting senior vulnerable road users (namely, older pedestrians and cyclists) and to identify a set of best-practice recommendations for managing the safety of these road user groups. A final report (Report No. 218) is available at www.monash.edu.au/muarc.

EFFECT OF COGNITIVE IMPAIRMENT ON PEDESTRIAN BEHAVIOR AND CRASH RISK

Pedestrian crashes make up about 15 percent of all road fatalities in Australia and a substantial proportion (37%) of these crashes involve older adults. It is often argued that their over-involvement in serious injury and fatal crashes is, in addition to their frailty, largely a consequence of their reduced ability to cope with certain traffic situations, particularly as a result of limited functional abilities. As a result of a Victorian Parliamentary Inquiry into Road Safety for Older Road Users, MUARC was commissioned by VicRoads to review the current state of knowledge with regard to the effect of cognitive impairment on pedestrian behavior and crash risk and to make recommendations for countermeasure development and further research. The full report is available on www.general.monash.edu/muarc MUARC Report 244.

REPORT ON VICROADS OLDER DRIVER SURVEY, 2004

In June 2004, 2,000 older Victorian licence-holders were surveyed particularly to determine whether they were still active drivers. In addition, the survey questionnaire covered a range of aspects relating to driving patterns, including extent of crash involvement and amount of driving activity. This report presents the main findings relating to whether Victorian older licence-holders were active drivers at the time of the survey, social and demographic factors associated with driving status, key aspects of older licence-holders' driving and travel patterns and some preliminary recommendations on best means to calculate older drivers' crash propensity. The final report has been prepared and is available from VicRoads (R&D Project 830,' Report on VicRoads older driver survey, 2004').

SELF-REGULATION OF OLDER DRIVERS

This study has examined the extent and nature of self-regulation amongst older drivers in Australia. The main research activity has involved a sequence of interviews with older drivers in the State of Victoria, to map age-associated changes in driving behaviors and attitudes. A comprehensive literature review of the topic has also been conducted and published. This report (Report No. AP-R221/03) is available at www.austroads.com.au. The interviews from the Victorian sample are completed and a final report (Report No. 208) is available at www.general.monash.edu.au/muarc.

The study has been extended to provide a broader representation of drivers and former drivers from other jurisdictions in Australia, particularly those with different licensing procedures. The results of this study confirmed many of the findings from the previous study, i.e., evidence for age-related differences in changes in the amount of driving as well as avoidance of specific driving situations. The findings showed that self-regulators were more likely to be Victorian (living in a jurisdiction without mandatory age-based licence re-testing), aged 75 years or older, female, with lower overall health ratings, and lower confidence in risky driving situations, particularly rural drivers.
Final report: Charlton, J., Oxley, J., Scully, J., Koppel, S., Congiu, M., Muir, C. & Fildes, B. (2006) *Self-regulatory driving practices of older drivers in the ACT and NSW*, Monash University Accident Research Centre, Report No. 254.

EXPLORING OLDER DRIVERS' CRASH RISK LEVELS

This project consists of a collection of activities linked by a common concern with further exploring the mileage/crash association, particularly as demonstrated by older drivers. Data from an assortment of sources (Australian, New Zealand and Dutch travel surveys, as well as test performance and health data from other projects) have been used to show that: (a) low mileage drivers of any age have a higher crash involvement than drivers with higher mileages; (b) once different driving distances have been taken into account and in terms of per-kilometer crash rates, older drivers as a group are at least as safe as other age groups; (c) at least for older drivers, the low mileage/high crash association is more likely attributable to reduced fitness to drive rather than to higher levels of urban driving.

This project has resulted in publications in two peer-reviewed journals:

- Langford, J., Methorst, R. and Hakamies-Blomqvist, L., *Older Drivers Do Not Have a High Crash Risk - a Replication of Low Mileage Bias.* Accident Analysis and Prevention, 38, 2006.
- Langford, J., Koppel, S., Charlton, J., Fildes, B., Newstead, S., *A Re-assessment of Older Drivers as a Road Safety Risk.* IATSS Research, 30(1), 2006.

Peer and Interest Groups

The Transportation and Aging Formal Interest Group of the Gerontological Society of America (GSA)
The GSA Transportation and Aging Formal Interest Group held its annual business meeting in Dallas, Texas on November 17, 2006. Conveners of the interest group are Lisa Molnar, David Eby, and Bonnie Dobbs. The mission of the interest group is to enhance the safe, effective, and accessible transportation of older people by facilitating communication and collaboration among researchers and other professionals. The business meeting was held in conjunction with a reception hosted by the Beverly Foundation. Thirty-six individuals attended with representation from the US and Canada.
If you are interested in joining the interest group contact Lisa Molnar at ljmolnar@umich.edu

The interest group sponsored an official symposium during the 2006 GSA Annual Meeting entitled The Aging of the Baby Boom Cohort: Changing the Face of Transportation and Aging? The symposium included presentations by Bonnie Dobbs, Rich Marottoli, Geri Adler, Oliver Page, and Andrew Kochera.

The major activity of the interest group during the past year has been the preparation of a "white paper" that reviews what is currently known about older driver safety and mobility, particularly in North America, and highlights important research needs. The paper, coordinated by Anne Dickerson, presents an ambitious research agenda for a number of

areas considered by the interest group to hold promise for achieving the complementary but interdependent goals of safety and mobility for current and future generations of older adults, including screening and assessment, remediation and rehabilitation, vehicle design and modification, technological advancements, roadway design, transitioning to non-driving, and alternative transportation. The paper also emphasizes the need for a sustained and broad-based research effort on multiple fronts, involving collaboration among a diverse group of researchers and professionals. The paper has been accepted for publication in the Gerontologist (Dickerson, Molnar, Eby, Adler, Bedard, Berg-Weger, Classen, Foley, Horowitz, Kerschner, Page, Silverstein, Staplin, & Trujillo, in press).

Transportation Peer Group established by the American Society on Aging

At the recent annual meeting of the American Society on Aging/ National Council of Aging a peer group dealing with the transportation of the aging society was established. John Eberhard was asked by ASA to establish the group and he, Nina Silverstein, Jeff Finn and Helen Kershcner held an organizing meeting where more than 50 people expressed interest in being a part of the peer group. The activities of the group are still to be determined but there will be further discussion with those expressing interest during the year. If you are interested in joining the peer group send John an email at jeberhard2@msn.com

Recent Publications

Driving and Community Mobility for Older Adults: Occupational Therapy Practice Guidelines

The American Occupational Therapy Association, Inc recently published Driving and Community Mobility for Older Adults: Occupational Therapy Practice Guidelines by Wendy Stav, Linda Hunt, and Marian Arbesman. It provides an overview of the occupational therapy process for driving and community mobility practice among older adults. It provides guidance for the entire process beginning with referrals, through the evaluation, planning and implementing the interventions, reimbursement guidelines, and documentation, within the boundaries of acceptable occupational therapy practice. A summary of the evidence based literature review is included which identifies the best practice interventions for the driver, automobile, infrastructure, community mobility and policy to promote safety, performance, participation, and engagement in community mobility. Supplementary features include case studies, billing categories, a historical perspective, a glossary, and adaptive equipment descriptions. The guidelines are available from the bookstore on the AOTA website: www.aota.org

Community mobility and dementia becomes a chapter in the new Handbook for Social Work Practice and Dementia

Nina M. Silverstein, University of Massachusetts Boston and Lisa Peters-Beumer, Easter Seals examine how social workers can help clients transition from being in the driver's seat to accepting the passenger seat. Beyond the immediate and devastating effects dementia can have on individuals and their quality of life are the strains that are placed on the families, caregivers, and communities that support them. Social workers are in a unique position to address all these issues at the same time that they provide care for individuals with dementia. To facilitate the entrance of social workers into this area of care, Carole B. Cox has edited a volume of expert articles on the biological, psychological, and social aspects of dementia. Included in the volume is a chapter on

community mobility and dementia by Silverstein and Beumer-Peters. Their chapter reviews the current practices in community mobility and dementia from driving to cessation counseling to community mobility options and concludes with recommendations for social work intervention.

Silverstein, N.M., & Peters-Beumer, L. (2007). Community Mobility and Dementia. In.Cox, C. (Ed.) Handbook for Social Work Practice and Dementia (Springer Publishing Company: NY)

Important Concern

Funding for a new wave of the National Household Travel Survey is Missing

According to the Bureau of Transportation Statistics funding for a new wave of the NHTS is not available. The 2001 NHTS consisted of two surveys; the long-distance travel component and the daily travel component. The long-distance component was the responsibility of BTS and was the follow on to the earlier American Travel Survey (ATS). The daily travel was the responsibility of FHWA and was the follow on to the NPTS. BTS had discontinued the long-distance travel component due to lack of funding. FHWA also has funding problems for the daily travel component and is relying on states and MPOs to pay for "add-ons" for their geographic regions. FHWA will conduct the surveys for the states and MPOs and have the combined data from all the add-ons, but it will not be a statistically representative national sample. For the latest information on the daily travel survey you should contact Heather Contrino in FHWA. Heather is in charge of the survey. For those of us who rely on these surveys for our work and to understand the mobility and safety of road users need to find some way to encourage USDOT and the Congress to get the money needed to conduct these surveys. This concern should be a topic for the Committee meeting in January.