Rural Older Drivers
Tough Problems, Effective Solutions
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College of Public Health, University of Georgia
Rural older adults: Who and where are they?

Counties With the Largest, Smallest Shares of Seniors
% of county population ages 65+

Source: U.S. Census Bureau 2014 population estimates
PEW RESEARCH CENTER
Quick facts:

• In 2016, persons reaching age 65 had an average life expectancy of an additional 19.4 years (20.6 years for females and 18 years for males).

• Older adults are a larger proportion of the population in rural areas (18% vs. 14%).

• Older adults are less likely to move than those under 65 (4% moved in the past year vs. 12% of those under 65). Rural residents are also less likely to move than those in urban areas.
Special risks and challenges

• Rural driving is more than twice as dangerous as urban driving (for all age groups). The traffic fatality rate in rural areas of the US is 1.84 per million VMT, as compared with 0.71 per million VMT in urban areas. Rural areas have 19 percent of the US population, but 49 percent of traffic fatalities [NHTSA, 2015 data].

• Rural residents must travel farther to reach health care, shopping and other destinations. Average VMT for rural residents aged 65 to 74 is 9,735 in rural areas vs. 6,458 in urban areas [2009 National Household Travel Survey].

• Only 11% of rural households report having access to transit services [USDOT, Beyond Traffic 2045].
Funding and its limitations

• FAST act (surface transportation block grants to states; competing with many other projects incl. recreational trails, etc.)
• FTA funding (public transit, incl. section 5310 for older adults & those with disabilities)
• Medicaid NEMT (only for Medicaid recipients, only to/from providers)
• Healthcare partnerships with ride-hailing (anti-kickback rules)
• For-profit ventures (duty to investors; Liberty Mobility Now sued)
• Area Agencies on Aging volunteers (volunteer force is also aging)
• MaaS (challenging to implement in rural areas)
Overview of the LongROAD Study
(Longitudinal Research On Aging Drivers)

David Strogatz, PhD
Bassett Research Institute
david.strogatz@bassett.org
• Founded in 1947
• “research and education organization dedicated to saving lives by preventing traffic crashes and reducing injuries when crashes occur”
• October 2012: RFA – “Developing a Long-Term Prospective Cohort Study to Better Understand the Safety and Mobility Needs of Older Adult Drivers”
• Rationale: effects of seniors driving and seniors not driving
Study Design

- **Cohort**
  - Recruit from healthcare system
  - Age 65-79 at baseline

- **Multisite**
  - CA, CO, MI, NY, and MD

- **Longitudinal**
  - Baseline assessment
  - Annual follow up (in-person and phone)
% Current Drivers by Sex and Age: National Health and Aging Trends Study (NHATS), 2011
Mortality and Injury Rates for US Drivers, 2003

Driving Cessation and Health Outcomes: Findings

• **Depressive Symptoms**
  • Driving cessation almost doubled the risk of increased depressive symptoms in older adults

• **Physical Health**
  • Association between driving cessation and reduced physical functioning was strong in longitudinal studies

• **Social Health**
  • Refers to the capacity to interact in society, which can be measured by social engagement, social contacts and satisfaction with social roles and social support
  • One study found driving cessation was associated with 51% reduction in the size of social network of friends and relatives over a 13 year period
Driving Cessation and Health Outcomes: Findings

• **Cognitive Decline**
  • In general, former drivers had accelerated cognitive decline over a 10 year period compared with active drivers

• **Entry into Long-Term Care**
  • One study found former drivers were nearly 5 times as likely as current drivers to be admitted to long-term care facilities

• **Increased Risk of Mortality**
  • Several studies found that driving cessation was a strong predictor of mortality risk, with non-drivers 4 to 6 times more likely to die than drivers
Research Questions

• What are the **risk and protective factors** for driving safety during the process of aging?

• What are the prevalence and user perception of **in-vehicle technologies** and aftermarket vehicle adaptations in old adult drivers?

• What are the effects of **medications** on driving behavior and driving safety in older adults?

• How do older adult drivers cope with physical and cognitive function declines through **self-regulation** of driving?

• What are the determinants and consequences of **driving cessation**?
LongROAD Study: Data Sources

• Participant – surveys, tests, medications
• Medical Record – conditions and procedures
• Vehicle – condition, features
• State DMV – crashes, convictions
• GPS – participant driving experience
## Results: Demographics

<table>
<thead>
<tr>
<th>Demographic Category</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age group</strong></td>
<td></td>
</tr>
<tr>
<td>65-69 years</td>
<td>42%</td>
</tr>
<tr>
<td>70-75 years</td>
<td>35%</td>
</tr>
<tr>
<td>75-79 years</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>47%</td>
</tr>
<tr>
<td>Women</td>
<td>53%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>88%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>7%</td>
</tr>
<tr>
<td>Asian</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>HS deg. or less</td>
<td>11%</td>
</tr>
<tr>
<td>Some college</td>
<td>18%</td>
</tr>
<tr>
<td>Associates/Bachelor’s deg.</td>
<td>30%</td>
</tr>
<tr>
<td>Advanced college deg.</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Household income</strong></td>
<td></td>
</tr>
<tr>
<td>Less than $20,000</td>
<td>5%</td>
</tr>
<tr>
<td>$20,000 - $49,999</td>
<td>21%</td>
</tr>
<tr>
<td>$50,000 - $79,999</td>
<td>24%</td>
</tr>
<tr>
<td>$80,000 - $99,999</td>
<td>14%</td>
</tr>
<tr>
<td>$100,000 or greater</td>
<td>32%</td>
</tr>
</tbody>
</table>
Summary Driving Data Through May 2017: the LongROAD Study

• # miles driven: 26,980,706
• # Trips: 4,131,837
• Avg trips/month: 107.3
• Avg miles/trip: 6.5
• Avg days driving/month: 20.4
• % trips at night/month: 8.1
• % trips <= 15 miles home: 65.0
• # of high speed events: 243,492
  • (6.3/month/driver). Range: 0-896/month
• # of high deceleration events: 132,435
  • (3.4/month/driver). Range: 0-142/month
Visual Ability and Driving Avoidance: the LongROAD Study

% of trips at night

- VISUAL ACUITY
- CONTRAST SENSITIVITY
- VISUAL PERCEPTION

% LOW   % HIGH

VISUAL ACUITY

VISUAL PERCEPTION
Visual Ability and Driving Avoidance: the LongROAD Study

- CONTRAST SENSITIVITY
- VISUAL PERCEPTION

% of trips on high speed roads

% LOW  % HIGH
Differences between Urban, Suburban and Rural Older Drivers: the LongROAD Study

- **Annual mileage by urbanicity**
  - Urban: 8177
  - Suburban: 9868
  - Rural: 10332

- **Hard braking events per 1000 miles driven by urbanicity**
  - Urban: 5.7
  - Suburban: 3.4
  - Rural: 2.7

- **Speeding events per 1000 miles driven by urbanicity**
  - Urban: 10.8
  - Suburban: 7.8
  - Rural: 3.1
Importance of Driving and Potential Impact of Driving Cessation: the LongROAD Study
## Functional Status as Predictor of Driving Cessation by Older Adults: Health and Retirement Study, 1998-2012

<table>
<thead>
<tr>
<th>FUNCTIONAL STATUS</th>
<th>CONTRAST</th>
<th>RURAL HR (95% CI)</th>
<th>URBAN HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-rated Eyesight</td>
<td>Fair-Poor/Excellent</td>
<td>0.93 (0.75, 1.15)</td>
<td>1.31 (1.17, 1.47)</td>
</tr>
<tr>
<td>Recent Fall w/ Injury</td>
<td>Yes/No Falls</td>
<td>1.02 (0.79, 1.32)</td>
<td>1.26 (1.10, 1.44)</td>
</tr>
<tr>
<td>Depression</td>
<td>+ 2 symptoms</td>
<td>1.10 (1.01, 1.21)</td>
<td>1.02 (0.98, 1.07)</td>
</tr>
</tbody>
</table>
Melissa Gray MS, BS

Program Manager

National Aging and Disability Transportation Center
MAJOR OBJECTIVES:
• Person-centered technical assistance and information
• Training
• Communication and Outreach
• Coordination and partnership
• Investment in community solutions

MISSION: To promote the availability of accessible transportation options that serve the needs of Older Adults, People with Disabilities, Caregivers and Communities.

Photo Credit: Meals on Wheels Montgomery County, Conroe, TX
Transportation Options

• Public Transit & Paratransit
• Neighborhood Shuttles/Microtransit
• Volunteer Transportation
• Vouchers
• Taxis
• Shared Ride/Transportation Network Companies
**Transportation Challenges**

- Most older adults and younger adults with disabilities usually travel by car, either driving their own vehicles or riding with family or friends.
- Across age and disability, most anticipate a time when they will not be able to drive.
- Those who give up driving report feelings of isolation, dependence and loss of enjoyment.
Transportation Challenges

- There is no single “go-to” information resource for alternative transportation options. Most turn to family and friends for help.
- Most believe finding alternative transportation will be difficult.
- Fewer people living in rural areas or small towns say their transportation alternatives are good.
Those who give up driving report feelings of isolation, dependence and loss of enjoyment.

**Younger adult with disability, age 33**

“I have lost independence, spontaneity, pride, sense of accomplishment. I have to prearrange everything and rely on others to get me places, wait for me, drive me home.”

**Older adult with disability, age 75**

“I have to depend on my wife to get us around. It can sometimes be a very helpless feeling.”

Q57: Can you give a specific example of how not driving has impacted you?
More public transportation is frequently mentioned as a need in communities.

<table>
<thead>
<tr>
<th>Older adults</th>
<th>Younger adults with disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>“An affordable transportation service for senior citizens and the handicapped that <strong>live in the rural communities.</strong>”</td>
<td>“I live in a very small town. We only have 1 company with 2 vans that pick people up. I live in the country and they don't come out this far. <strong>We need help in rural areas.</strong>”</td>
</tr>
<tr>
<td>– 60-year-old without a disability</td>
<td>– 49-year-old with a disability</td>
</tr>
<tr>
<td>“<strong>An effective public transportation system</strong> that runs frequently rather than occasionally.”</td>
<td>“<strong>Buses that run on the weekends.</strong> There are no buses that go between local towns on the weekend, and the buses that do run in the town don't run on Sundays.”</td>
</tr>
<tr>
<td>– 60-year-old without a disability</td>
<td>– 51-year-old with a disability</td>
</tr>
</tbody>
</table>

Q70: What would you like to see in your community that would help you get around better?
Community Transportation Innovations

Grant Programs:
- NADTC Innovations in Accessible Mobility
- Inclusive Coordinated Transportation Partnership Project

Grant program goals:
- Strengthen the connections between transit and human services
- Build bridges between transportation and community programs that support community living
- Demonstrates the value that inclusive processes can bring to transportation efforts
Community Transportation Innovations

Area Agency on Aging 1-B in Southfield, MI created and promoted a travel training program, conducted travel training courses, recruited a volunteer travel trainer, and provided instruction on how to use local transit to nearly 100 individuals.

Mountain Empire Older Citizens in Big Stone Gap, VA recruited and trained volunteers to assist transit passengers with chronic conditions and those receiving kidney dialysis and added a care coordinator to an existing one-call center.

North Front Range MPO in Fort Collins, CO will implement a centralized One-Call/One-Click center whereby existing transportation providers in Larimer County will coordinate their services to deliver more ride options for older adults and adults with disabilities in rural areas of the county.
More information about public transportation is needed.

Older adult, aged 60

“…If I get to where I am unable to drive myself, reckon I would have to think about moving closer to town. That is not an option at this time in my life nor would I want to.”

Younger adult with disabilities, aged 32

“There should be more public transportation. Maybe more information should be given to the public through social media or news.”

Caregiver of an older adult with a disability

“A list of transportation services would be handy along with any other information for the elderly.”

Q70: What would you like to see in your community that would help you get around better?
Every Ride Counts

- Comprehensive publicity campaign for local communities
- To promote the availability and accessibility of transportation options for older adults, people with disabilities and caregivers
- Includes *postcards, flyers, posters* and *social media messages* that can be customized with local contact information
- For an overview of the campaign and access to materials, go to: [https://www.nadtc.org/everyridecounts/](https://www.nadtc.org/everyridecounts/)
Every Ride Counts

SIT BACK AND
RELAX.

We’ll get you there.

EVERY RIDE COUNTS

EVERY RIDE COUNTS

Tried transit lately?
You’d be surprised how easy it is.

EVERY RIDE COUNTS

WE CAN HELP YOU
GET WHERE YOU
NEED TO GO.

FOR MORE INFORMATION
(276) 523-7433
info@meoc.org

Multimodal Elder Options Inc.
Serving age, Scott, Wise Counties and the
Chapman, Virginia.

EVERY RIDE COUNTS
Please evaluate this presentation using the Lifesavers Conference Mobile App.