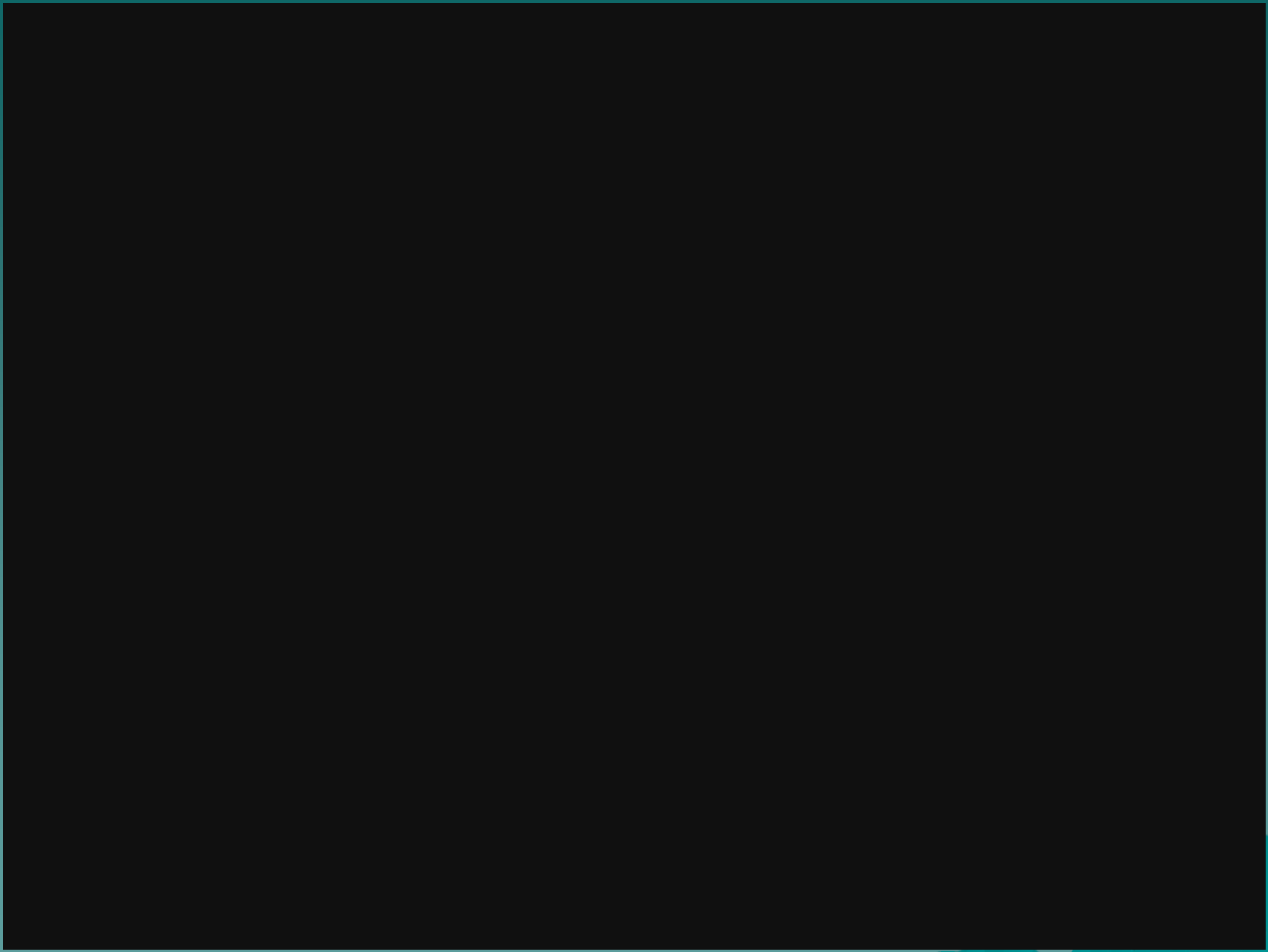


Older Drivers in Oregon: Factors Associated with Continuing or Ceasing to Drive

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If Nobody Believed in You, Artist: Joe Nichols

Why Study Older Drivers?

- ◆ The world is aging
- ◆ Mobility is critical for overall life satisfaction, both for meeting the daily necessities of life and for maintaining social connections
- ◆ Driving cessation has been linked to:
 - Increased risk of depression and isolation
 - Reduction of activities outside the home
 - Loss of independence

Why Study Older Drivers?

◆ Safety issues

- Those aged 80+ tend to limit miles driven BUT are 3 times more likely to die if in traffic accident (Cobb 1998)

◆ Older drivers face four main challenges to driving

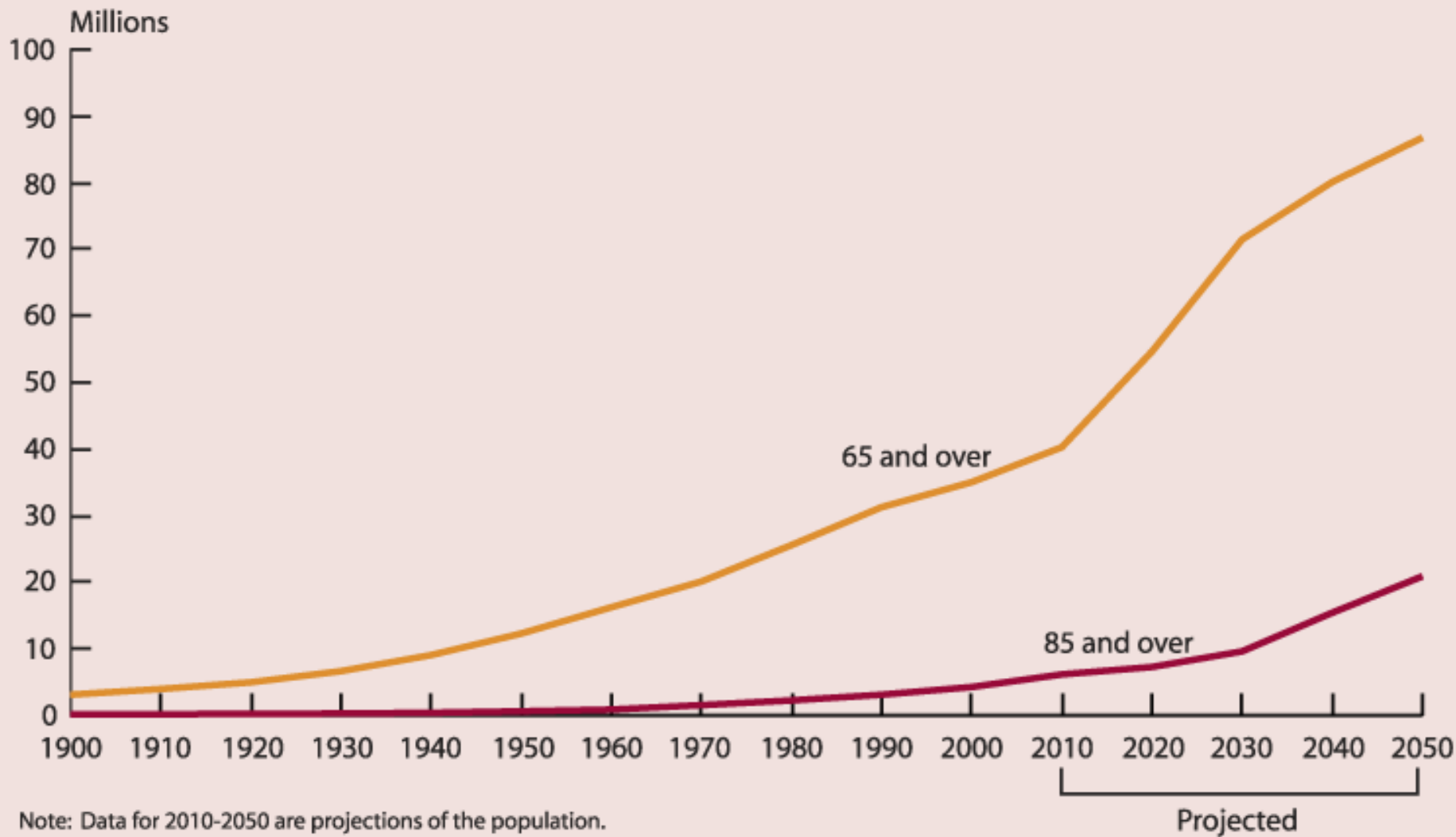
- sensory and perceptual changes
- cognitive changes
- response and execution changes, and
- the effects of medication(s) (Klavora & Heslegrave, 2002)

- ◆ Mixed findings re: causing accidents
 - ◆ Some studies show older adults are second most likely age group (after 18-25 year-olds) to cause in an accident
 - ◆ But Langford, Methorst, and Hakamies-Blomqvist (2005) found 75+ cause fewest number of accidents when controlling for kilometers driven
- ◆ The majority of older drivers modify their driving behaviors and/or do not pose a safety threat, BUT some older drivers continue to drive even when they are not able to do so safely

- ◆ Better understanding of the problems faced by older drivers is imperative, given:
 - the aging of the population and
 - the fact that the rate of mass transit usage among older adults has remained stagnant for at least the past two decades (Giuliano et al. 2003)

NUMBER OF OLDER AMERICANS

Number of people age 65 and over, by age group, selected years 1900-2000 and projected 2010-2050



Note: Data for 2010-2050 are projections of the population.
Reference population: These data refer to the resident population.
Source: U.S. Census Bureau, Decennial Census and Projections.

POPULATION BY SELECTED AGE GROUP, SEX-RATIO, AND GEOGRAPHIC AREA

Total Population by Age

Source: 2000 Census, SFT 1, Table P8.

Geographic Area	Percent of Total Population by Age				Male/Female Ratio			
	45-49	50-54	55-64	65+	45-49	50-54	55-64	65+
United States	7.2	6.2	8.6	12.4	96.8	95.5	91.8	69.8
Oregon	8.0	6.9	8.9	12.8	98.4	98.8	96.2	74.2
Washington	7.7	6.6	8.4	11.2	98.2	99.3	98.5	74.0

State Projections of Population Aged 65 and over: July 1, 2005 to 2030

Percent of Persons 65 and over

State	Census 2000	Projection 2005	Projection 2010	Projection 2015	Projection 2020	Projection 2025	Projection 2030
US	12.4%	12.4%	13.0%	14.5%	16.3%	18.2%	19.7%
OR	12.8%	12.5%	13.0%	14.7%	16.5%	17.8%	18.2%
WA	11.2%	11.3%	12.2%	13.9%	15.7%	17.3%	18.1%

Data Source: File 2. Interim State Projections of Population for Five-Year Age Groups and Selected Age Groups by Sex: July 1, 2004 to 2030

U.S.Census Bureau, Population Division, Interim State Population Projections, 2005.

PERSONS WITH DISABILITIES, BY AGE GROUP

Sex by Age by Disability Status by Employment Status for the
Civilian Noninstitutionalized Population 5 Years and Over

Source: 2000 Census, SF 3, Table P42.

Geographic Area	Persons with Disabilities			
	16 to 64	65 to 74	75+	65+
United States	18.6	32.3	53.6	41.9
Oregon	17.4	30.8	53.0	41.5
Washington	17.2	31.7	53.9	42.3

DISABILITIES OF 65+ CIVILIAN NONINSTITUTIONALIZED POPULATION

Age by Types of Disability for the Civilian
Noninstitutionalized Population 5 years and Over

Source: 2000 Census, SF 3, Table P41.

Geographic Area	Total with Disabilities	Percentage of Civilian Noninstitutionalized Population 65+ Years with Disabilities				
		Sensory	Physical	Mental	Self-care disability	Go-outside-home disability
U.S.	27,856,428	17.0	34.3	12.9	11.4	24.4
Oregon	349,140	18.8	35.0	13.5	10.9	21.8
Washington	544,316	19.7	34.0	13.3	11.0	22.1

THE WORLD IS AGING

The world is aging, especially in developing regions

- ◆ 2006: 11% of global population aged 60+
- ◆ 2050: 22% (more older people than children aged 0-14 for the first time in human history)
- ◆ Portland/Vancouver:
 - 2000: 10.5% aged 65+
 - 2030: 17% aged 65+ (137% increase, compared to 47% for the total population)

MORE OF THE WORLD'S POPULATION LIVING IN URBAN AREAS

2007: 49%

2030: 60% (with most growth in cities of less than 5 million and in developing regions)



Sources:

WHO (2007). *Global Age-Friendly Cities Guide*.

Neal et al. (2006). *Age-Related Changes in Housing and Transportation* (Report prepared for Metro).

THE OLDER DRIVER IN OREGON: A SURVEY OF DRIVING BEHAVIOR AND CESSATION (SPR 639)

http://www.oregon.gov/ODOT/TD/TP_RES/docs/Reports/2008/Older_Driver_in_Oregon.pdf

Conducted statewide mail survey and telephone interviews with older drivers and older adults who had voluntarily ceased driving (N=500 mailed surveys; N=100 telephone interviews).

STUDY CONSISTED OF 3 PHASES

1. Short screening survey mailed to a sample of older adults in Oregon to assess their willingness to respond to a longer survey about the transportation behaviors and needs of older adults
2. Developing and mailing the larger survey, which included a request for volunteers to participate in a follow-up telephone interview
3. Conducting telephone interviews with a sample of those respondents to the second mail survey, who volunteered to be interviewed.

METHODS

500 Mail Surveys

342 respondents who were current drivers

- ◆184 urban
- ◆141 rural
- ◆17 who did not report their urban/rural area status

158 respondents who had voluntarily ceased driving

- ◆110 urban
- ◆37 rural
- ◆11 who did not report their urban/rural area status

Both drivers and ceasers were identified using records from 1999 to 2006 that were provided by ODOT, Driver and Motor Vehicle Services

METHODS (Continued)

100 Telephone Interviews

- Conducted with a sample of older adults who indicated on their completed mail survey that they were willing to be called for a follow-up interview.
- Telephone interviews completed with
 - ◆33 urban drivers
 - ◆36 rural drivers
 - ◆25 urban ceasers
 - ◆6 rural ceasers

Analysis of the interview data was completed using qualitative analytic software, allowing the researchers to examine, across types of respondents, common themes and differences that emerged from the narrative data.

METHODS (Continued)

Purpose of telephone follow-up interviews was to provide elaboration of the transportation experiences of older adults, including:

- changes in driving patterns with age;
- reasons and circumstances surrounding ceasing to drive;
- the impacts of ceasing to drive;
- the availability, use, and limitations of transit options; and
- suggestions for transportation planners to better meet the needs of older drivers and non-drivers around the state.

RESEARCH QUESTIONS

- ◆ What are the factors that influence voluntary driving cessation?
- ◆ What are the physical and emotional barriers that delay driving cessation?
- ◆ What opportunities exist for alternative transportation after driving cessation?
- ◆ Do drivers make relocation decisions on the basis of driving cessation?
- ◆ What are the warning signs that make a driver stop driving?
- ◆ Was there a crisis situation that forced the driver to stop driving and, if so, what was it?

◆ Important findings re: “ceasing”

- Some people who *generally* had ceased to drive reported actual instances of continuing to drive,
- Other ceasers reported that they *would* still drive if they felt it was necessary to do so.

FACTORS ASSOCIATED WITH DRIVING CESSATION

Older adults who had ceased voluntarily to drive were

MORE likely to:

- Be older (average age 84)
- Be female
- Be widowed
- Live alone
- Have less education, lower income
- Live in senior housing
- Live in an urban area
- Have poorer self-rated health
- Have altered travel due to health
- Use public transit when it was available

LESS likely to:

- Own their residence
- Be employed and to volunteer

PHYSICAL & EMOTIONAL BARRIERS THAT DELAY DRIVING CESSATION

- ◆ No alternative but to drive:
 - Medical emergencies
 - Lack of other options



- ◆ Negative effects of no longer driving:
 - Social isolation (seeing friends less)
 - Reduced work and volunteer activities
 - Being able to visit places less often
 - Sense of lost independence
 - Discomfort asking others to drive

PHYSICAL & EMOTIONAL BARRIERS THAT DELAY DRIVING CESSATION (cont.)

- ◆ Anticipated negative impacts of no longer driving likely influenced drivers' unwillingness to consider ceasing to drive.
 - Current drivers anticipated even greater negative effects of ceasing to drive than ceasers reported had actually occurred.

WHAT OPPORTUNITIES EXIST FOR ALTERNATIVE TRANSPORTATION AFTER DRIVING CESSATION?

- ◆ Lack of awareness, particularly of special transportation options
- ◆ Lack of transportation options, especially in rural areas
- ◆ Few drivers viewed the transit options available to them as viable alternatives to driving due to:
 - Lack of service, insufficient routes
 - Limited / infrequent service, especially evenings, weekends
 - Distance to stops
 - Scheduling and reliability issues with dial-a-ride programs

RELOCATION DECISIONS ON THE BASIS OF DRIVING CESSATION

- ◆ The vast majority of both current drivers (80%) and ceasers (85%) had not considered/would not consider relocating in order to have better access to public transportation
- ◆ If relocation *were* to be considered, access to public transportation and a setting where one could meet all daily needs were seen as important



WARNING SIGNS THAT MAKE A DRIVER STOP DRIVING

- ◆ Health / Medical issues
 - Poor vision
 - Diminished reflexes and coordination
 - Getting confused while driving
 - Taking medication that affects driving
- ◆ Feeling they were not a safe driver
 - Having too many accidents
 - Citations
- ◆ Having someone else available to drive
- ◆ Having their doctor or family or friends advise them to stop
- ◆ No longer feeling able to afford driving
- ◆ Losing confidence in their driving

WAS THERE A CRISIS SITUATION THAT FORCED THE DRIVER TO STOP DRIVING AND, IF SO, WHAT WAS IT?

- ◆ No, generally not
 - Health/physical and personal changes occurred gradually over time, leading to changes in driving patterns, usually in 1-4 years
 - Most of the changes occurred when the driver was between 75 and 80 years of age
- ◆ The most common changes in driving made by older drivers (in urban and rural areas):
 - Avoiding traffic congestion
 - Avoiding “rush hour”

SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Actively include older adults in transportation planning and decision making
- ◆ Better dial-a-ride and on-call services
- ◆ Enhanced bus services
 - More routes
 - More frequent service
 - More stops
 - Better transit connections
- ◆ Infrastructure improvements to enhance mobility and use of transit (e.g., better sidewalks, better lighting, covered benches at stops)



SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Implement ways to make it easier for older adults to drive longer:
 - larger traffic signs and stop lights
 - better lighting
 - driver education, and
 - self-assessment tests
- ◆ Educate family members professionals alike re: reasons to continue/cease driving so they can better make the case for voluntary ceasing of driving when that is appropriate

SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Develop enhanced marketing and delivery of transportation options, targeted at both older adults and their families and friends
- ◆ Think creatively to identify ways to address the clear deficit in transportation options available to older adults living in rural areas in Oregon
- ◆ Assess the quality of existing transportation options and determine what, if any, improvements are needed and how to accomplish them

SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Provide education of older adults and caregivers to create reasonable expectations of transit
- ◆ Provide training concerning how to find and use available transportation options
- ◆ Approach transportation from a more holistic view, involving developing consortia to pool resources and identify creative options

MORE SPECIFIC SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Conduct longitudinal research to better understand the factors that lead individuals to cease driving, as well as the impacts of ceasing to drive
- ◆ Explore the development of local or regional medical transit services, in particular, where these do not exist (especially in rural areas), are not well known, or are not meeting current or anticipated needs
- ◆ Develop a statewide, crosscutting consortium to plan and guide enhanced alternatives to driving and to guide future research

SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Educate elders re: what to look for in a residential setting (e.g., access to which services would be most beneficial)
- ◆ Provide training in riding public transportation when it is available



SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS



SUGGESTIONS FOR TRANSPORTATION IMPROVEMENTS

- ◆ Explore the implementation of shorter license renewal periods
- ◆ Conduct research re: licensing requirements
 - shorter license renewal periods?
 - Is the vision test required in Oregon every eight years for drivers aged 50 and older effective in screening older drivers and detecting changes in their driving abilities?
 - Should we have more frequent testing, beyond that required for standard license renewal, especially for drivers considered to be at higher risk of having accidents?