The Safety and Mobility Patterns of Older Women in 2030

presented to
Impact of Changing Demographics on the Transportation System

presented by
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Outline of Today’s Presentation

● Overview

● Differences in Women and Men’s Travel

● Differences in Safety Patterns and Trends

● Policy and Research Recommendations
Overview

- An aging society brings dual challenges: Safety and Mobility

- Continued gender differences but bigger gaps among those over 65

- Socio-demographic changes and differences between the sexes affect travel
Policy Implications

• Improve all aspects of the driving and pedestrian environment
• Increase the level and quality of transportation alternatives
• Promote elder-friendly land use and community design options
Research Implications

- Do the types and severity of crashes differ by gender?

- Are there gender differences in needed roadway safety improvements?

- What happens at the intersection of age, sex, race, and ethnicity?

- Which land use concepts deal with aging-in-place as well as new communities?
Travel Trends and Mode Choice
Differences by Sex in:

- Licensing
- Trip patterns and mode choice
- Self-regulation and feelings about driving
- Response to educational messages and driver training programs
- Driving cessation
License-holding by Age, 2003

The graph shows the percentage of population with licenses across different age groups for males and females. The graph indicates a decrease in license-holding as age increases.
## Trends in Licensing and Travel, 1983 - 2001

<table>
<thead>
<tr>
<th></th>
<th>Percent Licenced</th>
<th>1983 - 2001 Percent Change</th>
<th>Annual Miles</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1983</td>
<td>2001</td>
<td>Daily Trips</td>
</tr>
<tr>
<td>Women</td>
<td>47.7</td>
<td>71.3</td>
<td>106.7</td>
</tr>
<tr>
<td>Men</td>
<td>85.7</td>
<td>91.4</td>
<td>72.7</td>
</tr>
</tbody>
</table>
# Mode Choice By Sex and Driver Status, 2001

<table>
<thead>
<tr>
<th>Mode</th>
<th>Drivers</th>
<th>Non-Driver</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>POV</td>
<td>91.6</td>
<td>91.4</td>
<td>66.4</td>
<td>63.6</td>
</tr>
<tr>
<td>Transit</td>
<td>0.8</td>
<td>0.8</td>
<td>10.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Walk</td>
<td>7.2</td>
<td>7</td>
<td>21.7</td>
<td>28.7</td>
</tr>
<tr>
<td>All Others</td>
<td>0.4</td>
<td>0.8</td>
<td>1.2</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Driver vs Passenger Status of Older Drivers in POV, 2001
Self-Regulation and Feelings About Driving

- Women more likely to self-regulate
- Women self-regulate in different ways
- Women more often express lack of confidence in their driving
- Women are disparaged from driving by spouses
“My husband always tells me what I’m doing wrong...not turning the right way or waiting too long. It’s just easier to let him drive although he’s...well he’s not as good as he used to be. I just close my eyes and pray (laughs).” (78 old woman driver, Sheffield, UK)
“I didn’t drive much when my husband was alive...it was hard to start again. He wanted to drive; it gave him something to do after he retired....[H]e really should have stopped driving before that, he wasn’t doing well...and I tried to drive him but he always complained about my driving...I would ask my daughter to take him.” (75 year old woman driver, Tucson)
“My mother drives very well but my father really shouldn’t be driving. But he doesn’t like her to drive and she goes along with what he wants and lets him drive... I tell her she should say something to him but she won’t....she doesn’t like to argue. I wish he would stop driving and just let her do it but I guess I understand why he won’t.”

(Associate child of two older drivers, Birmingham, UK)
Driving Cessation

Women stop driving at younger ages

Men and women have different reasons for cessation:

- Medical or vision problems: 90% of men, 46% of women
- Lacking confidence or feeling driving stress: 17% of women, 0% of men
“My husband was after me all the time to stop…I didn’t have that much confidence and he was telling me that I wasn’t driving right…I was hesitating like… or going the wrong way…he kept saying he should drive me…” (77 year old Tucson woman, former driver)”
Driving Cessation

So, why do women stop driving?

• *Because men insist on doing the driving?*
• *Because they don’t practice?*
• *Because it means less to them?*
Response to Educational Messages and Training Programs

- Women at all ages respond differently to safety messages and educational campaigns.

- Older women respond differently to driver training:
  - Tucson study: women less likely to self-regulate after training and less likely to use alternatives.
  - AARP study: women rated themselves as poorer drivers than men but were more likely to say the course had made them better drivers.
Summary: Travel Trends and Mode Choices of Older Women

- Less likely to be licensed; make fewer trips and travel fewer miles
- Make different mode choices
- Are more likely the passenger than the driver
- Practice greater and different self-regulation
- Express lack of confidence in driving
- Cease driving earlier than men (and for less definite reasons)
Safety Trends
Differences in Safety Patterns and Trends

- All older drivers behave more safely than those younger; they are:
  - More likely to buckle up
  - Less likely to drive impaired
  - Less likely to engage in risky driving behavior
Are Older Women at More or Less Risk—Than Men or Younger women?

It all depends on what you count:

- **Absolute** injuries or fatalities
- Crash or injury rates **per capita**
- Crash or injury rates **per driver**
- Crash or injury rates **per mile driven**
# Changes in Absolute Fatalities (000) by Sex, 1995 - 2005

<table>
<thead>
<tr>
<th>Type Of Crash</th>
<th>1995</th>
<th>2005</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Driver Involved in Fatal Crash</td>
<td>2,014</td>
<td>4,226</td>
<td>1,918</td>
</tr>
<tr>
<td>Driver Fatalities</td>
<td>1,323</td>
<td>2,571</td>
<td>1,231</td>
</tr>
<tr>
<td>Pedestrian Fatalities</td>
<td>505</td>
<td>758</td>
<td>370</td>
</tr>
<tr>
<td>Total Traffic Fatalities</td>
<td>3,137</td>
<td>3,861</td>
<td>2,639</td>
</tr>
</tbody>
</table>
Driver Fatal Crashes Per 100 Million Miles Traveled, 2001-02

Driver age

(a)
The Bottom Line

- 200,000 older women killed or injured annually (2006)

- Although older women constitute 12% of the population they account for
  - 14% of auto fatalities and crashes
  - 19% of pedestrian fatalities

Unless significant countermeasures are employed, traffic fatalities for older drivers are projected to double or triple by the year 2030. (NHTSA, 2008)
Summary: What Do We Know About the Safety Risks of Older Women?

- Fewer citations
- Fewer total crashes
- Fewer fatal crashes
- Less risky driving and pedestrian behavior
- 13% of female population (2008) but 20.8% of all female fatalities
- Faster growth in fatalities than growth in the population (2.2% vs .08%)
High Fatality Rates and Fragility: Does It Explain “Too Much”?

- Women over 65 have the highest number of vehicle fatalities per capita of all cohorts of either sex.
- Women by 85 have the highest fatal crash involvement of all age cohorts.
- Women over 70 have the highest number of pedestrian fatalities per capita of any cohort.
- The role of fragility vs. the type of crash or differences in vehicles and vehicle safety equipment or in type of driving.
Policy Recommendations
Keeping Older Women Safely Mobile

1. Alter the Auto-based System to Facilitate the Driving Task

2. Expand and Improve a Range of Transportation Alternatives

3. Develop, Design, and Retrofit Communities
Research Recommendations
Research Questions, I

Will the next generation of older women self-regulate more and cease driving earlier?

Do the types and severity of crashes differ by gender and better explain higher fatalities among older women?
Research Questions, II

- Do women react differently to or need different attributes from roadway and vehicle improvements?

- Why do older women cease driving when they may objectively be able to continue to safely drive?

- How can we develop and implement safety, educational, and training programs that effectively target older women?
Research Questions, III

- How do age, sex, and race or ethnicity interact to affect both safety and mobility needs and outcomes for older people?

- What housing and land use strategies can be used to increase safety and mobility for older people in existing as well as new communities?
The Challenge

If the problem impacts a large number of women in a consistent manner ----

It’s a women’s problem!