

NTSB Public Forum on Safety, Mobility, and Aging Drivers

Bonnie M. Dobbs PhD
Director, Medically At-Risk Driver Centre
University of Alberta, Canada

Washington, DC
November 9 & 10, 2010

A Focused and Integrated Approach

(Dobbs, 2008)

Identification

- **Broader Involvement**

Medical Community

Law Enforcement

Individual

Families and Friends

Community At-Large

Licensing Authorities

- **Evidence-Based Screening Tools**
- **Coordinated System**

Assessment

- **Functionally-Based Assessments**
- **Evidence-Based, Standardized Protocols**
 - Protection of those who are safe to drive
 - Protection from those who are unsafe
 - Risk Management/ Legal defensibility

Support

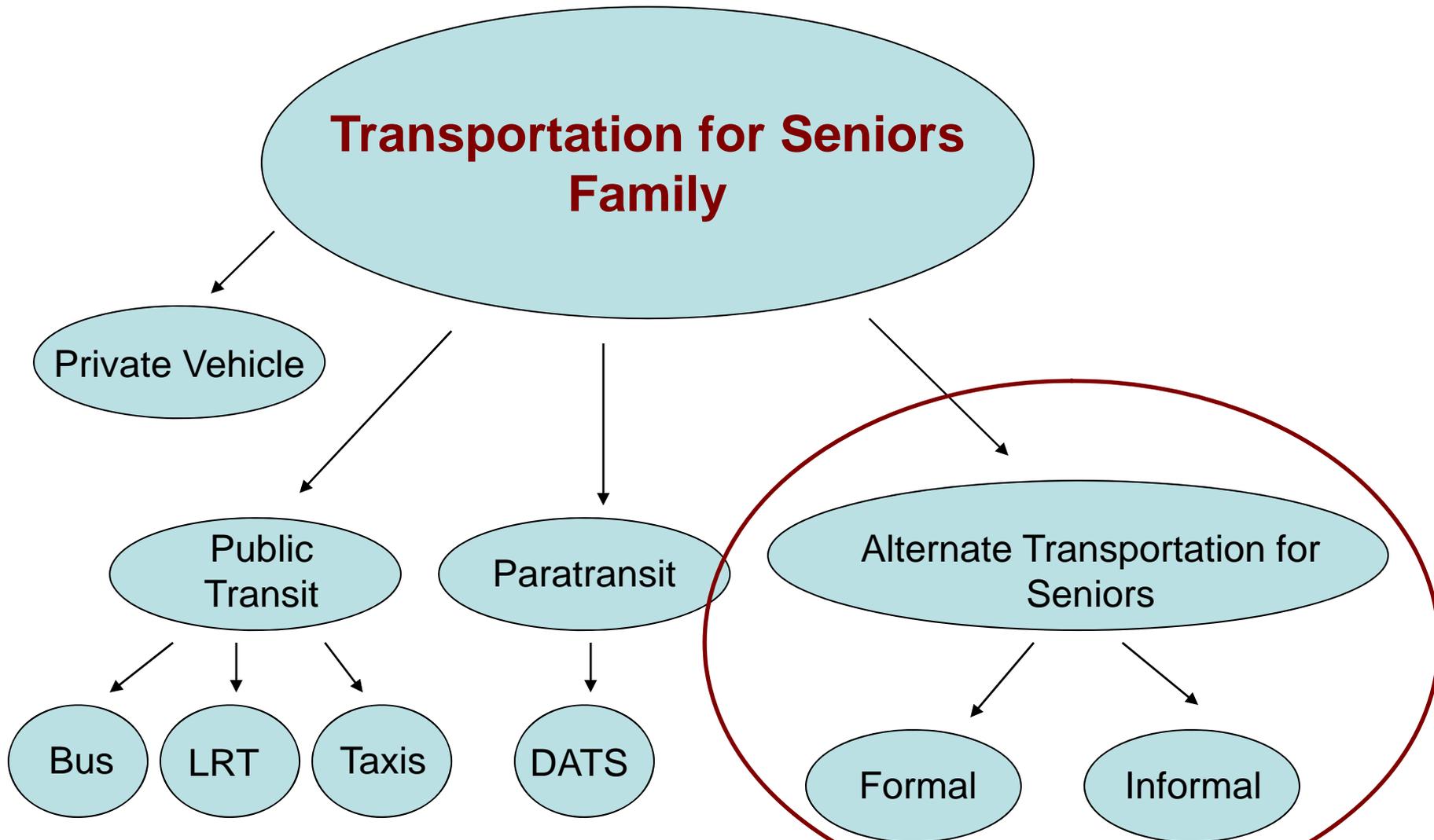
Psychosocial

Mobility



- **Assist with transition**
(Individual and family)
- **Driving Cessation Support Groups for Individuals and Caregivers**
- **Alternate Mobility**
 - Awareness
 - Implementation

Transportation for Seniors



Types of ATS Service Provision

| | |
|---|--|
| Curb-to-Curb | Curb-to-curb transportation services offers transportation from curbside of place of origin to curbside of destination. This type of service is likely to be inappropriate for seniors with deficits (e.g., sensory, motor, or cognitive impairments). |
| Door-to-Door | Door-to-door transportation services offers transportation from the door of place of origin to door of destination. Although this type of service is more appropriate for seniors with deficits, it still is not ideal. |
| Door-through-Door (Arm-to-Arm) | Door-through-door transportation services offer personal, hands-on assistance, providing 'escorted' services that serve to enhance the safety and mobility of the vulnerable segments of the senior population. |

Adapted from http://www.aoa.gov/prof/transportation/media/Door-Through-DoorGuide/HowToGuide_DoorThroughDoorTransportation.pdf

What is Important in Alternate Transportation Provision for Seniors?

Availability

Transportation services are provided to seniors and those services are available when needed (e.g., days, evenings; weekdays, weekends)

Acceptability

Service quality is acceptable in terms of advance scheduling; vehicles are clean and well-maintained; service providers provide driver 'sensitivity to seniors' training

Accessibility

Service providers provide 'door-to-door' and 'door-through-door' transportation; service providers provide transportation to essential and non-essential activities

Adaptability

Transportation can accommodate riders wanting to make multiple stops (trip chaining); allows for different types of routes (fixed vs. client response) and passenger service (single vs. group); can accommodate wheelchairs and walkers; escorts can be provided

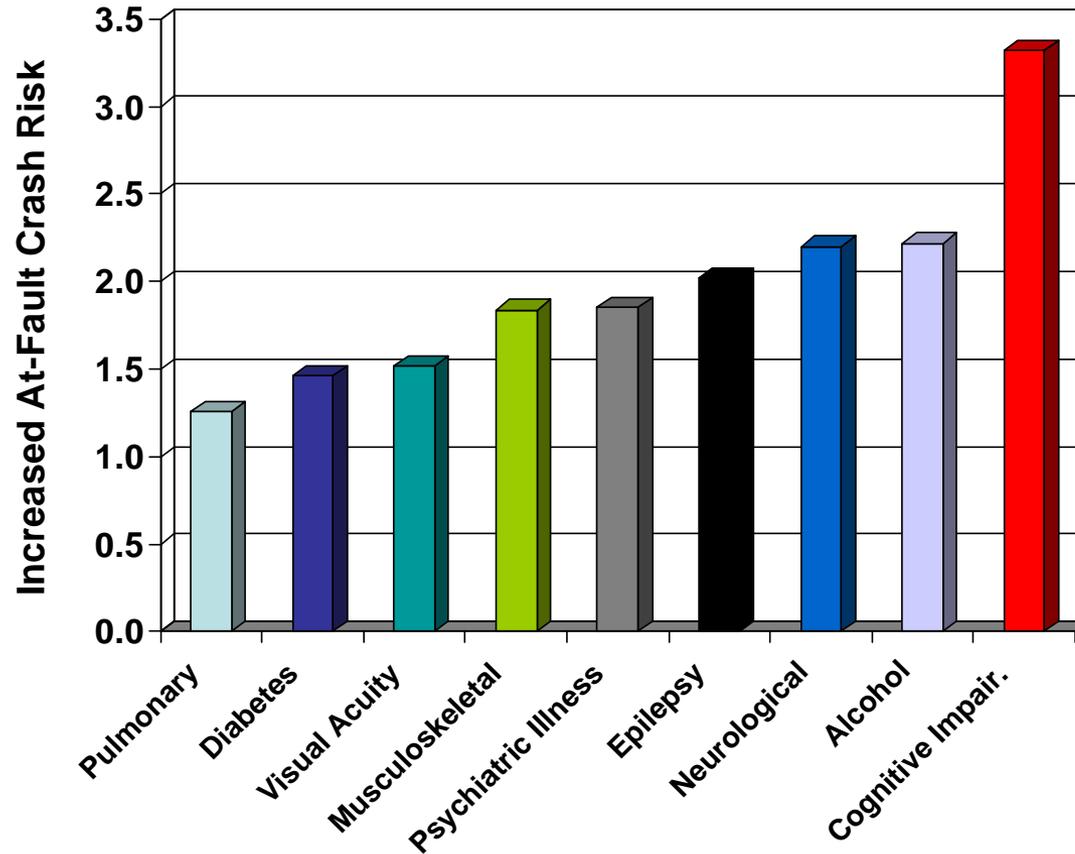
Affordability

Cost of transportation is affordable (e.g., uses volunteer drivers to reduce costs; vouchers or coupons available, etc.)

Older Driver or Medically At-Risk Driver Problem?

- Sensory, motor, cognitive abilities needed for 'safe' driving
- All change with age
- However, normal age associated changes are unlikely to affect driving competency except at the extreme upper age range
- Presence of a medical condition and/or treatments for those conditions an important factor in driving competency
- Many are age-associated

Increased At-Fault Crash Risk: Selected Medical Conditions



Source: Diller, E, Cook, L, Leonard, D, Reading, J, Dean, JM, Vernon, D. Evaluating drivers licensed with medical conditions in Utah, 1992-1996. DOT HS 809 023. Washington, DC: National Highway Traffic Safety Administration.

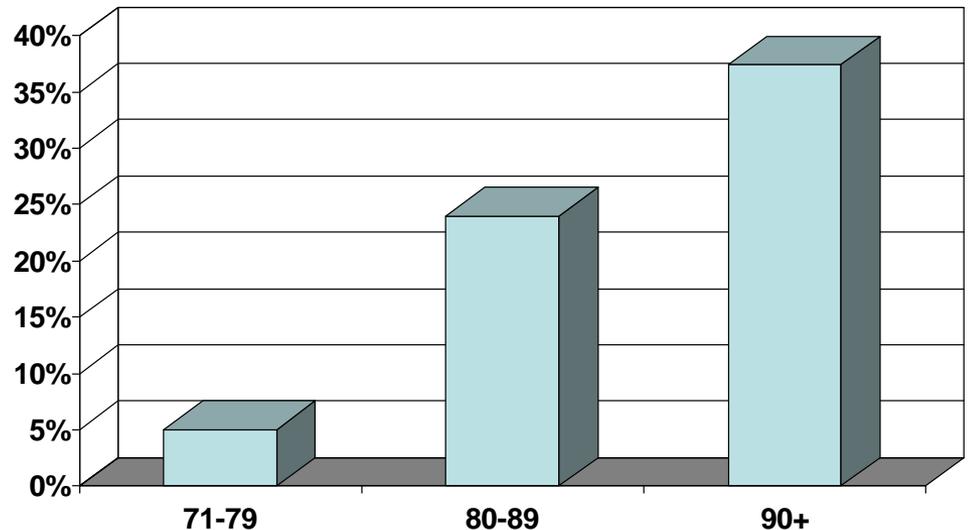
Relative Risk of Medical Conditions on Driving

| Main Group | Vaa 2003 |
|-------------------------|----------|
| Vision impairment | 1.09 |
| Hearing impairment | 1.19 |
| Locomotor disability | 1.17 |
| Cardiovascular diseases | 1.23 |
| Diabetes mellitus | 1.56 |
| Neurological Diseases | 1.75 |
| Epilepsy | 1.84 |
| Depression | 1.67 |

Vaa, T. (2003). IMPAIRMENTS, DISEASES, AGE AND THEIR RELATIVE RISKS OF ACCIDENT INVOLVEMENT: RESULTS FROM META-ANALYSIS. **IMMORTAL** CONTRACT NO GMA1/2000/27043 SI2.319837, Institute of Transport Economics, Norway

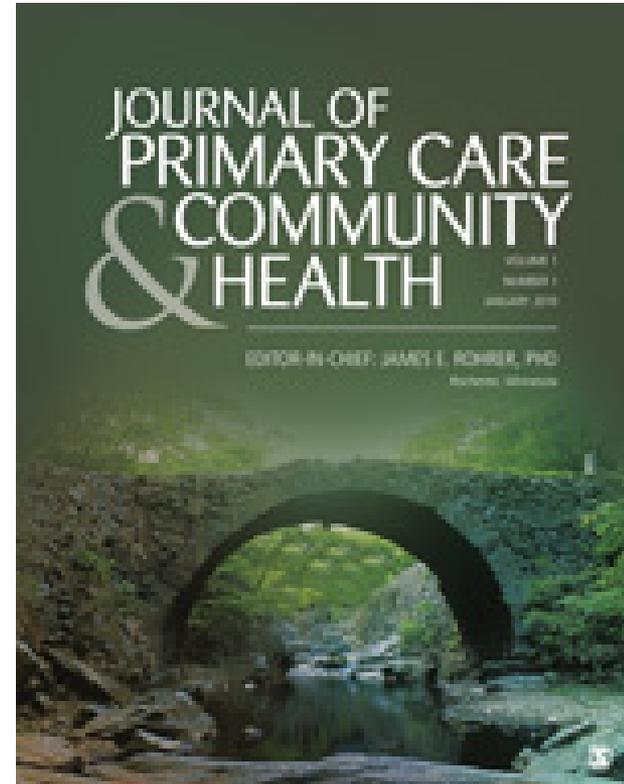
Concerns about Dementia

- 1 in 7 Americans have a dementia (3.4 million Americans 71 and older)
- Prevalence projected to increase seven fold with aging of the baby boomers
- All drivers with progressive dementia will become unsafe to drive



The SIMARD MD

A Scientifically Based Screening Tool for the Office Based Identification of Cognitively Impaired Drivers



Dobbs, B.M., & Schopflocher, D. (2010). The introduction of a new screening tool for the identification of cognitively impaired medically at-risk drivers: The SIMARD A Modification of the DemTect. *Journal of Primary Care and Community Health*, 1(2), 119-127.

Driving Cessation Competency Framework (Dobbs & Dobbs, 2000)

'Real' Competency

Yes

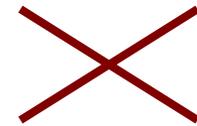
No

Perceived
Competency

Yes

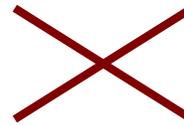


Appr. Cont'd Driving

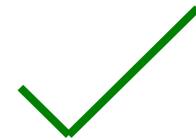


Inappr. Cont'd Driving

No



**Inappr. Driving
Cessation**



**Appr. Driving
Cessation**

Dobbs, A.R., & Dobbs, B.M. (2000). The role of concordance between perceived and real competence for mobility outcomes. In K.W. Schaie, & M. Pietrucha (Eds.). *Mobility and transportation in the elderly* (pp. 251-267). New York: Springer Publishing.