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JULY 28-31

## Law Enforcement's Identification and Referral of Medically Impaired Older Drivers



**TREDs**  
Training, Research  
and Education for Driving Safety

A special thanks to the California Office of Traffic Safety, through the National Highway Traffic Safety Administration, for a grant that was awarded to the Department of Family and Preventive Medicine to make this activity possible.

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## Presenters

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## NHTSA Priority

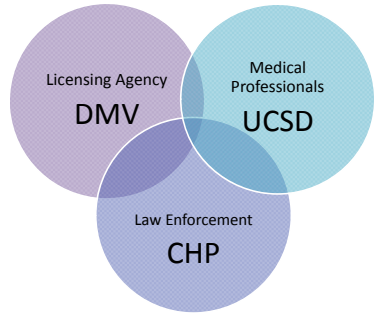
### NHTSA's Older Driver Program 5 Year Strategic Plan 2012-2017:

Addresses the "need for law enforcement to have more training and information to help them **better assess warning signs and understand what next steps to take** and what actions are mandated by laws within their jurisdiction."

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## Collaboration



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## Presentation Overview

- Overview of Law Enforcement Curriculum
- Development and Validation of a Roadside Tool to Assess for Cognitive Impairment
- Demonstration of Methods to Assist with Identification of Impairments in Older Drivers
- Referrals for Driver Re-Examination
- Program Evaluation and Conclusions

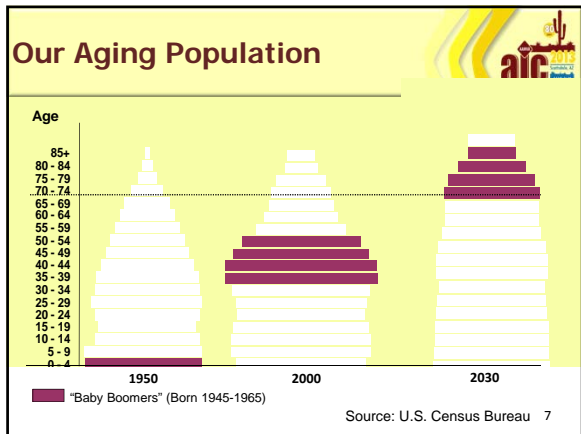
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## TREDs Training Curriculum

Topic	Learning Objective Officer will understand:	Personnel
Aging and Medical Conditions	How age-related changes in health and functional status impair driving ability and increase crash risk	Physician
Older Driver Traffic Stop	Approaches to identifying impairment in older drivers	Law Enforcement
Driver Re-Examination	Enforcement actions for documenting suspected impairment	Department of Motor Vehicles
Driver Education and Evaluation	Resources to assist aging drivers maintain mobility	Health Educator

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### Older Drivers Facts

- By 2030, 70 million (1 out of every 5) Americans will be over age 65 (NIH, 2013)
- 85-90% of this age group will be licensed to drive (AAA, 2013)
- An average of 500 older adults are injured every day in crashes (CDC, 2013)

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### Strengths of Older Drivers

#### General Characteristics of Older Drivers

- Take fewer risks
- More patient
- Possess greater life experience and knowledge of how actions impact others
- More compliant with the law

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### Self-Regulating Practices

#### Some older drivers self-regulate their driving

- Reducing driving exposure (e.g. fewer trips)
- Avoid certain driving conditions (e.g. bad weather, making left turns and times of heavy traffic)
- Women tend to self-regulate more than men (Kostyniuk & Molnar, 2008)

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### Health and Aging Concerns

**Older adults are dependent on alternative transportation after driving retirement:**  
 Men for 7 years  
 Women for 10 years

**Problems related to age can include:**  
 Reduced vision  
 Cognitive impairment  
 Decreased strength and mobility  
 Other medical conditions and medications can impair driving

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### Vision Changes with Aging

#### Reduction in Visual Acuity

- Only 1.5% of people between 65 and 69 years of age are visually impaired
- 24% of those over 80 years of age are visually impaired after their best correction attempt

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### Reduction in Visual Fields

Reduced ability to see objects to the side when the eyes are focused forward

Hemi Field Defect      20 Degree Field

### Macular Degeneration

Deterioration of the central portion of the retina

### Reduced Strength & Frailty

Aging can affect strength and frailty due to

- Muscle mass reduction
- Increase in bone fragility
- Diseases such as arthritis

- Frailty increases crash risk
- The passengers with older drivers also tend to be older adults; frail and at increased risk of injury or fatality

### Frailty Data

Figure 6-8. Average over all male occupants. Each point is the weighted average of the three values, one for each vehicle from Fig. 6-7.<sup>15</sup>

From: L. Evans *Traffic Safety* (2004), Bloomfield Hills, MI: "Science Serving Society"

### Dementia

- Dementia is a general term for loss of cognitive function
- Multiple causes:
  - Progressive degeneration such as Alzheimer's (the most common cause)
  - Brain tumor
  - Stroke (large or 'mini' strokes)
  - Lack of oxygen to the brain such as near drowning or overdose

### Cognitive Impairment

**Many conditions resulting in cognitive impairment are age-related and under-diagnosed**

Prevalence rates rise significantly with age:

- 65 - 74 years: 2.4%
- 75 - 84 years: 11%
- Greater than 85 years: 34.5 - 50%

### Clock Drawing

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### Clock Examples

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### Common Driving Errors

- Inadequate scanning of roadways
- Difficulty staying in same lane
- Difficulty making left turns and selecting correct lane when turning
- Inappropriate or delayed stopping
- Lane changes without signaling
- Pedal misapplication
- **Failure to yield or respond appropriately to road signs or signals**

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### Age/Annual Miles Driven

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### Fatalities/Miles With Age

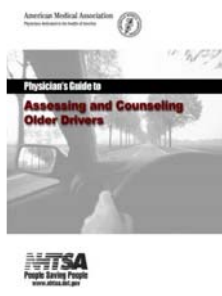
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### Fatalities Per Million By Age

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## Physician's Guide

- American Medical Association & National Highway Traffic Safety Administration (NHTSA)
- “Physician's Guide to Assessing and Counseling Older Drivers”**
  - Quick screening and referral tool
  - Available at: <http://www.ama-assn.org/go/olderdrivers>



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## States with Mandated Physician Reporting



California  
Delaware


Georgia  
Maine  
Nevada

New Jersey  
Oregon  
Pennsylvania

American Medical Association & National Highway Traffic Safety Administration (NHTSA)

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## Driver Orientation Screen for Cognitive Impairment (DOSCI)



**Rule Out**

**Cognitive Assessment**

**Scoring Criteria**

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## Step One: Rule Out DUI vs. Medical Conditions

**RULE OUT**

- Intoxication from alcohol, prescription medication, illicit drugs, or other impairing substances
- Urgent medical conditions

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## Step Two: Nine Questions

Ask ALL 9 Questions: Subtract one point for each incorrect response.

1. What is your date of birth? (-1pt.)  
Fecha de nacimiento  
Month, day, and year required; must match documents.
2. What is your full home address? (-1pt.)  
Su dirección (número, calle, ciudad, código postal)  
Address provided must match document; if not, prompt for address listed on documents.
3. What state are we in now? (-1pt.)  
¿En que estado se encuentra usted, en este momento?
4. What city/town are we in now? (-1pt.)  
¿En que ciudad se encuentra usted, en este momento?
5. Without looking at your watch, can you estimate what time it is now? (-1pt.)  
¿Sin mirar su reloj, puede decirme aproximadamente que hora es?  
Answer provided must be plus or minus one hour of correct time.
6. What day of the week is it? (-1pt.)  
¿Que día de la semana, es hoy?
- 7-9. What is today's date? (-1pt.)  
¿Cuál es la fecha de hoy?  
Prompt for month, day and year if needed.
  - Month (Mes): (-1pt.)
  - Day (Día): (-1pt.)
  - Year (Año): (-1pt.)


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## Step Three: Scoring Criteria

**SCORING CRITERIA**

- 5 or more incorrect → **Priority** re-exam
- Unsafe to drive; refer to department procedures for alternative transportation and vehicle removal
- 3-4 incorrect → **Regular** or **Priority** re-exam
- Potentially unsafe to drive; consider totality of circumstances
- 0-2 incorrect → **No Referral** or **Regular** re-exam based on totality of circumstances


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## Video: Recognizing Cognitive Impairment in Drivers

Developed by TREDS  
Training, Research and Education for Driving Safety  
UC San Diego School of Medicine  
treds.ucsd.edu


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## Discussion

### How many of you would complete a Request for Re-examination for Mr. Jones?


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## California Re-exam Options

- **Priority Re-exam**
  - Evidence of physical or mental incapacity
  - Violation must be observed or confirmed during investigation of a collision
- **Regular Re-exam**
  - Not immediate traffic safety threat
  - Observed or Not; reported, second or third hand physical incapacitation, confusion or disorientation

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## Mr. Jones' Errors

Ask ALL 9 Questions: Subtract one point for each incorrect response.

1. What is your date of birth? (-1pt.)  
Fecha de nacimiento: Month, day, and year required; must match documents.
2. What is your full home address? (-1pt.)  
Su dirección (número, calle, ciudad, código postal): Address provided must match document; if not, prompt for address listed on documents.
3. What state are we in now? (-1pt.)  
¿En qué estado se encuentra usted, en este momento?
4. What city/town are we in now? (-1pt.)  
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6. What day of the week is it? (-1pt.)  
¿Qué día de la semana, es hoy?
- 7-9. What is today's date? (-1pt.)  
¿Cuál es la fecha de hoy? Prompt for month, day and year if needed.
  - Month (Mes): (-1pt.)
  - Day (Día): (-1pt.)
  - Year (Año): (-1pt.)


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## Mr. Jones' Results

SCORING CRITERIA	
5 or more incorrect	→ <b>Priority</b> re-exam • Unsafe to drive; refer to department procedures for alternative transportation and vehicle removal.
3-4 incorrect	→ <b>Regular</b> or <b>Priority</b> re-exam • Potentially unsafe to drive; consider totality of circumstances
0-2 incorrect	→ <b>No Referral</b> or <b>Regular</b> re-exam based on totality of circumstances

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## Mr. Jones' Re-exam Form

**OBSERVED DRIVING BEHAVIOR**—Check appropriate boxes for driving problems you observed: (Use space below if needed for additional comments.)

<input checked="" type="checkbox"/> Responding incorrectly to Emergency Signal/Lights	<input checked="" type="checkbox"/> Failed to yield right-of-way
<input checked="" type="checkbox"/> Drifting or weaving in and out of lanes	<input type="checkbox"/> Lost control of vehicle
<input checked="" type="checkbox"/> Caused, or nearly caused, collision	<input type="checkbox"/> Struck stationary object
<input checked="" type="checkbox"/> Not yielding to other cars, pedestrians, etc.	<input type="checkbox"/> Failed to go on green light
<input type="checkbox"/> Driving on wrong side of road	<input type="checkbox"/> Driving without lights during darkness
<input type="checkbox"/> Driving on sidewalk	<input type="checkbox"/> Made turn from wrong lane
<input type="checkbox"/> Driving in wrong lane	<input type="checkbox"/> Fell asleep while driving
<input type="checkbox"/> Driving too slow, impeding traffic	<input type="checkbox"/> Violent or aggressive driving
<input type="checkbox"/> Failed to stop at red light/stop sign	<input type="checkbox"/> Not adequately controlling vehicle
<input type="checkbox"/> Unsafe/inappropriate lane change	<input type="checkbox"/> Other Observations _____
<input checked="" type="checkbox"/> Inappropriately stopped	

**DRIVER CONDITION (Observations after Stop/Collision)**—Check all appropriate boxes below. Please use the space below to provide specific details, if known, and the driver's medical (physical or mental) condition such as name of disease or illness, any medications taken, etc.

<input checked="" type="checkbox"/> Confused, disoriented, incoherent, or unaware of actions	<input type="checkbox"/> Alcohol/Drug Use (Describe below)
<input type="checkbox"/> Reported/Observed Medical Condition	<input type="checkbox"/> Confused by traffic
<input checked="" type="checkbox"/> Little or no recollection of incident	<input type="checkbox"/> Lost or confused while driving near home
<input type="checkbox"/> Medication	<input type="checkbox"/> Blackout/Seizure/Fainting
<input type="checkbox"/> Vision Condition/Visual Impairment	<input type="checkbox"/> Driver appears to need help with hygiene and/or dressing appropriately
<input type="checkbox"/> Mental/Emotional Condition	<input checked="" type="checkbox"/> Other Observations <i>Mr. Jones appeared agitated during questioning.</i>
<input type="checkbox"/> Driver reported he/she did not see cars, pedestrians, etc.	
<input type="checkbox"/> Difficulty Walking	
<input type="checkbox"/> Weakness or Coordination Problems	

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## Observations

- Pulled out in front of another vehicle
- Straddled lane lines/crossed double yellow lines
- Slow to yield/respond to lights; stopped abruptly in traffic lane
- Not driving in direction of destination; daughter confirmed father has been lost previously
- Forgetful during conversation
- **Unable to correctly state: date, year, day of week, city, current time and current address**

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## DMV Re-exam Process

Priority	Regular
<b>Officer gives notice to driver (pink copy)</b> - 5 days to report to DMV - Timeline: 0-21 days	<b>Officer faxes DS 427 to DMV DSO</b> - DMV contacts driver - Timeline: 30-90 days
Interview with Driver Safety Officer (DSO)	
<b>DMV requires all of these:</b> <ul style="list-style-type: none"> <li>• Medical evaluation</li> <li>• Visual testing</li> <li>• Written testing</li> <li>• Supplemental driving test</li> </ul>	<b>DMV may require any or all:</b> <ul style="list-style-type: none"> <li>• Medical evaluation</li> <li>• Visual testing</li> <li>• Written testing</li> <li>• Driving test</li> </ul>
If 'priority' box is checked, cannot be downgraded to a 'regular'	If report warrants immediate attention, DMV will expedite process

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## DMV Senior Driver Ombudsman

- Role of the Ombudsman is to help seniors keep driving as long as they can do so safely
- Help navigate the DMV process
- Work with people to include those with disabilities, strokes, head injuries, etc.
- [https://www.dmv.ca.gov/about/senior/senior\\_ombudsman.htm](https://www.dmv.ca.gov/about/senior/senior_ombudsman.htm)

**Welcome to the DMV's Senior Driver Ombudsman Program**



**Mobility Matters!**

Do you have questions? We have answers and options!

Visit our senior web page at: [www.dmv.ca.gov](http://www.dmv.ca.gov)  
Or call for more information:


Sacramento and Northern Counties (916) 657-6166	Los Angeles and Central Coast Counties (310) 812-8183
Bay Area Counties (310) 563-8998	Central and Southern Counties (949) 933-9573

Senior Guide Handbook is available upon request. (DL 623)

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## Law Enforcement Role

- Conduct/document traffic stops
- Source for helpful aging driver information
- Identify and refer at-risk drivers to licensing agencies



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## Importance to Law Enforcement

- Older drivers overrepresented in intersection collisions (left turns, right of way)
- Often exhibit erratic driving behaviors resembling DUI, attracting Law Enforcement attention
- Difficult to distinguish cognitive impairment during traffic stop without targeted assessment
- Law Enforcement traditionally lenient with older driver violators
- Re-exam reporting more effective when supported by objective data
- Law Enforcement can issue re-exam referrals for suspected medical conditions, but process is underutilized


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## Importance of Re-exam Referrals

- Documentation; tracking this history determines developing patterns of unsafe driving
- Important to:
  - Law enforcement
  - DMV
  - Driver's family - contact with law enforcement is often a call to action for family intervention
  - Physician and others working to keep the individual safe

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## DOSCI Usefulness





- 89% of officers responded they were *likely* or *very likely* to incorporate the DOSCI into their assessment of older drivers
- 92% of officers responded that the results of the DOSCI will help in preparing the DMV "Notice for Priority Re-Examination of Driver"

Results are based on 1,878 Law Enforcement Officers trained between January 2011 and August 2013.

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## Work in Progress

- Gaining knowledge of DMV processes for reexamination
- Expanding understanding of DMV actions/restrictions
- Learning to provide resource/referral information

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## Law Enforcement Training









- Validated process
- Developed with collaborative partnerships
- Using personal experiences
- To identify skill deterioration and cognitive impairment

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## Conclusions



- Age-related driving impairment is a serious and growing public health problem
- Law Enforcement can play a major role in the identification and referral of impaired drivers
- Training curriculum resulted in significant changes to knowledge, attitude and intent
- Law Enforcement feedback was positive at all levels of experience
- California Peace Officers Standards and Training (POST) has certified the training for two hours CPT credit

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## Contact



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