

# Driving Evaluation and Adaptive Driving Equipment

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Financial disclosure: the speakers have no relevant financial or non-financial relationships to disclose.

The material in this presentation is for general clinical knowledge, and it is not considered treatment recommendations for specific patients.



# Reporting Requirements

- All physicians and other persons authorized to diagnose and treat disorders and disabilities must report to the Department of Transportation any patient over 15 years of age diagnosed as having a condition that could impair their ability to drive safely. All Reports must be made by writing a letter or by filling out an Initial Reporting Form.

## Reporting Requirements (cont.)

- The department may require the applicant or driver to undergo one or more of the examinations authorized by the state to determine the competency of the person to drive.
- The department shall recall the operating privilege of any person whose incompetence has been established.
- The department shall suspend the operating privilege of any person who refused or fails to comply with the requirements.

# Determining Incompetence

- A. Vision Standards--**visual acuity of 20/70 or better combined vision may drive**

Visual acuity of less than 20/100 MAY NOT DRIVE.

**Must have a combined field of vision of at least 120 degrees in the horizontal meridian except the normal blind spots**

## Determining Incompetence (cont.)

B. Must be **seizure free for 6 months** with or without medication.

- if person only experiences an aura (an epileptic seizure which does not cause a change in a persons ability to think clearly or interfere with the mechanical or sensory ability to operate a motor vehicle) they will not be restricted.

## Determining Incompetence (cont.)

- C. Physical Requirements
  - **Unstable or brittle diabetes** or hypoglycemia, unless there has been a period of 6 months without any related syncopal attack.
  - **Cerebral Vascular Insufficiency** or **cardiovascular disease** including hypertension with accompanying signs and symptoms.
  - Periodic episodes of **loss of consciousness**, attention or awareness from whatever cause.
  - **Loss of a joint or extremity** as a functional defect or limitation.

## Physical Requirements (cont.)

- **Impairment of the use of a joint or extremity.**  
Physician must inform the patient of the prohibitions against driving but is not obligated to report unless the condition is expected to last or has lasted longer than 90 days.
- **Rheumatic arthritic, orthopedic, muscular, vascular, or neuromuscular disease.** -90 days
- Cerebral Vascular Insufficiency or cardiovascular disease which within the preceding 6 months has resulted in in coordination, confusion, loss of awareness, dyspnea upon mild exertion or any other sign or symptoms which impair the ability to control and safely perform motor functions necessary to operate a motor vehicle.

## Physical Requirements (cont.)

- **Mental Disorder-**
  - inattentiveness to the task of driving due to preoccupation, hallucination, or delusion.
  - Suicidal thinking,
  - Acute or chronic depression
  - Excessive aggressiveness or disregard for the safety of self and or others and presents with a clear and present danger, regardless of cause.
- **Use of any drug or substance** including alcohol which may impair skills necessary to drive (medically prescribed or not.



## Special driving examination:

### Conditions such as:

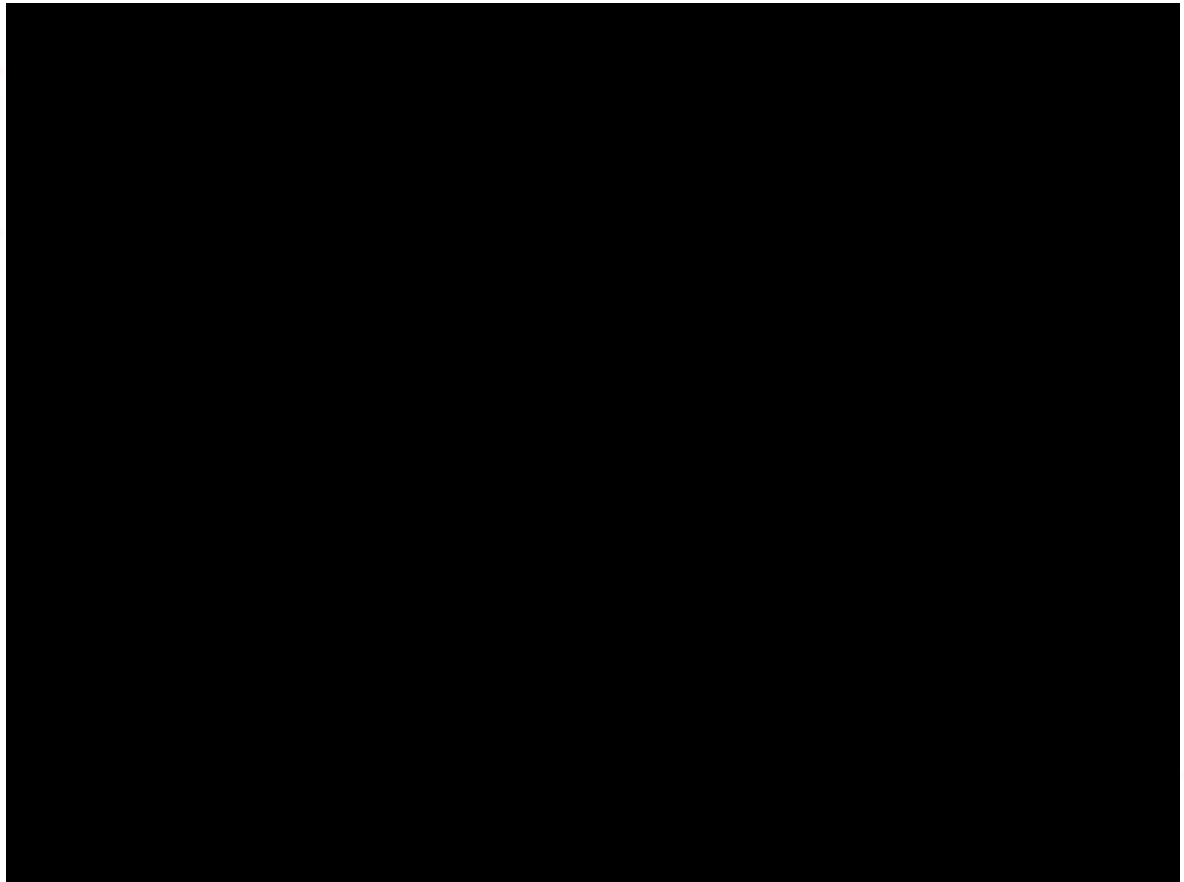
- loss or impairment of joint or extremity,
- Rheumatic,
- arthritic,
- orthopedic,
- muscular,
- vascular,
- neuromuscular disease



May be restricted to driving only when utilizing appropriate adaptive equipment.

# Good Shepherd's Driving Program

- 2 hour evaluation
- 1<sup>st</sup> hour clinical-strength, ROM, coordination, sensation, reaction time, vision screening, perceptual testing, cognitive testing.
- 2<sup>nd</sup> hour behind the wheel
- Written report and recommendations provided to physician.



# How does someone get referred?

- Self Referral
- Physician Referral
- Family Referral
- Office of Vocational Rehabilitation
- Require a prescription from your physician



# Referral Process

- Obtain RX from MD for “driving evaluation” or have form completed (included in handout)
- Send PO for X8343E via fax 610-776-8375
- If training is requested send PO for X8343T for requested units.
- Once vehicle is modified a FVA needs to be done. Need PO for X8343T

# Myth Busters

- Client does not need to have a license or permit.
- Client does not need to have a car.
- Once vehicle is modified an able bodied person CAN still drive the vehicle.
- Client should NOT buy a vehicle until they have completed the program.

# Our Vehicles

- We have 2 sedans and a minivan
- Hand controls
- Left foot gas pedal
- Various steering devices.
- Pedal extensions.
- 6 way seat
- Lowered floor conversion.
- Variable effort steering.



Auto Manufacturers are installing “technology” in newer vehicles to reduce crashes

- Lane departure recognition
- Forward Collision Warnings
- Brake override system  
(Hyundai in all 2014 models)  
that will release the throttle when  
the brake is applied



- Adaptive Headlights
- Lane departure prevention
- Blind spot detection
- Park Assist/ Backover prevention
- Electronic Stability Control (standard on 2012 and later models)
- Adaptive Cruise Control

# Aftermarket Technology

- Panoramic Mirrors
- Hicks
- Blind Spot Mirrors
- Remote Start

# Mobileye



Hicks's driver's side mirror has a field of view of about 45 degrees, compared to 15 to 17 degrees of view in a flat driver's side mirror.

Unlike in simple curved mirrors that can squash the perceived shape of objects and make straight lines appear curved, in Hicks's mirror the visual distortions of shapes and straight lines are barely detectable. -



# Blind Spot Mirrors



# Panoramic Rearview Mirror



# Steering Knob



# Limited hand function options



**REHABILITATION**



# Secondary Controls



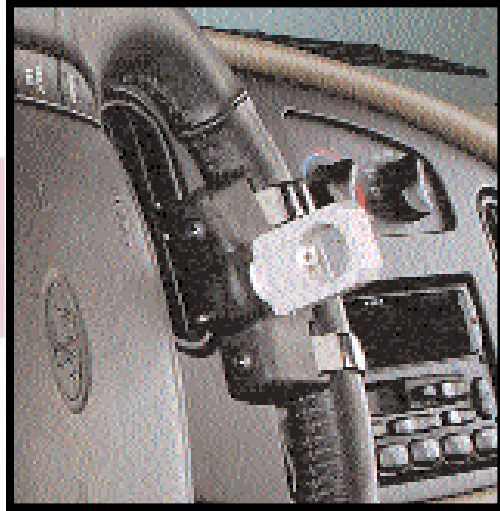
GOOD SHEPHERD  
PENN PARTNERS



GOOD  
SHEPHERD  
REHABILITATION

# Secondary Controls





# Sure Grip hand controls



# Mounting of controls



# MPD Hand Controls



# 3700 series hand control with tri pin handle



## Left Foot Accelerator



## Pedal Extensions





# Key extension



# Adapted Driving Equipment Procedure

- Client needs to have evaluation.
- A Request for retest letter is sent to PA DOT
- Once appointment is scheduled client will be contacted to schedule training.
- Client must be retested by PA DOT
- Equipment prescription issued.
- Final vehicle assessment performed.

# Foot steering







# Evo Seat



# Lowered Floor Minivan Conversion



# REAR ENTRY MINIVAN





# Car Topper



# Ford Explorer MXV



# ATC Truck Conversion



# Chevy Yukon



# Ford Transit



# Bruno Outrider

Power topper



# Bruno Curbsider



# Bruno Chariot





# Joey



# Outsider





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